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Seven Steps for Successful Pathfinder Leadership
Pathfinder Club Drill Manual
The Happy Path

North American Division Youth Ministries Director:
James L. Black, Sr.

North American Division Honors Committee:
Allen Williamson, Chairman
Terry Dodge, Secretary
Lila Barton
James L. Black, Sr.
Newton Cleghorne
Brad Forbes
Robert Holbrook
Dixie Plata
Joe White
Bob Wong

Project Coordinator: Christal Gregerson
Inside Design: Christal Gregerson
Cover Design: Ginger Calkins

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Introduction

The Adventist Youth (AY) honors were introduced in 1928 with the objective of developing the physical, mental, and spiritual capacities of youth and adults. Each honor is designed to be a study that introduces a subject that has practical value, which will enhance the lifestyle of the person pursuing the honor. Honors are considered “windows to be opened in the mode of discovery” within the philosophical framework of the church.

This manual includes all honors currently recognized by the General Conference Youth Ministry department and also those specialized honors recognized by various Divisions. There is a wide selection of challenging honors to interest juniors through adults. Families, Pathfinder clubs, Master Guides and elementary school teachers can use honors as a tool to encourage the exploration of new interests and development of skills.

Skill Levels
Each honor is assigned a skill level to guide leaders in selecting grade-appropriateness. Skill levels are divided into Level 1 (Grade 5-6), Level 2 (Grade 7-10), and Level 3 (Grade 11 and above). These levels are recommendations designed to guide leaders in their choice of honors.

Instructors
Some honors require an instructor. The instructor may be a school teacher or a church or community friend who is qualified to give the necessary guidance to complete the honor. An individual who serves as the instructor for an honor receives a silver diamond pin that may be attached to their honor patch.

Honor Patches
The Conference Youth or Pathfinder Department is the source for honor patches, instructor diamonds, and advanced stars. Your Conference will have an order form and will give you directions on how to order. Patches are usually presented at Investiture or during a church service.

Advanced Honors
Many of the current honors have an advanced level. Over the next several years more advanced honors will be added. Honor patches are marked “advanced” with the addition of a small bronze star.

Master Awards
Master patches are earned by completing selected honors within a category. Requirements are listed at the beginning of each section.

Resources
In past editions, a resources section has been included with each honor. Because of the rapid change in availability of books, you will find the resources listed at the beginning of each section. (ie. Arts, Crafts & Hobbies, Nature, etc.)

Honor Requirement Updates
For the latest information on honor updates and new releases go to www.pathfinders.nadadventist.org
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<td>Paper Quilling, Advanced</td>
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<td>Wood Carving</td>
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<td>Wood Handicraft</td>
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</table>
Airplane Modeling

1. Build and successfully fly an airplane from a kit made of balsa wood and tissue paper, and rubberband or gas powered.

2. Build a balsa wood glider from a kit and observe its flying characteristics as related to the variable positions of the wings.

3. Make and successfully fly two different styles of airplanes using sheets of paper between eight (20.3 cm) and fourteen (35.6 cm) inches in width and length.

   Styles: 1. ______________________ 2. ______________________

4. Define, locate, and explain the usage of the following basic items:
   (Complete chart)

   a. Fuselage  
   b. Wing  
   c. Airelon  
   d. Rudder  
   e. Horizontal stabilizer  
   f. Strut  
   g. Cockpit  
   h. Engine  
   i. Landing gear  
   j. Propeller
<table>
<thead>
<tr>
<th>PART</th>
<th>DEFINITION</th>
<th>LOCATED (Y/N)</th>
<th>USAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuselage</td>
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<td></td>
</tr>
<tr>
<td>Wing</td>
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<td></td>
<td></td>
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<tr>
<td>Airelon</td>
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<td></td>
<td></td>
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<tr>
<td>Rudder</td>
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<td></td>
<td></td>
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<tr>
<td>Horizontal Stabilizer</td>
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<td>Strut</td>
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<td>Cockpit</td>
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<tr>
<td>Engine</td>
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<td></td>
<td></td>
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<tr>
<td>Landing Gear</td>
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<td></td>
<td></td>
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<tr>
<td>Propeller</td>
<td></td>
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</tbody>
</table>
Basketry

1. Know the names of two countries where Rattan (cane) is grown.
   a. ______________________
   b. ______________________

2. Explain how to treat pithcane (reed) before weaving.
   __________________________
   __________________________

3. What tools would you use for:
   a. Cane basket making? __________________________
   __________________________
   b. Raffia or Indian basket making? __________________
   __________________________

4. Define:
   a. Weaver singeing __________________________
   __________________________
   b. Crushing __________________________
   __________________________

5. Explain how to:
   a. Mend a broken spoke (stake). __________________
   __________________________
   b. Join a weaving rod (reed). __________________
   __________________________

6. Name two kinds of bases used in baskets and tell in which type of basket each one can be used.

<table>
<thead>
<tr>
<th>Bases</th>
<th>Types of Baskets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
</tbody>
</table>
7. Describe how to lay:
   a. A footridge border ______________________________________
      ______________________________________________________
      ______________________________________________________
   b. A three-rod border ______________________________________
      ______________________________________________________
5.  Do the following:
   a. simple weaving
   b. slewing and
   c. bispoking
   d. stitch a raffia base.
7. Make a cane sandwich tray with a wood base.
8. Make a hot roll basket with a woven base.
9. Make a round hot pad six inches (15.2 cm) in diameter in Raffia or Indian basketry.
Block Printing

1. List the tools and equipment necessary for block printing.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. Write a paragraph on the principles of design and lettering as applied to block printing.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. Using a potato, carve a design incorporating your initials into it, and use it to print your initials on paper.

4. Design and print at least one greeting card.

5. Design and print one bookplate or book cover.

6. Going through the steps of designing, carving, and printing, create another original piece of work of your choice.
Bread Dough

1. Make a list of materials and supplies needed for dough artistry.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Why is it important to have clean hands and use hand lotion while working with bread dough?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. Explain the different techniques of tinting and painting the dough.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4. What type of finish do you use to protect and give a glossy appearance?

________________________________________________________________________

5. Make at least two different flowers with leaves and arrange into a container of your choice.

6. Make one of the following using tinted dough:
   a. Sculpture arrangement
   b. Small wall plaque

7. Make one of the following:
   a. Kitchen refrigerator magnet
   b. Pin
   c. Choice of something you would like to make
Cake Decorating

1. List equipment necessary for cake decorating.

________________________________________________________
________________________________________________________
________________________________________________________

2. Learn from memory the two cake icings—butter cream and royal—and their proper uses.
Buttercream: ______________________________________________
________________________________________________________
Uses: _____________________________________________________
Royal: ____________________________________________________
________________________________________________________
Uses: _____________________________________________________
Name one other icing used for frosting: _______________________

3. Learn and demonstrate proper construction of the decorating tube using parchment, wax papers, or a disposable bag. Show proper method of inserting tip, brushing with color, filling with icing, and folding of top. What is the name of the top fold?

________________________________________________________

4. Name three essential steps to good cake decorating.
1. _______________________________________________________
2. _______________________________________________________
3. _______________________________________________________
5. Demonstrate pressure control with tubes. Learn the technique and name the proper tip (tube) used to make the following:

<table>
<thead>
<tr>
<th>Techniques</th>
<th>Tip</th>
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<tr>
<td>Star, fill-in and border</td>
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<tr>
<td>Rosette</td>
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<tr>
<td>Shell border</td>
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<tr>
<td>&quot;S&quot; design</td>
<td></td>
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<tr>
<td>Ribbon</td>
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<tr>
<td>Zigzag border</td>
<td></td>
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<tr>
<td>Leaves</td>
<td></td>
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</tbody>
</table>

6. Name four color techniques. Demonstrate two, including two-color icing.

1. __________________________ 2. __________________________
3. __________________________ 4. __________________________

7. Learn to make the following flowers:

a. Sweet pea
b. Rosebud
c. Full American beauty rose
d. Drop flower

8. Demonstrate writing technique using two different tips and methods.

<table>
<thead>
<tr>
<th>Technique Used</th>
<th>Tip</th>
<th>Method</th>
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9. Decorate a doll cake or a cake prepared in a specialty cake pan using star fill-in method. Use at least two colors to make the design or pattern.

10. Make a special occasion cake of your choice using two or more borders of different types, and a floral arrangement.

11. Make a heart cake using borders, florets, string work, and writing.
Candlemaking

1. Make at least five of the following:
   a. Free-form sand candle
   b. Layered colored candle
   c. Candle made in a mold
   d. Ice candle
   e. Dipped candle
   f. Dribble-wax candle
   g. Perfumed candle
   h. Pair of beeswax candles
   i. Floating candle
   j. Candle in a container/jar
   k. Decorated candle

2. Know the two kinds of wax used for candle making and their uses.

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3. Know sizes of wicking and which one will burn properly in each particular candle.

<table>
<thead>
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<th>Size of wicking</th>
<th>Types of candles used in</th>
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</table>
4. When should a metal core wick be used?

5. Know the safety techniques of candle making.
Ceramics

1. Tell briefly the history of early ceramics.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Know what is meant by the following terms:
   a. Greenware ____________________________
   b. Bisque ____________________________
   c. Decal ____________________________
   d. Kiln ____________________________
   e. Glaze ____________________________
   f. Slip ____________________________
   g. Mender ____________________________
   h. Stain ____________________________

3. Explain the use of cones in kilns.

________________________________________________________________________
________________________________________________________________________

4. Know how and when to use
   underglaze ____________________________
________________________________________________________________________
   glaze ____________________________
________________________________________________________________________
   stain. ____________________________
________________________________________________________________________

5. Know what tools are used in completing your projects in ceramics.

________________________________________________________________________
________________________________________________________________________
6. Know the difference between glaze and food-safe glaze.

Glaze _____________________________________________________
__________________________________________________________

Food-safe glaze ___________________________________________
__________________________________________________________

7. Complete two of the following using underglaze on one, and the second one food-safe:
   a. Cookie jar
   b. Pie plate
   c. Vase
   d. Flower planter
   e. Candy dish
   f. Mug
   g. Item of your choice

Note: Candidate need not do the firing.
1. Have a tote with cross-stitch materials, including at least one hoop, masking tape or Fra-check, needles, and scissors.

2. What is the difference between cross-stitching, counted cross-stitch, and embroidery?

3. Know at least four stitches used in counted cross-stitch.
   1. ____________________________ 2. ____________________________
   3. ____________________________ 4. ____________________________

4. Cross-stitch a simple object in three different sizes of aida cloth. Mount and label the size and name of aida cloth used, stating how many floss strands are to be used with each.

5. Make a counted cross-stitch of a quote with a border and frame it for hanging, using at least three different stitches.

6. Make at least a 5 x 7 inches (12.7 x 17.8 cm) counted cross-stitch on aida-14 of a nature scene.
Crocheting

1. Define and crochet the following:
   - St ______________________________________________________
   - Sp ______________________________________________________
   - Sts _____________________________________________________
   - Rnd _____________________________________________________
   - Incl ____________________________________________________
   - Dec ____________________________________________________
   - Inc ____________________________________________________

2. Make squares of at least 20 stitches of the following:
   - SC
   - DC
   - HDC
   - TR
   - DTR.

3. Show how to measure stitch gauge or row gauge on sample squares.

4. Know how to care for items made out of the following:
   - wool ___________________________________________________
   - orlon __________________________________________________
   - nylon __________________________________________________
   - cotton _________________________________________________

5. Know how to make a granny square, and show something you have made using a granny square, such as a hat, scarf, pillow cover, etc.

6. Show a sample of simple edging you have made out of thread.

7. Crochet one of the following out of yarn: hat, scarf, sleeveless sweater, or slippers.
Crocheting, Advanced

- 1. Have the Crocheting Honor.
- 2. Crochet a round doily out of thread.
- 3. Make fancy hairpin lace for a pillow case or similar object.
- 4. Crochet a sweater (not sleeveless) or baby set.
- 5. Crochet an afghan or a throw rug.
1. Relate briefly the story of barter, showing three reasons why money came into being and naming at least ten strange forms of money used in place of coins or currency.

2. Relate briefly the history of coinage and paper currency in your country, making sure to mention the dates of the establishment of any mints or engraving plants. Also discover some change in the metal composition of a coin, giving any interesting highlights concerning such a change.

3. Explain how money is distributed in your country.
4. Define the following terms:

Alloy _____________________________________________________

________________________________________________________

Altered Date _____________________________________________

________________________________________________________

Buffed Coins _____________________________________________

________________________________________________________

Cast Coins ______________________________________________

________________________________________________________

Clad Coinage ____________________________________________

________________________________________________________

Commemorative __________________________________________

________________________________________________________

Die ______________________________________________________

________________________________________________________

Field _____________________________________________________

________________________________________________________

Inscription ______________________________________________

________________________________________________________

Lettered Edge ____________________________________________

________________________________________________________

Mint Mark _________________________________________________

________________________________________________________

Obverse __________________________________________________

________________________________________________________

Planchet _________________________________________________

________________________________________________________

Proof _____________________________________________________

________________________________________________________
5. Describe the obverse and reverse for paper money of the six lowest denominations currently in use in your country.

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<th>Denomination</th>
<th>Obverse</th>
<th>Reverse</th>
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<td>5.</td>
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<td>6.</td>
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</table>
6. Know how coins are graded in quality by collectors.

7. Collect and mount a type set of coins from your country of any date currently being minted or in circulation. Proof, commemorative, rare, silver, or expensive coins are not needed. In your collection:
   a. Possess at least one coin from each mint in the type set.
   b. Locate and Identify the mint mark (if any) on each coin.
   c. Locate and identify the initials (if any) of each coin's designer(s).

8. Do two of the following:
   a. Make enlarged drawings of both sides of ten different denominations or forms of coins for your country no longer in circulation.
   b. Collect, identify, and mount 25 different foreign coins. No two coins alike.
   c. Collect and mount a type set of coins from your country minted during the 20th Century.
   d. Collect and mount a date set of series of coins for your country beginning with your birth year. (Commemorative, gold, proof, expensive, or rare coins need not be included.)


Facts about your country’s currency may be obtained from the government treasury department.
Currency (Coins), Advanced

1. Have the Currency (Coins) Honor

2. Select a coin or note from your collection and present an oral or written report on the historical or other significance of the person(s), place(s), item(s) or symbol(s) found on both sides.

3. What are the laws regarding counterfeiting in your country and what devices are used in your nation’s currency to prevent it?

4. Attend a meeting of a local coin club and report on your experience. Possible items to consider:
   a. Level of expertise of members as demonstrated by presentations and dialogues.
   b. Average general age of attendees.
   c. Ideas which might help the club extend its collector interest to a wider audience.
   d. How newcomer friendly is the organization.
   e. Suggestions on how these people might be reached with the gospel through a manner which they would find attractive.

5. Select one of the three categories of your collection as required under the Currency Honor requirements 7 and 8, and increase your collection to include twice the total number of specimens.

6. Add to your collection at least one of the unusual (odd and curious) forms learned about in requirement 1 of the Currency Honor requirements and have in your Currency Honor files, at least a paragraph summarizing how, when and where this item was used as currency.
Decoupage

1. Give the meaning and history of decoupage
   Meaning: __________________________________________________
   ________________________________________________________
   History: _________________________________________________
   ________________________________________________________
   ________________________________________________________
   ________________________________________________________

2. Make a list of the materials and equipment needed in decoupage.
   ________________________________________________________
   ________________________________________________________
   ________________________________________________________

3. Describe how to prepare a wood or metal object for decoupage.
   ________________________________________________________
   ________________________________________________________
   ________________________________________________________

4. Describe three ways in which a print may be used in decoupage.
   1. ______________________________________________________
   2. ______________________________________________________
   3. ______________________________________________________

5. Use the basic steps in completing two of the following objects:
   a. Modpodge print
   b. Keyring
   c. Bookends
   d. Bottle
   e. Tissue box
   f. Reasonable choice
Drawing and Painting

1. Make a freehand sketch of an animal, showing in values the distribution of color.
2. Draw a cylindrical object and a rectangular object grouped together a little below the eye, showing proper perspective, light, and shade.
3. Make a drawing of some landscape near your home.
4. Make an original decorative design in color, using any motif, and state for what use it is intended.
5. Paint in color a flower or leaf spray.
6. Paint an outdoor scene in either water color or oil.
Felt Craft

1. From what fiber is felt made?

________________________________________________________

What gives it its tensile strength?

________________________________________________________

2. List 15 uses of felt.

1. __________________________  9. __________________________
2. __________________________ 10. __________________________
3. __________________________ 11. __________________________
4. __________________________ 12. __________________________
5. __________________________ 13. __________________________
6. __________________________ 14. __________________________
7. __________________________
8. __________________________ 15. __________________________

3. Give three reasons why felt is a good material for handicrafts.

1. _______________________________________________________
2. _______________________________________________________
3. _______________________________________________________

4. List the essential steps in felt manufacture.

________________________________________________________

________________________________________________________

________________________________________________________

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5. Make two of the following, using at least two different colors of felt:
   a. Pennant
   b. Bookmark
   c. Refrigerator magnet
   d. Needle case
   e. Similar item

6. Make one of the following, using at least four different colors of felt:
   a. Small wall mural
   b. Holiday decoration
   c. Hand puppet
   d. Kitchen knick-knack

7. Make one of the following, using sewing:
   a. Stuffed animal
   b. Stuffed toy
   c. Tote bag
   d. Bean bag
Flower Arrangement

1. Name six perennials and six annuals suitable for indoor flower arrangement.

<table>
<thead>
<tr>
<th>Perennials</th>
<th>Annuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. _________</td>
<td>_________</td>
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<td>2. _________</td>
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<tr>
<td>6. _________</td>
<td>_________</td>
</tr>
</tbody>
</table>

2. Name at least three flowers that bloom in the spring or early summer suitable for indoor flower arrangement.

1. _________ 
2. _________ 
3. _________

3. Name at least three flowers that do not keep well when cut, and three that do.

<table>
<thead>
<tr>
<th>Do not keep</th>
<th>Keep</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. _________</td>
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<td>2. _________</td>
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<tr>
<td>3. _________</td>
<td>_________</td>
</tr>
</tbody>
</table>

4. Give six suggestions regarding the cutting of flowers and their aftercare, such as when to cut, how to cut, and how to keep.

1. ____________________________
2. ____________________________
3. ____________________________
4. ____________________________
5. ____________________________
6. ____________________________
5. At what stage of development should roses, gladioluses, and dahlias be cut?
   Roses _____________________________________________________
   Gladiolus _________________________________________________
   Dahlias __________________________________________________

6. Give three suggestions on the relation of containers to the flowers used, and three on the relation of arrangement to the room and furnishings.
   Containers to flowers
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   Arrangement to room
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________

7. In flower arrangement, what should be the relation of:
   Dark and light shades ________________________________________
   __________________________________________________________
   Large and small flowers_______________________________________
   __________________________________________________________
   Open and partly open flowers_______________________________
   __________________________________________________________

8. Make two artistic flower arrangements in each of the following areas:
   (Fresh or silk flowers may be used.)
   a. Table decoration
   b. General house use
   c. Public service
9. What are some wild flowers that could be used in arrangements for the home?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

What combinations of these flowers can be used?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Glass Craft

1. Name ten kinds of glass.
   1. ____________________________  6. ____________________________
   2. ____________________________  7. ____________________________
   3. ____________________________  8. ____________________________
   4. ____________________________  9. ____________________________
   5. ____________________________ 10. ____________________________

2. Know what kind of glass is used for
   furniture __________________________________________________
   ____________________________
   cloth insulation _____________________________________________
   ____________________________
   airplanes __________________________________________________
   ____________________________
   automobiles __________________________________________________

3. Prepare at least three colors of glass for picture making.
   1. ____________________  2. ____________________  3. ____________________

4. Know the steps in making a picture with glass, and complete such a picture, using at least three colors.
   Steps _____________________________________________________
   __________________________________________________________
   __________________________________________________________
   Picture ____________________________________________________
   Colors 1. _____________  2. _____________  3. _____________

5. Write a 300-word report or give a three-minute oral report on the history of glass and how glass is made.
Glass Painting

1. Know the primary colors
   1. ___________________________  3. ___________________________
   2. ___________________________

Know the secondary colors
   1. ___________________________  3. ___________________________
   2. ___________________________

Know how to mix the primary colors to obtain the secondary colors.

<table>
<thead>
<tr>
<th>Primary</th>
<th>Secondary</th>
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</table>

2. Know the materials used in painting, mounting, and hanging a glass painting.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

3. Make and display a glass painting for each of the following designs: animal, flower, and landscape or seascape.

4. Make a silhouette painting and mount for hanging.

5. Make a hand-painted mirror picture by removing the back coating of the mirror from the picture area and painting the design on the back of the mirror glass.
Knitting

1. Define the following:
   - K ________________________________
   - P ________________________________
   - STS ______________________________
   - RND ______________________________
   - TOG ______________________________
   - PPSO ______________________________
   - INC ______________________________
   - DEC ______________________________
   - YO ________________________________

2. Demonstrate the following:
   a. Cast on
   b. Bind off
   c. Cable stitch
   d. Ribbing
   e. Garter stitch
   f. Stockinette stitch
   g. Pick up a dropped stitch

3. Know how to care for these kinds of yarn:
   - Wool ________________________________
   - Hair ________________________________
   - Synthetic ____________________________

4. Show how to join on a new ball of yarn.
5. Identify and know the purpose of the following weights of yarn:
   Medium ______________________________________________________
   ____________________________________________________________
   Sports ______________________________________________________
   ____________________________________________________________
   Heavy ______________________________________________________
   ____________________________________________________________
   Bulky _______________________________________________________
   ____________________________________________________________

6. Knit two items from the following:
   a. Slippers
   b. Mittens
   c. Baby booties
   d. Hat
   e. Scarf
   f. Sleeveless sweater
   g. Reasonable choice
Knitting, Advanced

1. Have the Knitting Honor.
2. Knit a pair of argyle or patterned socks, gloves, or some other article, using four needles and yarn bobbins.
3. Knit an afghan or a baby blanket.
4. Knit a sweater with long sleeves or a baby set of sweater, bonnet, and booties.
Leather Craft

1. List the necessary tools a beginner needs in leather craft and demonstrate the proper use of each.

2. Know how to distinguish different kinds of leather, such as calf, goat, and imitation leather. What leathers are most suitable for tooling?

3. Give the steps necessary in the preparation of leather.

4. Transfer a design to leather, and tool and lace some object in leather, such as a billfold, magazine cover, belt, key keeper, or small purse.

5. Show how to use leather dye.

6. What kind of finish should be used on leather?
Leather Craft, Advanced

1. Have the Leather Craft Honor.

2. Show how to:
   a. punch holes
   b. set snaps
   c. do saddle stitching
   d. do two types of lacing.

3. Make a sheath for a hatchet, knife, or ax.

4. Complete a figure-carved belt, doing your own tooling.

5. From your own design, cut from leather, tool, punch, and lace a project such as a case, purse, bag, or an equivalent.

6. Show six leather items you have made.
   1. __________________________________________
   2. __________________________________________
   3. __________________________________________
   4. __________________________________________
   5. __________________________________________
   6. __________________________________________

Date completed ____________  Instructor’s Signature ____________________
Lettering and Poster Making

1. Write from memory the complete lower case alphabet in two of the following:
   a. Gothic
   b. Roman
   c. Italic

2. Demonstrate when the different sizes and types of pens are to be used.

3. State at least four principles in making a poster attractive and distinctive.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________

Know how to make correct margins for the size of paper you are using.

4. Make three posters in a variety of sizes to be used by any of the following groups: Sabbath School, church, school, Pathfinder Club, or AY Society. Use at least two different types of lettering in these posters.

<table>
<thead>
<tr>
<th>Where Used</th>
<th>Size</th>
<th>Types Used</th>
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<tbody>
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<td>3.</td>
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</tbody>
</table>
5. Make five additional posters on topics of your own choice. These posters will be judged for acceptance on the following three conditions:
   a. Arrangement
   b. Neatness
   c. Selection in type of lettering used.

   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________

6. Practice all strokes until they can be done smoothly and accurately.
Macramé

1. Give a brief history of the art of decorative knotting.

__________________________________________________________

__________________________________________________________

2. What is a good macramé cord? ______________________________

__________________________________________________________

3. Know three kinds of cords that are good and why they are good.

<table>
<thead>
<tr>
<th>Cord</th>
<th>Why</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<td>3.</td>
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</tbody>
</table>

4. Know the basic knots used in macramé. Know two variations of each of these knots.

__________________________________________________________

__________________________________________________________

5. How is the overhand knot useful in macramé?

__________________________________________________________

6. How much cord is needed to reach the desired length of the finished product?

__________________________________________________________

7. Make a sampler wall hanging using the essential knots and using at least two variations, such as the horizontal half-hitch, vertical half-hitch, or the half knot.

8. Make two other items of your choice using the square knot, the double half-hitch, and two variations of either or both items.
Metal Craft

1. Name the various metals that can be used in metal craft.

2. Complete one project using metal foil tooling. Complete the project by antiquing and framing.
   Project: ________________________________

3. Complete one project using metal punch.
   Project: ________________________________

4. Complete one project using drilling, riveting, and bending of metal such as a simple candle holder.
   Project: ________________________________

5. Demonstrate properly the use of the following:
   a. Tin Snips
   b. Pop rivet
   c. Electric drill
   d. Metal file

Date completed ____________   Instructor’s Signature _____________________

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2002 Edition
Model Boats

1. Do two of the following:
   a. Purchase and build one kit for a sailboat 10 to 15 inches (25.4 to 38.1 cm) long and about four to five inches wide and operate boat on the water for at least two minutes.
   b. Build a model boat with an electric motor from your own plans or from a kit, size 10 to 18 inches, (25.4 to 45.7 cm) and operate the boat for three to five minutes.
   c. Build a model boat 18 to 30 inches (45.7 to 76.2 cm) long from your own plans or from a kit. Install a small bore internal combustion engine .029 or .049 and operate for at least two successful runs of three to five minutes each. Record in writing the operating characteristics of the model and state what you did to improve its performance.

2. Identify and define these words:
   Displacement ____________________________________________
   Center of gravity __________________________________________
   Propeller pitch ____________________________________________
   Thrust and lift ____________________________________________
   Mono hull ________________________________________________
   Hydro __________________________________________________
   Bow _____________________________________________________
Model Cars

1. Build at least one plastic model car from the parts supplied in a kit. Car must be stock in every respect.

2. Build a second car using extra accessories included in the kit or create alterations using putty and/or parts from other kits. (Decals don’t count). Include paint job.

3. Write or give orally a report on the history of automobiles. Be sure to include interesting steps in the development process such as notes on engine sizes, automatic transmissions, power steering, computerized controls, etc.

Date completed ____________ Instructor’s Signature ____________________
Model Railroading

1. Give the history and development of model railroading.

2. Tell the difference in how the following prototype motive power units operate:
   Steam
   Diesel
   Electric

3. Know the name, scale, and track gauge for four model railroad gauges.

<table>
<thead>
<tr>
<th>Name</th>
<th>Scale</th>
<th>Track Gaage</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Pathfinder’s Name
4. Know the shapes and names of at least eight track plan arrangements.

1. __________________________  
2. __________________________  
3. __________________________  
4. __________________________  
5. __________________________  
6. __________________________  
7. __________________________  
8. __________________________
5. Know at least six points to check for the maintenance of a model railroading layout.

1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
4. __________________________________________________________
5. __________________________________________________________
6. __________________________________________________________

6. Identify and explain the use of:

Five types of freight cars

<table>
<thead>
<tr>
<th>Types Identified</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>5.</td>
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</tbody>
</table>

Three types of passenger cars

<table>
<thead>
<tr>
<th>Types Identified</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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</tbody>
</table>

Three types of steam engines according to their wheel arrangement

<table>
<thead>
<tr>
<th>Types Identified</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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</table>

Two types of grade crossing warning devices

<table>
<thead>
<tr>
<th>Types Identified</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
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<tr>
<td>2.</td>
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</tbody>
</table>
Two types of railroad signals

<table>
<thead>
<tr>
<th>Types Identified</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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</table>

Five types of railroad-related buildings or structures

<table>
<thead>
<tr>
<th>Types Identified</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</tbody>
</table>

7. Know the meaning of the following model railroad terms:

- Ballast ____________________________________________________
- Blind drivers ______________________________________________
- Block _____________________________________________________
- Bolster __________________________________________________
- Crossing _________________________________________________
- Crossover _________________________________________________
- Double header ____________________________________________
- Draft gear _______________________________________________
- Flange __________________________________________________
Frog ______________________________________________________

Gap ______________________________________________________

Gauge _____________________________________________________

Grade _____________________________________________________

Gravity yard _______________________________________________

Hot box ___________________________________________________

Insulated rail joiner________________________________________

Journal ___________________________________________________

Layout _____________________________________________________

Mainline ___________________________________________________

Prototype __________________________________________________

Rail joiner _________________________________________________

Reverse loop _______________________________________________

Siding _____________________________________________________

Spur ______________________________________________________
8. Construct a portion of a model railroad layout. In your construction, do the following:
   a. Assist in assembling the framework
   b. Install a section of ballast
   c. Install a section of track
   d. Install at least one turnout, including the wiring
   e. Assist in making scenery, such as trees, rocks, mountains, or grass
   f. Make one model railroading building or structure
   g. Assist in the wiring to supply electrical power to the tracks

9. Successfully operate a model railroad train on the layout you have assisted in building.
Model Rocketry

(Instructor Required)


2. Know and explain the importance of the basic model rocket components.

3. Draw the following:
   The steps in the flight of a model rocket
   A cut-a-way view of a model rocket engine, labeling each part
   A schematic plan for a simple launch system using proper electrical symbols
4. Define the following:

Wadding ________________________________

Boost gliders ________________________________

Stall ________________________________

Payload ________________________________

Apogee ________________________________

Center of gravity ________________________________

Center of pressure ________________________________

Impulse ________________________________

Velocity ________________________________

Ejection ________________________________
5. Name and describe at least four different recovery systems.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
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<tbody>
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</tbody>
</table>

6. From a kit, build, finish, and paint a single-stage rocket that has a minimum length of six inches with a recovery system, such as a parachute or streamer. Successfully launch and recover the rocket with the recovery system deploying properly.

Launch date: ______________________________
Model Rocketry, Advanced

(Instructor Required)

1. Have the Model Rocketry Honor.

2. From a kit, build, successfully launch, and recover a boost glider.
   Launch date: __________________________

3. Design, build (not from a kit), finish, and paint a single-stage rocket.
   Check for stability, and successfully launch and recover this rocket.
   Launch date: __________________________

4. Do one of the following:
   a. From a kit build, finish, and paint a two-stage rocket. Successfully launch and recover this rocket.
   b. From a kit, build, finish, and paint a three-engine clustered single-stage rocket. Successfully launch and recover this rocket.
   Launch date: __________________________

5. Design an electrical launch system. When this has been approved by your instructor, build this system and use it to launch rockets at least five times.
   Launch date: 1. __________________________
   2. __________________________
   3. __________________________
   4. __________________________
   5. __________________________

6. Describe and demonstrate single station altitude tracking.

   ______________________________________
   ______________________________________
   ______________________________________

   Date demonstrated: __________________________
With the aid of a helper, track the same rocket three times using three different sizes of engines and compare altitudes with an altitude finder.

<table>
<thead>
<tr>
<th>Engine Size</th>
<th>Altitude</th>
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<tbody>
<tr>
<td>1.</td>
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</table>

7. Compare the velocity and altitude of two different weights of rockets using the same size engine.

<table>
<thead>
<tr>
<th>Rocket Weight</th>
<th>Velocity</th>
<th>Altitude</th>
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<tbody>
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Music

(Instructor Required)

1. Play or sing a scale and know its composition.

2. Write a scale in both treble and bass clef.

   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________

3. Know the following
   a. half-tone
   b. a whole tone
   c. a third
   d. a fifth
   e. an octave.

4. Distinguish a march from a waltz and give the time of each.
   March _______________________ Waltz _______________________

5. Define the following: Draw the symbols of each.
   A quarter note
   _________________________________________________________
   A half note
   _________________________________________________________
   A whole note
6. Name five great composers and one composition of each, including an oratorio, a piano composition, and a song.

<table>
<thead>
<tr>
<th>Composer</th>
<th>Composition</th>
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</table>

7. Play with or without music or sing from memory 15 hymns (one verse or stanza each) and/or other sacred songs or choruses and list the composer of each.

<table>
<thead>
<tr>
<th>Hymn/Chorus</th>
<th>Composer</th>
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<tbody>
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</table>

8. Play or sing from memory one piece of good music other than those used in #7.

Music: ____________________________
9. Do one of the following:
   a. For instrumentalists, be able to sight-read and play a moderately difficult piece of music. Explain all signs and terms in it.
      Music: ________________________________
   b. For singers, show with baton or arm how to lead a group in singing compositions written in 3/4 and 4/4 time.
      Music: ________________________________

10. Define orchestra
    ____________________________________________________________________________
    ____________________________________________________________________________
    ____________________________________________________________________________

Name at least five instruments in an orchestra.
1. ________________________________
2. ________________________________
3. ________________________________
4. ________________________________
5. ________________________________

11. Do a biographical sketch on a famous hymn writer and orally present it to a group.
    Hymn writer: ________________________________
    Date presented: ________________________________
Needle Craft

1. Do two of the following:
   a. Embroider one of the following: dresser scarf, pair of pillowcases, luncheon cloth, or other equivalent article.
   b. Make a pillow cover or wall hanging, a set of four sachet pillows, or three tree ornaments out of any of the following methods:
      (1) Punch embroidery
      (2) Candlewicking
      (3) Crewel
   c. Make a pillow cover, wall hanging, cover for chair, footstool, or piano bench in needlepoint or counted cross stitch.
   d. Make an article using any of the following methods:
      (1) Applique
      (2) Fagoting
      (3) Smocking
      (4) Shirring
      (5) Swedish weaving on linen or huck toweling

2. Show articles you have made, using ten of the following stitches:
   a. Back
   b. Blanket
   c. Braid
   d. Buttonhole
   e. Roman
   f. Chain
   g. Cross
   h. Feather
   i. Fishbone Stem
   j. French knot
   k. Heavy chain
   l. Herringbone
   m. Lazy daisy
   n. Long and short
   o. Outline
   p. Running
   q. Satin
   r. Split
   s. Star filling
   t. Stem
   u. Whipping

3. Show the correct way of gathering lace and whipping it to hemmed edge.

4. Describe a satisfactory method of keeping your fancy-work equipment in good equipment.
1. What is Origami?

__________________________________________________________
__________________________________________________________

Where did it come from?

__________________________________________________________
__________________________________________________________

How was it used and developed?

__________________________________________________________

2. Identify the symbols for the following terms:
   a. Valley fold
   b. Mountain fold
   c. Cut
   d. Existing crease
   e. Hold here
   f. Watch this spot
   g. In front
   h. Behind
   i. Tuck in, open out, or apply force
   j. Fold over and over
   k. Turn model over

3. Demonstrate folding the following folds:
   a. Reverse fold
   b. Squash fold
   c. Petal fold
   d. Book fold
   e. Preliminary fold
   f. Blintz fold

4. Demonstrate folding the following bases:
   a. Bird base
   b. Waterbomb base
   c. Frog base

5. Do three of the following models:
   a. House
   b. Lotus blossom
   c. Cicada
d. Housefly
e. Butterfly
6. Choose three of the following models to fold or select similar models from Origami books:
   a. Jumping Frog       e. Leaf
   b. Carrier Pigeon     f. Walking dog
   c. Sailboat          g. Duck
   d. Hen

7. Fold one model of your choice from memory from requirement 5 or 6.
   Model ________________________________

8. Illustrate a Bible story using several Origami models.
   Bible Story ________________________________
   Models used ________________________________
   ________________________________
Photography

1. Explain the principles of camera construction

What the camera lens does

The effect of light on light-sensitive film

The action of developers

2. What is meant by the "speed" of the film

What does ASA/ISO mean?
3. How are shutter speed, lens aperture, and film speed related?

4. Give the principal uses of photography.

5. Take print or slide pictures illustrating at least eight of the following techniques. Use comparison pictures for illustration:
   a. Framing
   b. Camera steadiness
   c. Direction of lighting - front, backlighting, side
   d. Panning - background blurred with subject in focus
   e. Rule of thirds
   f. Angle - eye level, high and low angle
   g. Level horizon
   h. Distance from subject - fill the frame
   i. Use of leading lines
   j. Quality of light - shade, sunlight, and time of day
   k. Correct exposure - underexposed, overexposed, and correctly exposed
   l. Use of flash - distance and reflective objects

6. Do one of the following:
   a. Tell how black and white film is developed into negatives and print eight of your own pictures.
   b. Tell how slides are made and develop one roll of film.
1. What is the principal ingredient of plaster of Paris?

_____________________________________________________________________

2. Give the steps in pouring a plaster item and preparing it for painting.

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

3. Know how to remove air bubbles from a poured item.

_____________________________________________________________________

4. Know how the setup time can be increased or decreased for plaster.

_____________________________________________________________________
_____________________________________________________________________

5. What precautions should be taken when cleaning the mixing and pouring equipment?

_____________________________________________________________________

6. When is a sealant applied to a plaster item and why?

_____________________________________________________________________
_____________________________________________________________________

7. What type of paint is best to use on plaster craft items?

_____________________________________________________________________
8. Paint three items that will include the following designs and techniques or equivalent:
   a. Floral to show shading
   b. Fruit to show highlighting
   c. Animal to show fine line or detail
   d. Religious motto to show letter highlighting

   Items painted
   1. __________________________  3. ____________________________
   2. __________________________

9. Mold and paint two additional items of different designs.

   Items molded and painted
   1. __________________________  2. ____________________________
1. Make a list of the materials and equipment used in making small castings in plastic molds.

2. Know how to clean and properly take care of plastic molds.

3. What safety precautions should be used when working with plastics?

4. Tell how to mix resin for casting and colored layers.
   - Casting
   - Colored layers

5. Why are the following used?
   - Catalyst
   - Surface hardener
   - Pigments

6. What is meant by polymerization?
7. Prepare and embed two nature items suitable for embedding. Nature items may be embedded in one or more castings.

Nature items: 1. ___________________ 2. ___________________

8. Make three castings with at least one item embedded in each casting.

<table>
<thead>
<tr>
<th>Castings</th>
<th>Item Embedded</th>
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<tbody>
<tr>
<td>1.</td>
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<tr>
<td>3.</td>
<td>___________________</td>
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</tbody>
</table>
1. Write or explain orally the different types and uses of pottery and the materials used in making it.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. What is the purpose of a glaze?

________________________________________________________________________

Describe the specific dangers to be avoided.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. Design and draw two pottery forms, one of which must be decorated.

Forms: 1. __________________________ 2. __________________________

4. Do three of the following. Each project is to be decorated, such as painted, glazed, or indented:
   a. Using the coil method, make a jar or vase.
   b. Using the slab method, make a box.
   c. Using the pinch pottery method, make one object.
   d. Design and make four different tiles.
   e. Make a tray or dish.
   f. Throw a simple vase on a potter's wheel.
Sculpturing

1. List the tools and materials used in simple sculpturing.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. Model two or more examples of toy animals, using a sculpture medium.
   1. ____________________________  2. ____________________________

3. Make a model of the human hand or foot, using a sculpture medium.

4. From a living model, make a statue "in the round" of the human head, using a sculpturing medium (not necessarily life size).
Silk Screen Printing

1. List the tools and equipment necessary for silk screen printing.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. Name three kinds of inks suitable for silk screen printing.
   1. __________________________
   2. __________________________
   3. __________________________

3. List at least three industrial uses of the silk screen process.
   1. ______________________________________________________
   2. ______________________________________________________
   3. ______________________________________________________

4. Tell how bottles and round surfaces are printed.
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________

5. Make a design, transfer the design to a screen, and screen print one of the following projects:
   a. At least ten greeting cards
   b. At least three posters
   c. Print a design on fabric
   d. Comparable project of your choice

Art, Crafts & Hobbies
General Conference
2002 Edition

Date completed ____________  Instructor’s Signature ____________________
Silk Screen Printing, Advanced

1. Have the Silk Screen Printing Honor.

2. Properly stretch and secure silk screen fabric to a frame.

3. Know what fabrics can be used in silk screening and the advantages of each.

<table>
<thead>
<tr>
<th>Fabric</th>
<th>Advantage</th>
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</table>

What factors influence the choice of mesh count for the screen?

4. Understand and use each of the following silk screen printing techniques:
   a. Hand cut film stencil method
   b. Photographic method
   c. Resist method

5. Use two of the following techniques in meeting requirement 4:
   a. Print a design using two or more colors in proper registration
   b. Print a repeat or all-over design
   c. Print a three-color design using only two colors of ink

6. Print on a material other than paper or fabric, such as glass, metal, or leather.
   Project: ____________________________________________
Soap Craft

1. What ingredients are used to make soap?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. What is the difference between soap and detergent?
   Soap: _____________________________________________________
   __________________________________________________________
   Detergent: _________________________________________________
   __________________________________________________________

3. What causes the cleansing action of soap?
   __________________________________________________________
   __________________________________________________________

4. Write or tell a story about the history and origin of soap.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

5. Name seven forms of soap.
   1. ____________________________  5. ____________________________
   2. ____________________________  6. ____________________________
   3. ____________________________  7. ____________________________
   4. ____________________________

6. What is scum?
   __________________________________________________________
7. Carve an object from a bar of soap.
   Object: ____________________________________________________

8. Decorate a bar of soap for a gift.
   Decorations: _______________________________________________

9. Make a scene out of whipped soap, using at least three colors.
   Scene: ____________________________________________________
   Colors 1. _____________________  3. _____________________
   2. _____________________

Soap Craft, Advanced

1. Have the Soap Craft Honor.

2. What types of fats can be used in making soap?

3. What is used in making soap transparent?

4. What are the advantages and disadvantages of soap and detergent?

<table>
<thead>
<tr>
<th></th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>Soap</td>
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</tbody>
</table>

5. What are some cleaning aids added to soap mixtures?

6. What makes soap float?

7. What makes soap hard?

8. Learn the following verses:
   Jeremiah 2:22
   Malachi 3:2.
9. Explain two methods of making soap. Make a batch of soap by one of these methods.

1. ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

2. ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

Method used: ______________________________________________________

10. Do one of the following:
    a. Visit a soap-making establishment, commercial or non-commercial.
    b. Obtain information from a soap-making firm about how soap is made.
    c. Study and prepare from an encyclopedia or another source a one- to two-page report that explains how soap is made.
Stamps

1. Relate briefly the story of the beginning of the postal service in your country.

2. How is the history of your country told in postage stamps?

3. What are the rates for first-class mail in your country?

4. What country does not have its name on its stamps and why?
   Country: __________________________
   Why: ____________________________

5. Know the meaning of the following:
   Coil stamp ________________________
   Booklet stamp ____________________
   Perforations _____________________
   Perforation gauge ___________________
Definitive stamps

Commemorative stamps

Hinges

Plastic mounts

6. Have a knowledge of how to soak stamps from paper and how to dry them.

7. Make a collection of at least 750 stamps. (No two stamps alike.)

8. Properly classify these stamps:
   a. As to country.
   b. In series; that is, according to year and design.

9. Mount your stamps with gummed hinges or plastic mounts. (Plastic mounts are preferred for mint stamps.)

10. Choose a topical idea and develop a display of at least nine pages, including a title page, suitable for a stamp club show, Pathfinder Fair, etc. Display should be artistically arranged, neatly labeled and mounted, showing careful thought and research. Be sure to include several covers or cachets.
   Topical idea:

Date completed ____________  Instructor’s Signature ________________

Stamps  2002 Edition
Stamps, Advanced

1. Have the Stamp Honor.

2. Know the meaning of the following:
   - Cancellation
   - Perfins
   - Blocks
   - Plate blocks
   - Precanceled
   - First day covers
   - Cachets
   - Souvenir sheets
   - Watermarks
   - Tongs

3. Make a display of at least 16 pages suitable for a stamp club show, Pathfinder Fair, or Junior Youth Philatelic Stamp Show. Display should be artistically arranged, neatly labeled and mounted, showing careful thought and research. Cachets and covers should be used as well.

4. Make a collection of 750 additional stamps with at least 50 stamps from each of five foreign countries.

5. Name two different catalogs for identifying stamps.
   1. 
   2. 

6. Using a stamp catalog, identify and mount according to catalog number and country.

7. Mount your stamps with gummed hinges or plastic mounts. (Plastic mounts are preferred for mint stamps.)
1. Describe the following:
   - String craft _________________________________________________
   - __________________________________________________________
   - Symmography ______________________________________________
   - __________________________________________________________
   - Geometric stitchery _________________________________________
   - __________________________________________________________

2. Draw and stitch on cardboard in equally spaced points:
   - A right angle
   - An acute angle
   - An obtuse angle

3. Name three ways to prepare wood for string art.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________

4. Using stringing methods on wood, do four of the following:
   - Filled circle
   - Hollowed circle
   - Star
   - Edging
   - Curve from within
   - Curve from without
   - Filler
   - Wing weave

5. Complete one original string art hanging on wood for display.
Textile Painting

1. Know the best types of material for painting and how to prepare them for painting.

2. Know how to trace and transfer a pattern onto the material.

3. How much time should be given for paint to dry?

4. Demonstrate the centering of patterns on material.

5. Properly clean brushes after they have been used, or if using tube paints, properly care for tubes and tips.

6. Paint three different designs, using paint brushes on at least two, using the following techniques:
   a. Highlighting
   b. Shading
   c. Fine line

   Designs: 1. _________________ 3. _________________
   2. _________________

7. Using a stencil, paint an item with at least two colors.

   Items: 1. _________________ 2. _________________
1. Describe the principle involved in most weaving procedures.

2. Define the following:
   - Warp
   - Woof
   - Shuttle
   - Yarn beam
   - Heddle
   - Cloth beam

3. Make a cardboard hand loom on which an envelope purse can be woven.

4. Design and weave a table runner or towel, using at least three different colors.

5. Make a jersey looped potholder.
Wood Carving

1. Explain the qualities of hard and soft woods and the best woods for wood carving.
   Hardwood: _________________________________________________
   __________________________________________________________
   Soft Wood: ________________________________________________
   __________________________________________________________
   Best woods for carving: ______________________________________
   __________________________________________________________

2. Describe the different wood carving tools and explain how to sharpen them.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

3. Explain the best methods of handling the grain of wood in designing.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

4. Design and carve a plaque in low relief.
   Design: ___________________________________________________
   __________________________________________________________

5. Design and carve two of the following items:
   a. Whistle
   b. Letter opener
   c. Tray
   d. Bookends
   e. Clock case
   f. Equivalent items of your choice
Wood Handicraft

1. Identify at least five common kinds of wood, such as pine, walnut, oak, and cedar.

Woods Identified:

1. ________________________________
2. ________________________________
3. ________________________________
4. ________________________________
5. ________________________________

2. Know the characteristics for the woods identified, and know one use for each example.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Use</th>
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</thead>
<tbody>
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<td>1.</td>
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<td>5.</td>
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</tbody>
</table>

3. What is the difference between hard and soft wood?

Hardwood: ________________________________

_______________________________________

Soft Wood: ________________________________

_______________________________________

4. Know how to properly use the following tools in wood handicrafts:

a. Coping saw
b. Rasp
c. Plane
d. Knife
e. Chisel
f. Sanding block
5. Know at least two safety procedures for each of the above tools.
   a. 1. ___________________________________________________
       2. ___________________________________________________
   b. 1. ___________________________________________________
       2. ___________________________________________________
   c. 1. ___________________________________________________
       2. ___________________________________________________
   d. 1. ___________________________________________________
       2. ___________________________________________________
   e. 1. ___________________________________________________
       2. ___________________________________________________
   f. 1. ___________________________________________________
       2. ___________________________________________________

6. Cut out, assemble, and finish animal bookends or doorstop.
   Project: ___________________________________________________

7. Cut out and finish a garden stake or lawn marker, using a design such as a child, bird, flower, or tree.
   Project: ___________________________________________________

8. Make a plaque, tray, notebook cover, or some other useful object in which wood burning is used.
   Project: ___________________________________________________
Health & Science

Basic Rescue
Blood and the Body’s Defenses
Bones, Muscles and Movement
Brain and Behavior
CPR
Chemistry
Child Care - Babysitting
Digestion
First Aid, Basic
First Aid, Standard
First Aid, Advanced
Health & Healing
Heart & Circulation
Heredity
Home Nursing
Optics
Physics
Red Alert

Euro Africa Division
North American Division
North American Division
Basic Rescue

1. What is the definition of an emergency rescue?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. Show how to safely rescue a person from the following situations:
   a. Being in contact with a live electric wire
   b. A room filled with fumes or smoke
   c. Clothes on fire
   d. Drowning using a non-swimming rescue
   e. An ice accident

3. Show three ways of attracting and communicating with rescue aircraft.
   1. __________________________________________
   2. __________________________________________
   3. __________________________________________

4. Know six indications for the need of an immediate rescue.
   1. __________________________________________
   2. __________________________________________
   3. __________________________________________
   4. __________________________________________
   5. __________________________________________
   6. __________________________________________

5. Know six procedures to follow before moving a victim from a life-threatening situation.
   1. __________________________________________
   2. __________________________________________
   3. __________________________________________
6. Know five principles involved in moving a victim from a life-threatening situation

1. ___________________________________________________________________
2. ___________________________________________________________________
3. ___________________________________________________________________
4. ___________________________________________________________________
5. ___________________________________________________________________

7. Know the proper ways to help a victim, without assistance, in the following:
   Pulling the victim ___________________________________________________________________
   Lifting the victim ___________________________________________________________________
   Assisting a victim in walking ___________________________________________________________________

8. Know the proper way to help a victim, with assistance, in the following:
   Chair carry ___________________________________________________________________
   Fore-and-aft carry ___________________________________________________________________
   Two-handed and four-handed seats ___________________________________________________________________
   Blanket carry ___________________________________________________________________
   Three-man hammock carry with victim in supine and prone position ___________________________________________________________________
Three- or four-man lift _______________________________________

__________________________________________________________

Six-man lift and carry _______________________________________

__________________________________________________________

9. Know how to properly use a stretcher and carry a victim on a stretcher.

__________________________________________________________

Know how to make an improvised litter.

__________________________________________________________

10. Know how to properly use ropes and knots as follows:
a. Tie knots for joining ropes together
   Knots Tied: ___________________________________________

b. Tie knots for shortening a rope
   Knots Tied: ___________________________________________

c. Tie knots for use around a person for a rescue
   Knots Tied: ___________________________________________

d. Coil and accurately throw a light and a heavy 50-foot (15.2 m) rope.

11. What steps should be taken before reporting a lost person?

____________________________________________________________

____________________________________________________________

____________________________________________________________

____________________________________________________________

What information will be needed when reporting a lost person?

____________________________________________________________

____________________________________________________________

____________________________________________________________

____________________________________________________________
How is a search for a lost person conducted in a wilderness area?

_____________________________________________________________

_____________________________________________________________

_____________________________________________________________

_____________________________________________________________
<table>
<thead>
<tr>
<th>SAFELY RESCUE PERSON FROM FOLLOWING SITUATIONS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICE ACCIDENT</td>
</tr>
<tr>
<td>DROWNING/NON-SWIM</td>
</tr>
<tr>
<td>CLOTHES ON FIRE</td>
</tr>
<tr>
<td>ROOM WITH SMOKE</td>
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<tr>
<td>WIRE WITH ALIVE ELECT</td>
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</table>

<table>
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<tr>
<th>PROPERLY USEropes AND KNOTS</th>
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<tbody>
<tr>
<td>COIL &amp; THROW LIGHT</td>
</tr>
<tr>
<td>RESCUE PERSON FOR ROPE</td>
</tr>
<tr>
<td>KNOTS AROUND</td>
</tr>
<tr>
<td>ROPE TO SHORTEN</td>
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<tr>
<td>KNOTS JOINING ROPE</td>
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</table>

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<tr>
<th>BASIC RESCUE INSTRUCTOR’S CHART</th>
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<td>NAME</td>
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</table>
Blood and the Body's Defenses

1. Have the Microscopic Life Honor.

2. Name the two major constituents of blood. What is the percentage of each in normal blood.

<table>
<thead>
<tr>
<th>Constituents</th>
<th>Percentage</th>
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<tbody>
<tr>
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</table>

3. Be able to draw pictures of and name the 7 types of blood cells and indicate what each type does.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
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<td>7.</td>
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</tbody>
</table>
4. Observe some preserved human blood under a microscope. Count 100 white blood cells and draw a graph showing the number of each of the five types of white blood cells that you found.

Blood Cells
1. ____________________________________________
2. ____________________________________________
3. ____________________________________________
4. ____________________________________________
5. ____________________________________________

Graph

Which type is most common?

__________________________________________________________

Which is least common?

__________________________________________________________

5. Do at least one of the following and report on what you observed:
   a. Observe blood being drawn from someone’s arm by a medical professional.
   b. With the help of an experienced person, observe blood flowing through some capillaries (either on video tape or in a living organism (such as hamster cheek-pouch, frog skin, or goldfish tail) using a microscope.
   c. Visit a medical laboratory where blood tests are performed.
   d. Visit a blood bank.

6. What two gases are transported by the red blood cells?
   1. ________________________________  2. ________________________________
Explain why blood appears blue/green in your veins but if you cut yourself, the blood that comes out is bright red.

Explain why a lack of iron in your diet might make you have yellowish-colored blood.

☐ 7. Explain how blood clots when you are injured.

How does typical “First Aid” help in this process?

☐ 8. What does it mean to be a blood donor?

If possible, know your own blood type. _________________________

What types of blood can be donated to you?

Which blood types cannot be donated to you?

Why?
9. Tell two stories in the Bible in which blood is involved.

Stories: 1. ____________________________

2. ____________________________

From what you know about blood, why do you think that the Bible uses blood as a symbol of God’s saving power?

__________________________________________________________________________

__________________________________________________________________________

10. List 10 specific health habits that can help your body stay healthy and fight off infection. Find a reference from the Spirit of Prophecy that supports each one of these.

<table>
<thead>
<tr>
<th>Habits</th>
<th>References</th>
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11. Define the following terms relating to the body’s defenses:

immunology ____________________________

______________________________________

pathogen inflammation __________________

______________________________________

antibody ____________________________

______________________________________
memory cells

immunity

vaccine

allergy

histamine

antihistamine

12. Poison Ivy and poison Oak are plants commonly encountered by active Pathfinders.

Identify Poison Ivy and Poison Oak

Poison Ivy

Poison Oak

How to avoid an allergic reaction

Explain what to do if you get an allergic reaction to either.

13. Make a list of as many as possible of the infectious diseases that you have had.

Diseases
Which ones are you now immune to? Explain why or why not.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Why or why not?</th>
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14. From your personal medical records, list all the vaccines that you have had and determine from your doctor when your next vaccination should be.

Vaccines

<p>| |</p>
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Next one: _____________________________

15. Write or tell about one infectious disease (at least 250 words).

16. What is AIDS?

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How is it spread?

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Is there a cure?

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Why is it so devastating?

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</table>

17. Find three biblical references that have to do with cleanliness and the control of or spread of disease.

1. _____________________________  3. _____________________________
2. _____________________________
1. What's the difference between exoskeletons and endoskeletons?

Exoskeletons ______________________________________________________

Endoskeletons ______________________________________________________

Which type of skeleton do humans have?

__________________________________________________________

2. List three functions of the skeletal system

1. _________________________________________________________

2. _________________________________________________________

3. _________________________________________________________

3. Is bone a living tissue? _______________________________________

   Explain why or why not.

   __________________________________________________________

   __________________________________________________________

4. Describe the structure and development of bone.

   __________________________________________________________

   __________________________________________________________

5. Identify the following bones of the skeletal system:

   Carpals ___________________________________________________

   __________________________________________________________

   Clavicle (collar bone) _______________________________________

   __________________________________________________________
cranium ___________________________________________________

__________________________________________________________

femur _____________________________________________________

__________________________________________________________

fibula _____________________________________________________

__________________________________________________________

humerus __________________________________________________

__________________________________________________________

mandible __________________________________________________

__________________________________________________________

maxillary bones ____________________________________________

__________________________________________________________

metacarpals ________________________________________________

__________________________________________________________

metatarsals _________________________________________________

__________________________________________________________

patella ____________________________________________________

__________________________________________________________

pelvis _____________________________________________________

__________________________________________________________

phalanges __________________________________________________

__________________________________________________________

radius _____________________________________________________

__________________________________________________________

ribs ______________________________________________________

__________________________________________________________

scapula (shoulder lade) _______________________________________

__________________________________________________________

coccyx (tail bone) __________________________________________

__________________________________________________________

Bones, Muscles, and Movement
2002 Edition
6. What is a joint?

7. List the three types of joints found between bones.
   1. ______________________  3. ______________________
   2. ______________________

8. Name and describe six types of freely movable joints. Be able to locate an example of each of these in your body.
   1. ______________________  4. ______________________
   2. ______________________  5. ______________________
   3. ______________________  6. ______________________

9. Be creative and construct a model of one of the six freely movable joints.

10. What is another name for a broken bone?

List 3 types of breaks that can occur in bones.
   1. ______________________  3. ______________________
   2. ______________________
Describe how bones heal and how doctors can help this process.

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

11. What is osteoporosis?

__________________________________________________________

Who can get it?

__________________________________________________________

List at least 5 health habits that deal with maintaining healthy bones and muscles.

1. __________________________

2. __________________________

3. __________________________

4. __________________________

5. __________________________

12. What is the function of the muscular system?

__________________________________________________________

13. Name and describe three types of muscle tissue. Give one example of each.

<table>
<thead>
<tr>
<th>Muscle Tissue</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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</table>

14. Be able to identify the following muscles on your body:

a. Masseter
b. Trapezius
c. Deltoid
d. Pectoralis
e. Biceps
f. Abdominal
g. Quadriceps
h. Triceps
i. Latissimus dorsi
j. Gluteus maximus
k. Hamstrings
l. Gastrocnemius
m. Soleus.

15. Describe the process that causes a muscle to contract.

________________________________________________________________________
________________________________________________________________________

16. Describe the difference between voluntary and involuntary muscles.
Voluntary ________________________________________________________________
________________________________________________________________________
Involuntary ______________________________________________________________
________________________________________________________________________

17. Using your model in # 9, show how muscles, bones, and joints work together to produce movement.

18. Find 3 texts in the Bible that mention bones and/or muscles. Tell about each one in your own words.

1.  ________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2.  ________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3.  ________________________________________________________________
________________________________________________________________________
________________________________________________________________________
1. Be able to label a diagram or a model of a human brain including the following parts and tell briefly what each part does.
   - medulla
   - pons
   - cerebellum
   - midbrain
   - thalamus
   - hypothalamus
   - pituitary gland
   - cerebrum

2. What is a neuron?

Draw a picture of a typical neuron and label it's parts.
Where does information enter a neuron and where does information leave from?

3. Explain how drugs affect the function of neurons especially at the 'synapse'.

Make a commitment never to take drugs except for medical reasons.

4. What is a reflex?

Perform a knee-jerk reflex test on someone. (Instructions: Gently tap someone just below the knee-cap while the person's leg is hanging over the edge of a chair.). Explain why it occurs (use the following terms in your answer: sensory neuron, motor neuron, spinal cord).

Why do doctors use this test in a physical exam?

5. What is a sensory neuron?

What is "adaption". Demonstrate adaption by doing the following:

a. Rest your arm on a table and then place a small cork (or something very light) on your arm. Notice how it feels at that time and how it feels one minute later after not moving.

b. Place one finger of one hand in a bowl of cool water and another finger of the other hand into a bowl of warm water. After 30 seconds, put both fingers in to a bowl of water at room temperature. How does the water at room temperature feel on each finger?
c. What spiritual lesson can be drawn from the concept of adaptation?

________________________________________________________________________

________________________________________________________________________

6. How are the senses of taste and smell similar and how are they different.

Similar
________________________________________________________________________
________________________________________________________________________

Different
________________________________________________________________________
________________________________________________________________________

Draw a map of which part of the tongue responds to the following tastes. **Instructions:** Have someone dip a Q-tip into one of the following: sugar water (for sweet), lemon juice (for sour), flat tonic water (bitter) or salty water (salt), and then lightly touch different parts of your tongue. Notice which areas of the tongue taste the solution that is being tested. Rinse with pure water between each test and use a new Q-tip for each test.

**Sweet**

**Sour**

**Bitter**

**Salt**
7. Draw a picture of the various parts of the eye and explain why you have a blind-spot. Find your blind-spot for one eye. **Instructions:** Place a very small black dot on the center of a white piece of paper. Close one eye and stare directly ahead. Hold the paper at arms length in front of you and move the paper until the spot "disappears" (usually this occurs when the dot is just a bit below eye level—it is important).

8. Describe the three basic parts of the ear and tell what each part does.

<table>
<thead>
<tr>
<th>Basic Parts</th>
<th>Function</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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</tbody>
</table>

Explain why the following activities can be bad for your hearing:

- listening to a "walkman"
- putting something long in your ear
- being in the front row at a loud music concert
not treating an ear infection properly


standing behind a jet at an airport


9. Do one or more of the following activities: (some of these activities will need to be planned with a medical/dental professional or at a local college or university—they are usually very willing to assist you)
   a. Observe an electroencephalogram or one being performed on someone and describe what can be learned from this test.
   b. Watch a "lie-detector" test being performed. Briefly explain how one works.
   c. Observe an MRI or one being performed and explain what information can be learned from such a test.
   d. Observe a neuron under a microscope.
   e. Observe someone receiving an local or general anesthetic and explaining how an anesthetic works.
   f. Observe a real human brain (fresh or preserved)

10. List at least 5 things that you can do to protect your brain from damage.
   1. _____________________________________________
   2. _____________________________________________
   3. _____________________________________________
   4. _____________________________________________
   5. _____________________________________________

11. Do one of the following:
   a. Visit and help care for someone (minimum of 2 hrs) who has a disease of the brain and report on their special needs.
   b. Briefly describe the following disorders of the nervous system:
      Alzheimer's Disease _______________________________________
      _____________________________________________
      Multiple Sclerosis _________________________________
12. Find at least three references from the Bible that refer to your brain and/or to decisions that you make in life.

1. ______________________  
2. ______________________  
3. ______________________
CPR - Cardiopulmonary Resuscitation

1. Successfully complete a class sponsored by either the American Heart Association, the American Red Cross, or an equivalent under a certified instructor in order to properly learn and demonstrate one-person CPR. This must be within the past 12 months.
   Date course completed: ________________________________

2. Know and understand the location and function of the heart and lungs.
   Location: ________________________________
   Function: ________________________________

3. Define CPR and tell five conditions under which it would be used.
   Definition: ________________________________
   Conditions of use:
   1. ________________________________
   2. ________________________________
   3. ________________________________
   4. ________________________________
   5. ________________________________

4. Understand Prudent Heart Living.
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________

List five things a person can do to maintain a healthy heart.
1. ________________________________
2. ________________________________
3. ________________________________
4. ________________________________
5. ________________________________
5. Develop, maintain, and keep a record of a personalized program in exercise, health, and diet habits for one month.

6. Learn the significance of the colors and design used on the honor token for this honor as follows:
   a. The person needing CPR is white, signifying no circulation.
   b. The person giving CPR is red, signifying a very alive person.
   c. The background of purple signifies loyalty or commitment.
   d. The border of gold speaks to the value of the human life.
   e. A heart is formed by the head, shoulders, and arms of the person performing the CPR, signifying compassion for another individual.
1. Define the following terms:
   Elements ____________________________________________________
   ____________________________________________________________
   Compounds _________________________________________________
   ____________________________________________________________
   Chemical symbols __________________________________________
   ____________________________________________________________
   Solutions _________________________________________________
   ____________________________________________________________
   Atoms _____________________________________________________
   ____________________________________________________________
   Molecules _________________________________________________
   ____________________________________________________________
   Periodic table ______________________________________________
   ____________________________________________________________
   Combustion _________________________________________________
   ____________________________________________________________
   Acid ______________________________________________________
   ____________________________________________________________
   Salt _______________________________________________________ 
   ____________________________________________________________
   Proton ____________________________________________________
   ____________________________________________________________
   Neutron __________________________________________________
   ____________________________________________________________
Electron  __________________________________________________

Distillation  __________________________________________________

Fractional distillation  ________________________________________

Filtration  __________________________________________________

2. What gases extinguish life, and how?

Explain the principle of one kind of chemical fire extinguisher.

3. Name two common sources of carbon monoxide.
   1. __________________________   2. __________________________
   Why is it dangerous?

4. What are the states of matter?

5. Do five of the following, and explain the chemical action that takes place:
   a. Try to light a sugar cube, first without and then with some ash applied to the cube, thus showing the action of a catalyst.
      Chemical action: ________________________________
b. Place an ice cube in a glass of water, place a four-inch (10.2 cm) string on top of the glass and ice, then solve the problem of taking the ice cube out of the water without touching it.
Chemical action: ______________________________________
____________________________________________________

c. With the use of water, turpentine, and soap, transfer a newspaper picture to a blank sheet of paper.
Chemical action: ______________________________________
____________________________________________________

d. With the use of a candle and a piece of cardboard, demonstrate visually the three parts of a candle flame.
Chemical action: ______________________________________
____________________________________________________

e. With a bowl of water, wooden match sticks, a lump of sugar, and small amount soap, demonstrate the action of sugar and soap on the floating match sticks.
Chemical action: ______________________________________
____________________________________________________

f. Place a fresh egg in fresh water and then salt water, noting the difference.
Chemical action: ______________________________________
____________________________________________________

g. Demonstrate that rust uses up oxygen with the use of steel wool, a pencil, a rubber band, a water glass, and a dish of water.
Chemical action: ______________________________________
____________________________________________________

h. Demonstrate the colors produced when the following are burned: salt, copper, sulfate, and boric acid.
Chemical action: ______________________________________
____________________________________________________

i. Make an invisible ink.
Chemical action: ______________________________________
____________________________________________________

j. Show that washing soda or sodium carbonate contains water.
Chemical action: ______________________________________
____________________________________________________
1. Have the Nutrition Honor.

2. Keep a record of what and how much food you eat for two weeks. Compare your diet to that of the food pyramid.

3. What is digestion?

What is another name for the human digestive system?

4. Where does saliva come from?

What are the three functions of saliva?

5. Be able to identify the following parts of the tooth: enamel, dentin, pulp, gum, cementum, and periodontal membrane.

What role do the teeth play in digestion?

6. Be able to label a diagram or model of all the organs that help with digestion. Starting from where the food goes into the mouth to where it was expelled from the anus.

7. Know the difference between food bolus and chyme.

Food bolus

Chyme
8. Where does bile come from?

__________________________________________________________

Where is it stored?

__________________________________________________________

What does it do in the duodenum?

__________________________________________________________

9. What are villi?

__________________________________________________________

What makes them absorb the nutrients so quickly?

__________________________________________________________

At what point are all the nutrients removed from the food/chyme?

__________________________________________________________

Compare the amount of water absorbed by plain paper compared to a similar sized paper towel using an 1/8 cup (17.2 ml) of water.

<table>
<thead>
<tr>
<th>Water</th>
<th>Plain Paper</th>
<th>Paper Towel</th>
</tr>
</thead>
</table>

10. What happens if too much water is present in the large intestine?

__________________________________________________________

What happens if not enough water is present?

__________________________________________________________
11. How does fiber in your diet aid in digestion?

________________________________________________________________________

How long should food remain in the digestive tract?

________________________________________________________________________

What happens if food stays in the digestive system too long?

________________________________________________________________________

12. Demonstrate the digestion of starch into simple sugar using the iodine test.

13. What are the six basic nutrients that are essential for life and where does the bulk of their digestion/absorption take place?

<table>
<thead>
<tr>
<th>Nutrients</th>
<th>Digestion/Absorption</th>
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</table>

14. Know the difference between monosaccharide, disaccharide, and polysaccharide.

   Monosaccharide ____________________________

   Disaccharide ____________________________

   Poly saccharide ____________________________

What is the most important carbohydrate?

________________________________________________________________________
15. What are amino acids?

How many are needed to make all the proteins in the body?

What is meant by essential amino acids?

How many of them are essential?

Where can you get all the essential amino acids?

16. What is ATP?

What is it used for?

What does your body make ATP from?

What three sets of chemical reactions make ATP in your body?
1. 
2. 
3. 
Why do we need to breathe oxygen?

17. Know the difference between water and fat soluble vitamins.
Water soluble

Fat soluble

What are two common vitamins that are fat soluble?
1. 
2. 

What are two vitamins that are water soluble?
1. 
2. 

18. List four (4) Bible texts that refer to digestion.
1. 
2. 
3. 
4. 

19. List five (5) E.G. White references that promote proper digestion. Choose a variety of topics.
1. 
2. 
3. 
4. 
5. 
First Aid, Basic

(Instructor for Skills Required)

If residing in the United States or another country where Red Cross instruction is given, satisfactorily pass the Red Cross Examination in Basic First Aid and receive your certificate.

In British countries pass the examination in St. John Ambulance and receive certificate for the same.

Or complete the following requirements:

1. Know the causes of shock and demonstrate its proper treatment.
   Causes ____________________________________________________
   _________________________________________________________
   Treatment ________________________________________________
   _________________________________________________________

2. Know the proper steps for rescue breathing.
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________

3. Know the proper procedures to assist a choking victim.
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________

4. Know the proper procedures to assist a bleeding victim.
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
5. Know the pressure points and how to correctly apply pressure at these points.

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

6. Know the proper procedure to assist a victim of poisoning.

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

7. Demonstrate the proper procedure in splinting various broken bones in the body.
   Areas splinted ______________________________________________
   __________________________________________________________

8. Know the proper procedure to assist the burn victim.
   First degree ________________________________________________
   __________________________________________________________
   Second degree ______________________________________________
   __________________________________________________________
   Third degree _______________________________________________
   __________________________________________________________

9. Know the proper procedure to assist a victim of a chemical burn.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

10. Know what situations are likely to cause carbon monoxide poisoning and the rescue and treatment techniques for such poisoning.
    Causes ________________________________________________
    _________________________________________________________
    _________________________________________________________
    _________________________________________________________

First Aid, Basic
2002 Edition
Rescue techniques __________________________________________
________________________________________________________
Treatment ________________________________________________
________________________________________________________

11. Know the proper procedure for giving assistance to the victim of a head injury.

12. Know the proper procedure for giving aid to a victim of internal injuries.

13. Know the difference between the following and the treatment of each

Heart attack ________________________________________________
________________________________________________________
Treatment ________________________________________________
________________________________________________________

Stroke ____________________________________________________
________________________________________________________
Treatment ________________________________________________
________________________________________________________

Epilepsy ___________________________________________________
________________________________________________________
Treatment ________________________________________________
________________________________________________________
simple fainting

Treatment

14. Know how to prevent infection.

15. What is the proper treatment for a snake bite?

16. What is the proper treatment for animal bites?

17. What is the proper treatment for insect and spider bites?

18. What is the difference between heat exhaustion and heat stroke, and what is the treatment for each?

Heat exhaustion

Treatment

Heat stroke

Treatment

First Aid, Basic
2002 Edition
19. What should you do if your clothes catch fire?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

20. What are the basic fire prevention principles for the home?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

21. What are the basic water safety principles?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

22. What are the ways to save a drowning victim without swimming?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

23. What are the basic electrical safety principles?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

24. How can you prevent food poisoning?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

Note: The red oval on the patch designates “basic” level.
First Aid, Standard

(Instructor for Skills Required)

If residing in the United States or another country in which Red Cross instruction is given, satisfactorily pass the Red Cross Examination in Standard First Aid and receive your certificate.

In British countries pass the examination in St. John Ambulance and receive certificate for the same.

Or complete the following requirements:

1. Know the basic principles for mouth-to-mouth breathing and the treatment for an obstructed airway.

   Principles __________________________________________________
   __________________________________________________________
   __________________________________________________________
   Treatment ________________________________________________
   __________________________________________________________
   __________________________________________________________

2. What is the difference between a heart attack and a stroke and the treatment for each?

   Heart attack ______________________________________________
   __________________________________________________________
   __________________________________________________________
   Treatment ________________________________________________
   __________________________________________________________
   __________________________________________________________

   Stroke ____________________________________________________
   __________________________________________________________
   __________________________________________________________
   Treatment ________________________________________________
   __________________________________________________________

3. Know the proper procedure for assisting a bleeding victim.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
4. Know the pressure points and how to correctly apply pressure at those points.

5. Know the proper method of applying a tourniquet and when to apply one.

6. Know the causes of shock and demonstrate its proper treatment.

7. Know the proper procedure for assisting a victim of poisoning.

8. Know the proper procedure for assisting a burn victim.

9. Know how to properly apply the following bandages:
   a. Open and closed spiral    c. Fingertip
   b. Figure-eight            d. Cravat bandage to the head
10. Know how to apply the following splints:
   a. Upper arm splint
   b. Forearm splint
   c. Ankle splint
   d. Kneecap splint

11. Know the proper treatment for the following:
   Head injuries

   Internal injuries

   Gunshot wounds

   Injuries to the eye

   Animal and insect bites

   Fainting and epilepsy

   Effects of heat and cold


13. Know how to escape from a fire.

14. Know how to obtain help in an emergency
15. Know the proper procedure to assist a radiation-exposure victim.

__________________________________________________________
__________________________________________________________
__________________________________________________________

16. Know the following rescue carries:
a. Drag by shoulder  e. Improvised litter
b. Blanket drag  f. Three-person hammock carry
c. Two-person carry  g. Litter carry
d. Carry by extremities

Note: The white oval on the patch designates “standard” level.
First Aid, Advanced

If residing in the United States or any other country in which Red Cross instruction is given, pass the American Red Cross exam in Advanced First Aid and receive your certificate.

Note: The yellow oval on the patch designates “advanced” level.
Pathfinder’s Name

Health and Healing

☐ 1. Be in at least the eighth grade.

☐ 2. Through the Bible and/or Spirit of Prophecy learn how Jesus healed the sick and the procedure for church elders to use to anoint the sick and ask God for healing. Write a 250-word report or give a two-minute oral report on what you learned.

☐ 3. What is continuing education as related to health careers?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

☐ 4. Interview at least two people who work in a medical health career. One of the two must be someone other than a doctor or nurse, such as someone working in dentistry, physical therapy, respiratory therapy, radiology, nutrition, etc.

People interviewed

1. ________________________________________________________________

2. ________________________________________________________________

In your interviews ask the following questions:

a. Why did you choose your profession?

b. What education is necessary to enter your profession?

c. After education what amount of time does it take to become certified or proficient in your field?

d. What part of your job do you like the best? The least?

e. What days of the week and hours per day do you work at your job?

f. What advancement is available in your field?

g. What course of study in college would complement your chosen profession?

h. List local schools that offer training in your profession?
5. Do one of the following:
   a. Be a candy striper or a page in a hospital or medical facility.
   b. Visit a medical or dental office and do the following:
      (1) Observe the areas of operation, such as the business
          office, laboratory, examining rooms, x-ray room, etc.
      (2) Be introduced to the equipment used in the office.
      (3) Learn the steps of an office visit from when a patient
          comes into the waiting room until the time he leaves the
          office.
      (4) Learn how the doctor does an examination from the taking
          of the patient's history to the diagnosis.
   c. Go on a visit with a home nurse and do the following:
      (1) Learn the steps of a home visit from when the nurse finds
          out about the patient to when the nurse reports to a doctor.
      (2) Observe the nurse taking the vital signs.
      (3) Observe the nurse giving instructions and medication.
   d. Visit an outpatient department of a hospital, such as physical
      therapy, x-ray, laboratory, etc. Do the following:
      (1) Observe the areas of operation in the department.
      (2) Be introduced to the equipment used in the department
          and how it works.
      (3) Learn the steps a patient takes when visiting the
          department.
      (4) How many people does it take to staff the department?
      (5) Does the department operate at night?
Home Nursing

1. Have the First Aid Honor.

2. What foods are included in the following diets
   - Liquid ____________________________
   - Soft ______________________________
   - Light ______________________________
   - Full ______________________________

3. Know the symptoms of a fever.
   __________________________________________
   Know how to take person's temperature.
   __________________________________________
   Know how to bring a high temperature down.
   __________________________________________

4. Know what is a normal rate for
   - pulse ________________________________
   - respiration __________________________
   - temperature __________________________

   Practice taking the pulse rate, respiration rate, and temperature of a friend or classmate.

   Friend/Classmate ________________________________
   Pulse _________ Respiration _________ Temperature ____________

5. What is a communicable disease?
   __________________________________________
   How is it transmitted?
   __________________________________________
What precautions should be followed to guard against communicable diseases?

__________________________________________________________

List safety measures to be observed when caring for a person with a communicable disease in the home.

__________________________________________________________

__________________________________________________________

__________________________________________________________

6. What symptoms tell you that a person is physically ill?

__________________________________________________________

__________________________________________________________

7. Know how to help take care of a newborn and an aged person in your home.
   Newborn ________________________________________________
   Ways to help ____________________________________________
   ________________________________________________________
   ________________________________________________________
   ________________________________________________________
   Aged Person _____________________________________________
   Ways to help ____________________________________________
   ________________________________________________________
   ________________________________________________________
   ________________________________________________________

8. Know when and how to wash your hands when caring for a sick person.
   When __________________________________________________
   How ____________________________________________________
9. Know how to make a bedridden patient comfortable in bed.

10. Show how to feed a helpless patient in bed.

11. Show how to give liquid medicine and tablets, pills, or capsules to children and adults.
Know how to properly apply eye drops.

12. Demonstrate the method of giving fomentations and foot baths.
Explain the value of their use and tell the conditions under which such treatments should be given.
Value _____________________________________________________

_________________________________________________________

Conditions_________________________________________________

_________________________________________________________

13. Demonstrate the application of a heating compress and the use of heat and cold for the treatment of inflammation and bruises.

14. Explain how the following natural remedies help in preventing disease:
(Note how the first letter of each item spells NEW START).

Nutrition

Exercise _____________________________________________________

_________________________________________________________

Water _____________________________________________________

_________________________________________________________

Sunshine ___________________________________________________

_________________________________________________________

Temperance ________________________________________________

_________________________________________________________
1. Define and/or draw a diagram of the following:
   Focal length ________________________________________________
   __________________________________________________________

   Positive lens ______________________________________________
   __________________________________________________________

   Negative lens _____________________________________________
   __________________________________________________________

   Two kinds of distortion _________________________________
   _________________________________________________________
Longitudinal color

Lateral color

Spherical aberration

Achromatic lens

Refraction of light
2. Explain how light behaves when it strikes or traverses water, oil, feldspar, and a mirror.

Water _____________________________________________________
__________________________________________________________

Oil _____________________________________________________
__________________________________________________________

Feldspar __________________________________________________
__________________________________________________________

Mirror ____________________________________________________
__________________________________________________________

3. Name and draw diagrams of three kinds of positive lenses and three kinds of negative lenses.

Positive
1. ______________ 2. ______________ 3. ______________

Negative
1. ______________ 2. ______________ 3. ______________

4. What should be the minimum distance of light source from the lens when testing for focal length?

_______________________________________________

5. Find the focal length of at least four lenses, one being a negative lens.

1. __________________________ 3. __________________________
2. __________________________ 4. __________________________

6. Explain by diagram why an image from a positive lens makes an image reversed and inverted.
7. Show with diagrams how a prism works. State the angles at which the colors appear and disappear.

8. Show and demonstrate what happens when light strikes one-way glass.

9. Construct one optical instrument using mirrors or lenses, such as a periscope, a slide or opaque projector, or a simple telescope.

10. Explain what is meant by the term 6x35 and 7x50 as applied to binoculars.

11. Define the term "f/stop" as used in connection with cameras.

What does it mean when a lens is fast or slow?

Is an f/8.5 lens faster or slower than an f/8 lens?
Physics

1. Define the following:
   Physics ____________________________________________________
   Mass _______________________________________________________
   Work _______________________________________________________ 
   Force _______________________________________________________ 
   Power _______________________________________________________ 
   Potential energy _____________________________________________
   Kinetic energy ______________________________________________
   Weight ____________________________________________________
   Matter ____________________________________________________
   Inertia _____________________________________________________
   Friction ___________________________________________________
   Wave _______________________________________________________
Center of gravity ____________________________

Exponential notation ____________________________

Absolute zero ____________________________

Fulcrum ____________________________

2. What is the scientific method? How can the scientific method be used to study the Bible?

3. What is a controlled experiment?

4. Explain the terms in Albert Einstein's E=mc^2 equation.

5. What units of measure for mass, length, and time are used where you live?
   Mass ____________________________
   Length ____________________________
   Time ____________________________

6. What units of measure are used for time prophecy in the Bible?

What is the chapter and verse where they can be found?
7. List Newton's three laws of motion.
   1. ___________________________________________________________________
   2. ___________________________________________________________________
   3. ___________________________________________________________________

8. Using a table cloth and several heavy books, demonstrate Newton's first law of motion.


10. Demonstrate Galileo's falling body experiment by dropping two plastic beverage bottles (one full of water, the other half full) at the same time from a height of seven feet. Record the results and draw a spiritual application from this experiment.

   Results ___________________________________________________________________
   ___________________________________________________________________

11. Demonstrate the mechanical advantage of levers by pulling a large nail, driven deeply into a board, using only a hammer. Pull a second nail using a hammer and a small block of wood, located near the nail, under the head of the hammer. Note the difference in force required to pull the nail with different positions on the hammer on the block (fulcrum) and draw a spiritual application from this experiment.

   Force required ___________________________________________________________________
   ___________________________________________________________________

   Position ___________________________________________________________________
I. Tell what you should do to prevent injury and/or possible loss of life in the following situations:

A fire in your house __________________________________________

__________________________________________________________

A neighbor’s house __________________________________________

__________________________________________________________

A public building ____________________________________________

__________________________________________________________

If you are stranded in a car in a blizzard or desert ________________

__________________________________________________________

Motor vehicle accident _________________________________________

__________________________________________________________

Earthquake _________________________________________________

__________________________________________________________

Flood _____________________________________________________

__________________________________________________________

Tornado ___________________________________________________

__________________________________________________________

Hurricane __________________________________________________

__________________________________________________________

Thunderstorm ______________________________________________

__________________________________________________________

Atomic emergency __________________________________________

__________________________________________________________
Rock or snow avalanche __________________________________________

Your boat or canoe capsizes in open water __________________________________________

2. When telephoning for help in an emergency situation, what essential information should be given and who should hang the telephone up last?

3. Demonstrate what emergency first aid measures you should take in the following situations?
   a. Someone’s clothes catch on fire
   b. A severely bleeding wound
   c. Someone is choking
   d. Someone swallows poison

4. Do the following:
   a. Draw an escape route for your family in case of fire in your home when normal exits are blocked.
   b. Practice with your family a home fire drill.
      Date of drill __________________________________________
   c. Discuss with your examiner the procedures for safely getting people out of your church and school in case of a fire. Consideration should be given as to how to prevent panic.
      Panic prevention __________________________________________

5. What should you and your parents do to prevent abduction of children in your family?

What should you do if you are abducted?

Date completed ___________  Instructor’s Signature ____________________
Household Arts Index

Baking
Basic Sewing
Cooking
Cooking, Advanced
Cultural Food Preparation
Dressmaking
Dressmaking, Advanced
Food - Canning
Food - Drying
Food - Freezing
Housekeeping
Laundering
Mat Making
Nutrition
Nutrition, Advanced
Quilting
Tailoring
Tapa Cloth

South Pacific Div/Island Ed.
Baking

1. Explain the difference in food value between whole wheat flour and white flour.

   Whole wheat flour

   __________________________________________________________
   __________________________________________________________

   White flour

   __________________________________________________________
   __________________________________________________________

2. Describe the effects of yeast in bread making.

   __________________________________________________________
   __________________________________________________________


   Old Testament

   __________________________________________________________

   New Testament

   __________________________________________________________

4. Prepare whole grain bread (can be wheat, rye, oatmeal, etc.).

   Type of bread

   __________________________________________________________

5. Prepare two of the following:
   a. Yeast biscuits
   b. Unleavened bread
   c. Bread sticks
   d. Bagels
   e. Vegetable bread

6. Explain why the use of baking powder and soda should be avoided and why the mixture of milk, sugar, and eggs is harmful to health.

   Baking powder and soda

   __________________________________________________________
   __________________________________________________________

   Milk, sugar and eggs

   __________________________________________________________
7. How do you test a cake for being done?

How do you keep a cake from "falling"?

8. Prepare two of the following:
   a. Cake from basic ingredients (any flavor)
   b. Cake from a mix (any flavor)
   c. Fruit or nut cake or loaf cake
   d. Sponge cake

9. Make one pie in each of the following categories:
   a. Baked, any fruit, including lemon
   b. Unbaked (baked pie shell only), fresh fruit, gelatin, etc.

10. Make and bake one recipe of cookies.
    Type of cookies ______________________________

    Make one recipe of refrigerator cookies.
    Type of cookies ______________________________

    It is preferable to use wholesome ingredients such as fruit, oatmeal, nuts, etc.

11. Prepare recipe file for all of the items required above and any others desired. See how many recipes you can find using fruit without large amounts of sugar.
Basic Sewing

1. Describe the proper use of the following:
   - Thimble ________________________________
   - Tape measure ________________________________
   - Scissors and shears ________________________________
   - Pinking shears ________________________________
   - Needles of various sizes and types ________________________________

2. Become acquainted with the sewing machine in your home or school.
   Identify:
   a. Balance wheel
   b. Thread take-up
   c. Presser foot
   d. Presser foot lifter
   e. Needle
   f. Feed dogs
   g. Bobbin
   h. Control
   i. Backspace lever

3. Demonstrate how to properly thread and run the machine.

4. Put a hem in one of the following items showing neat and even stitches.
   a. Towel
   b. Apron
   c. Flannel baby blanket
   d. Flannel lap blanket
      Item hemmed ________________________________

5. Demonstrate your ability to properly sew on buttons and snaps.
6. Tell what is meant by selvage, bias, and grain of fabric.
   Selvage ___________________________________________________
   Bias ______________________________________________________
   Grain of fabric _____________________________________________

7. Make a laundry bag for camping, or a similar simple item.
Cooking

1. Know how to properly operate the kind of stove you have in your home. Know how to put out an oil or grease fire on your stove.

__________________________________________________________

__________________________________________________________

Know how to prevent such a fire.

__________________________________________________________

__________________________________________________________

Know safety precautions while cooking, including consideration of small children.

__________________________________________________________

2. Know how to properly use
   a. Measuring spoons
   b. Measuring cups
   c. An electric mixer
   d. A blender
   e. Food processor.

3. What is meant by
   boiling __________________________________________________

   _________________________________________________________

   broiling ____________________________________________

   _______________________________________________________

   frying ________________________________________________

   _______________________________________________________

   baking ________________________________________________

   _______________________________________________________

   Household Arts
   General Conference
   2002 Edition
Which are the most healthful ways of preparing common foods?

Which are the most unhealthful ways?

4. Demonstrate your ability to properly prepare two different kinds of hot cereal, a healthful hot drink, and cook eggs in two different ways other than frying.

Methods

<table>
<thead>
<tr>
<th>Food</th>
<th>Method</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot cereal</td>
<td>1.</td>
<td>2.</td>
</tr>
<tr>
<td>Hot drink</td>
<td>1.</td>
<td>2.</td>
</tr>
<tr>
<td>Eggs</td>
<td>1.</td>
<td>2.</td>
</tr>
</tbody>
</table>

5. Prepare potatoes healthfully by two different methods.

1. ______________________ 2. ______________________

6. Cook three other vegetables in the most healthful way.

<table>
<thead>
<tr>
<th>Vegetables</th>
<th>Method cooked</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
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<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

7. Prepare a simple salad.

Why do we need fresh salads in our diet?
8. Know the food pyramid guide.

Why is it important that we follow the food pyramid guide in our diet every day?

__________________________________________________________

__________________________________________________________

Make a chart for one week of the foods you eat to see if you are following the food pyramid guide. (Complete Meal Chart)

9. Set the table properly for your family for an evening meal.

Serve a balanced meal that you have planned and prepared as much as possible by yourself. Include main dish, vegetable, and salad.

Main dish ____________________________________________________

Vegetable ____________________________________________________

Salad _________________________________________________________

Additional items _____________________________________________

10. Follow a recipe correctly in making a vegetarian entree or a vegetable casserole.

Recipe ______________________________________________________

11. Start a recipe file of your own. Put into it 10 recipes of dishes you have personally prepared from entrees, vegetables, salads, and beverages.
Cooking—Meal Chart

Make a chart for one week of the foods you eat to see if you are following the food pyramid guidelines

<table>
<thead>
<tr>
<th>Day of the Week</th>
<th>MORNING</th>
<th>AFTERNOON</th>
<th>EVENING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Day 2</td>
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<tr>
<td>Day 3</td>
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<td>Day 4</td>
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<td>Day 5</td>
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<td>Day 6</td>
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<tr>
<td>Day 7</td>
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<td></td>
</tr>
</tbody>
</table>
Cooking, Advanced

1. Have the Cooking Honor.

2. How many cups make a quart? (How many mls to make a liter?)

   How many table spoons to a cup?

   How many teaspoons to a table spoon?

3. Prepare two main casserole dishes using macaroni, noodles, beans, or rice.

   Macaroni
   1. __________________________  2. __________________________

   Noodles
   1. __________________________  2. __________________________

   Beans
   1. __________________________  2. __________________________

   Rice
   1. __________________________  2. __________________________

4. Prepare two different vegetable casserole dishes.

   1. __________________________  2. __________________________

5. Prepare two kinds of salad.

   1. __________________________  2. __________________________

   How are salads kept crisp?

   __________________________________________________________
   __________________________________________________________

   Household Arts
   General Conference
   2002 Edition
6. Know the difference in food value between whole milk, lowfat milk, and non-dairy milk.
   Whole milk ____________________________________________________________
   ____________________________________________________________
   Lowfat milk _________________________________________________________
   ____________________________________________________________
   Non-dairy milk ____________________________________________________
   ____________________________________________________________

7. Prepare a balanced breakfast using the food pyramid guide.
   Menu ______________________________________________________________
   ______________________________________________________________

8. Prepare a vegetarian entree dish.
   Entree ____________________________________________________________
   ______________________________________________________________

9. Plan menus for one week, choosing at least three dishes in which leftovers may be used. (Complete Meal Chart)
   Leftovers
   1. __________________________  2. __________________________
   3. __________________________

10. Prepare a balanced meal using a vegetarian entree, a vegetable casserole, and a salad.
    Vegetarian entree _________________________________________________
    Vegetable casserole _____________________________________________
    Salad __________________________________________________________
    Additional items _________________________________________________
    ______________________________________________________________

11. Know several reasons why vinegar is unhealthful.
    ______________________________________________________________
    ______________________________________________________________
    ______________________________________________________________
12. What does caffeine do to the body?

List five foods that contain caffeine.
1. 
2. 
3. 
4. 
5. 

13. Have 25 recipes of personally-prepared dishes, not more than five of which are candies or desserts.
## Cooking, Advanced—Meal Chart

Plan menus for one week, choosing at least three dishes in which leftovers may be used.

<table>
<thead>
<tr>
<th>Day</th>
<th>MORNING</th>
<th>AFTERNOON</th>
<th>EVENING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
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<tr>
<td>Day 2</td>
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<td>Day 3</td>
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<td>Day 4</td>
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<td>Day 5</td>
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<tr>
<td>Day 6</td>
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<td></td>
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<tr>
<td>Day 7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dressmaking

1. Have and review the Basic Sewing Honor.

2. Have a practical sewing box for your sewing supplies. Include in it a pin cushion, tape measure, pins, needles, thread, scissors, seam gauge and seam ripper.

3. Know how and when to:
   - Baste ________________________________
   - Overcast ______________________________
   - Zigzag ________________________________
   - Blind hem ______________________________

4. Identify (a) 5 natural fabrics such as
   a. cotton
   b. linen
   c. wool
   d. silk

   (b) synthetic fabrics such as
   a. rayon
   b. nylon
   c. dacron
   d. polyester.

5. Show and demonstrate how to straighten fabric before use.

6. Choose a pattern for an item such as a shirt, blouse, skirt or shop apron.
   Pattern ________________________________
   Properly lay your pattern on the material, cut it out, and sew your item to completion.
Dressmaking, Advanced

1. Have the Dressmaking Honor.

2. Do the following:
   a. sew a seam with finished edges
   b. make darts
   c. gather
   d. bind
   e. topstitch
   f. make a French seam.

3. Make a neat buttonhole.

4. Demonstrate on another person how to measure for
   a. length of skirt or pant
   b. length of sleeve
   c. length from neck to waistline.

5. Make a blouse or shirt with set-in sleeve and a collar, and
   explain how you would adjust the shoulders for persons of
   different build.

6. Explain how to make at least four of the following
   alterations or modifications in patterns:
   a. shorten/lengthen waist
   b. shorten/lengthen sleeve
   c. waist size
   d. shorten/lengthen skirt or pants
   e. shorten/lengthen blouse.

7. Make a pair of pants or shorts that fit properly.

8. Make a skirt that fits properly.

9. Select from pictures or draw an outfit for yourself that
   shows proper color harmony and is complementary to your
   figure.
1. Define the following:
   - Botulism __________________________________________________
   - Steam pressure canning ______________________________________
   - Cold pack _________________________________________________
   - Sterilize __________________________________________________
   - Boiling water bath __________________________________________
   - Steam canning _____________________________________________
   - Jelly ______________________________________________________
   - Scald _____________________________________________________
   - Open kettle canning _________________________________________
   - Jam _______________________________________________________
   - Pectin ____________________________________________________
2. List the equipment used in the following methods of canning:
   Pressure ___________________________________________________
   Boiling water bath ___________________________________________
   Steam _____________________________________________________
   Open kettle _________________________________________________

3. Give directions for
   sterilizing __________________________________________________
   filling _____________________________________________________
   sealing ____________________________________________________
   testing seals on jars _________________________________________

4. When should food be steam pressure processed?
   ____________________________________________________________
   ____________________________________________________________
5. List the kinds of vegetables and fruits that are excellent for canning as opposed to freezing or drying.

<table>
<thead>
<tr>
<th>Vegetables</th>
<th>Fruits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
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<tr>
<td>2.</td>
<td></td>
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<tr>
<td>3.</td>
<td></td>
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<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>

6. Can the following items:

a. One fruit juice using the open kettle method
   Juice ______________________________

b. Two kinds of fruit using the boiling water bath method, one by hot packing and one by cold packing
   Boiling Water bath
   1. ______________________________
   2. ______________________________
   Hot packing
   1. ______________________________
   Cold packing
   1. ______________________________

c. Two kinds of vegetables using the pressure canning method, one by hot packing and one by cold packing
   Pressure canning method
   1. ______________________________
   2. ______________________________
   Hot packing
   1. ______________________________
   Cold packing
   1. ______________________________

d. One jelly or jam
   Jelly or jam _________________________
Food - Drying

1. List at least three different ways to dry foods.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________

2. Why and how do you sulphur fruits?
   Why ______________________________________________________
   __________________________________________________________
   How ______________________________________________________
   __________________________________________________________
   __________________________________________________________

3. How is dried fruit stored and protected from insects?
   __________________________________________________________
   __________________________________________________________

4. How are dried foods reconstituted?
   __________________________________________________________
   __________________________________________________________

5. What is important in selecting fruit to be used in making fruit leather?
   __________________________________________________________
   __________________________________________________________

6. How are dried nuts stored?
   __________________________________________________________
   __________________________________________________________
7. Dry the following and provide samples for testing:
   b. Fruit leather
   c. Vegetable leather
   d. Fruit slices
   e. Vegetable slices (such as carrots) or pieces (such as peas)
   f. Vegetarian jerky
   g. Parsley or some other herb

8. Reconstitute a vegetable and cook for sampling.
1. Define the following terms:
   Blanching ____________________________________________________
   ____________________________________________________________
   Quick freeze _________________________________________________
   ____________________________________________________________
   Freezer burn ________________________________________________
   ____________________________________________________________

2. What kinds of containers can be used for freezing foods?
   ____________________________________________________________
   ____________________________________________________________

3. What are the essential things to be considered when selecting vegetables or
   fruits for freezing?
   ____________________________________________________________
   ____________________________________________________________

4. How do you thaw frozen vegetables for the table?
   ____________________________________________________________
   ____________________________________________________________
   How do you thaw frozen fruits for the table?
   ____________________________________________________________
   ____________________________________________________________

5. Freeze two vegetables (corn and another of your choice), then prepare and
   serve for sampling.
   1st Vegetable _______________________________________________
   2nd Vegetable _______________________________________________

6. Quick freeze a vegetable for easy pouring.
   Vegetable ___________________________________________________
7. Why is salt not put in vegetables to be frozen?

_____________________________________________________________

8. Freeze some peaches in light syrup and also some in orange or pineapple juice.
What is the reason for using ascorbic acid in the syrup and not in the fruit juice?

_____________________________________________________________

Why is ascorbic acid used in freezing peaches?

_____________________________________________________________

9. Freeze one type of berry without added sweeteners.
Berry ________________________________

10. Make one kind of freezer jam.
Freezer jam ________________________________
1. Have the Laundering Honor.

2. List items used in keeping a house clean.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

3. Describe the best way to keep stoves, microwave ovens, and refrigerators clean.

   __________________________________________________________
   __________________________________________________________

4. Under what conditions do germs and pests thrive?

   __________________________________________________________
   __________________________________________________________

Give ways of cleaning each of the following:
basement __________________________________________________
   __________________________________________________________
closets ____________________________________________________
   __________________________________________________________
cupboards _________________________________________________
   __________________________________________________________
sinks _____________________________________________________
   __________________________________________________________
floors _____________________________________________________
   __________________________________________________________

   toilets ___________________________________________________
5. State the proper way to prepare dishes for washing, either in the sink or dishwasher.

__________________________________________________________

__________________________________________________________

State the order in which silver, glass, table, and kitchen dishes should be washed.

1st ___________________ 2nd ___________________________

3rd ___________________ 4th ___________________________

6. How should the following be cleaned

rugs ____________________________________________________

_______________________________________________________

carpets _________________________________________________

_______________________________________________________

pillows _________________________________________________

_______________________________________________________

upholstered furniture ____________________________________

_______________________________________________________

papered walls __________________________________________

_______________________________________________________

painted walls __________________________________________

_______________________________________________________

floors __________________________________________________

_______________________________________________________

windows _______________________________________________

_______________________________________________________

7. How is trash disposed of in your community?

_______________________________________________________

_______________________________________________________
8. What precautions should be taken in cleaning out a fireplace?

________________________________________________________________________

________________________________________________________________________

9. What is meant by keeping a home "baby safe"?

________________________________________________________________________

________________________________________________________________________

10. Plan and do the work in a house for one week.
Laundering

1. Why is it important to read the labels in garments before laundering them?
   ________________________________________________________________
   ________________________________________________________________

2. What is the proper way to prepare clothes for washing?
   ________________________________________________________________
   ________________________________________________________________

3. What types of clothes should be washed in hot, warm, and cold water?
   Hot __________________________________________________________
   Warm _________________________________________________________
   Cold _________________________________________________________

4. What precaution should be used when using chlorine bleach?
   ________________________________________________________________
   ________________________________________________________________
   What are the advantages of powdered oxygen bleach?
   ________________________________________________________________
   ________________________________________________________________
   Why should chlorine bleach and ammonia never be mixed?
   ________________________________________________________________
   ________________________________________________________________

5. What precautions should be taken when using liquid fabric softeners?
   ________________________________________________________________
   ________________________________________________________________
6. Know how to remove the following stains:

- Blood
- Chewing gum
- Crayons
- Grass
- Grease
- Fruit
- Ink
- Rust
- Grape juice

Why must stains be removed before laundering?

7. How are woolen and wool like garments laundered?

8. Why is it important to remove garments from a dryer immediately when the cycle is complete?
9. What points are to be considered in selecting a washing machine, dryer and iron?
   Washing machine ________________________________________________
   ________________________________________________________________
   Dryer __________________________________________________________
   ________________________________________________________________
   Iron ____________________________________________________________
   ________________________________________________________________
   How should these items be cared for?
   ________________________________________________________________

10. Know what type of materials should be dried only on the lowest heat setting of a dryer.
    _______________________________________________________________
    _______________________________________________________________

11. Show a blouse or shirt that you have properly ironed.

12. Properly launder and fold clothes for your family for one week.
Nutrition

1. Describe the food pyramid guide.

________________________________________________________________________
________________________________________________________________________

List the number of servings required from each group per day.

<table>
<thead>
<tr>
<th>Food Pyramid</th>
<th>Number of servings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
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<td>2.</td>
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<td>3.</td>
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<td>4.</td>
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</tbody>
</table>

Why is it important to eat a balanced diet?

________________________________________________________________________
________________________________________________________________________

2. Explain the difference between the following:
Lacto-ovo vegetarian ________________________________________________

________________________________________________________________________
Ovo vegetarian ______________________________________________________

________________________________________________________________________
Vegan vegetarian _____________________________________________________

________________________________________________________________________

3. Plan a two-day menu, containing a balanced lacto-ovo vegetarian diet utilizing the food pyramid guide. (Complete chart)

4. What is another name for
Vitamin B1 __________________________
Vitamin B2 __________________________
5. List at least three significant food sources of the following nutrients:

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Source 1</th>
<th>Source 2</th>
<th>Source 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin C</td>
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<tr>
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<tr>
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<tr>
<td>Calcium</td>
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</tbody>
</table>

6. Why is it important to drink plenty of water every day?

________________________________________________________________________

________________________________________________________________________

How much water should you drink every day?

________________________________________________________________________

7. Name three common diseases that can be controlled by diet.
   1. ____________________________  3. ____________________________
   2. ____________________________

8. What is the difference between whole wheat flour and white flour.
   Whole wheat flour ____________________________
   White flour ____________________________

   Which one has the higher nutritive value?
   ___________________________________________________________________

9. What does RDA stand for?
   ___________________________________________________________________

   What does it mean?
   ___________________________________________________________________
10. Why is it important not to take excessive amounts of some vitamins and minerals?

__________________________________________________________

__________________________________________________________
Plan a two day menu containing a balanced lacto-ovo vegetarian diet from the food pyramid

<table>
<thead>
<tr>
<th></th>
<th>BREAKFAST</th>
<th>LUNCH</th>
<th>DINNER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Day 2</td>
<td></td>
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</tr>
</tbody>
</table>
Nutrition, Advanced

1. Have the Nutrition Honor.
3. Keep a food diary on yourself for one week. (See chart)
4. Calculate the total nutrients of the following in your diet each day: (See chart)
   a. Calories
   b. Protein
   c. Iron
   d. Calcium
   e. Vitamin A
   f. Thiamine
   g. Riboflavin
   h. Niacin
   i. Vitamin C or ascorbic acid
5. How do the number of nutrients in your diet compare with the Recommended Daily Allowance chart? (See chart)
6. Explain why a high fiber diet is important, and tell how this can be obtained.

 name three diseases due to malnutrition, and describe the symptoms of each.

<table>
<thead>
<tr>
<th>Diseases</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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</tr>
</tbody>
</table>
8. What are the symptoms of vitamin B12 deficiency?

___________________________________________________________

___________________________________________________________

9. What advice would you give a person who decided to be a total vegetarian?

___________________________________________________________

___________________________________________________________

___________________________________________________________

10. What is the difference between saturated and unsaturated fats?
Saturated fats _______________________________________________

___________________________________________________________

___________________________________________________________

Unsaturated fats

Which is the most healthful, and why?

___________________________________________________________

___________________________________________________________

Why _____________________________________________________

___________________________________________________________

11. Why is it advisable to use less sugar in the diet?

___________________________________________________________

___________________________________________________________

List several ways in which this may be accomplished.

___________________________________________________________

___________________________________________________________

___________________________________________________________

12. What are amino acids?

___________________________________________________________

___________________________________________________________
How many are needed to make all the proteins in the body?

________________________________________________________________________________________

What is meant by essential amino acids?

________________________________________________________________________________________

How many of them are essential?

________________________________________________________________________________________

Where can you get all the essential amino acids?

________________________________________________________________________________________

☐ 13. Know the difference between water and fat soluble vitamins.

Water soluble vitamins

________________________________________________________________________________________

Fat soluble vitamins

________________________________________________________________________________________

What are two common vitamins that are fat soluble?

1. __________________________ 2. __________________________

What are two vitamins that are water soluble?

1. __________________________ 2. __________________________


________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________
Nutrition, Advanced Chart

Do the following:
1. Keep a food diary for one week on yourself.
2. Calculate the total nutrients each day.
3. Compare the nutrients in your diet with the RDA.

<table>
<thead>
<tr>
<th>MORNING</th>
<th>NOON</th>
<th>EVENING</th>
<th>Nutrient Totals</th>
<th>RDA</th>
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<tbody>
<tr>
<td>Day 1</td>
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<tr>
<td>Calories</td>
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<td>Day 2</td>
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<td>Day 3</td>
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</table>
**Nutrition, Advanced Chart (cont.)**

Do the following:
1. Keep a food diary for one week on yourself.
2. Calculate the total nutrients each day
3. Compare the nutrients in your diet with the RDA.

<table>
<thead>
<tr>
<th></th>
<th>MORNING</th>
<th>NOON</th>
<th>EVENING</th>
<th>Nutrient Totals</th>
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<td>Vitamin C</td>
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</tbody>
</table>
Quilting

1. What is a quilt?

_________________________________________________________________

How is it used?

_________________________________________________________________

2. Who introduced quilts to North America?

_________________________________________________________________

3. What are three main fibers used in the interlining (middle layer) of a quilt?
   1. __________________________
   2. __________________________
   3. __________________________

4. What are two common types of quilts?
   1. __________________________
   2. __________________________
   What is a crazy quilt?

_________________________________________________________________

5. What is the difference between yarn tying and quilting?
   Yarn tying ____________________________________________________
   Quilting ____________________________________________________

6. What are the steps in making a quilt?

_________________________________________________________________

_________________________________________________________________

7. Construct and finish a quilt, either as an individual or group project.

8. Develop a file of at least six quilt patterns, including two patchwork and one on a patriotic theme.
1. Identify the following materials:
   a. Wool
   b. Worsted wool
   c. Cotton
   d. Linen
   e. Silk
   f. Artificial silk
   g. Rayon
   h. Polyester
   i. Synthetic wool

2. Identify three of the following weaves:
   a. Plain
   b. Basket
   c. Rib
   d. Twill
   e. Herringbone
   f. Pile

3. How are the following used?
   Interlining
   Tailor tacks
   Tailor canvas or other interfacing
   Pad stitching
   Iron-on interfacing

4. Tell the points to be considered when making a garment fit properly and look tailored.

5. Be familiar with the following pressing equipment:
   a. Sleeve board
   b. Press mitt
   c. Seam roll
   d. Tailor's ham
   e. Tailor's board
   f. Needle board
Use at least two of these in pressing.

6. Know at least two methods for making bound buttonholes.
   1. __________________________
   2. __________________________

   Make a bound buttonhole using one of these methods.

7. Make a slit pocket with a Welt or a bound pocket.

8. Demonstrate your skills in tailoring by making a man's or woman's suit that fits properly.
<table>
<thead>
<tr>
<th>Category</th>
<th>Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphibians</td>
<td></td>
</tr>
<tr>
<td>Amphibians, Advanced</td>
<td></td>
</tr>
<tr>
<td>Animal Tracking</td>
<td></td>
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<tr>
<td>Animal Tracking, Advanced</td>
<td></td>
</tr>
<tr>
<td>Antelopes</td>
<td>East Africa Division</td>
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<tr>
<td>Antelopes, Advanced</td>
<td>East Africa Division</td>
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<tr>
<td>Bird Pets</td>
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<td>Birds, Advanced</td>
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<td>Cats, Advanced</td>
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<tr>
<td>Cetaceans</td>
<td>South Pacific Division</td>
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<td>Dog Care and Training</td>
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<td>Ecology</td>
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<tr>
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<tr>
<td>Lichens, Liverworts and Mosses</td>
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<tr>
<td>Marine Invertebrates</td>
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</table>
Marine Mammals
Marsupials
Microscopic Life
Moths and Butterflies
Orchids
Palm Trees
Parrots and Cockatoos
Poultry
Reptiles
Reptiles, Advanced
Rocks and Minerals
Rocks and Minerals, Advanced
Sand
Seeds
Seeds, Advanced
Shells
Shells, Advanced
Shrubs
Small Mammal Pets
Spiders
Stars
Stars, Advanced
Trees
Trees, Advanced
Wattles
Weather
Weather, Advanced
**Amphibians**

1. What are the characteristics of amphibians?

   __________________________________________________________
   __________________________________________________________

2. Name the two main orders of amphibia and tell how to distinguish between them.
   1. ___________________________  2. ___________________________
   __________________________________________________________
   __________________________________________________________

3. Distinguish between toads and frogs.
   Toads _____________________________________________________
   __________________________________________________________
   Frogs _____________________________________________________
   __________________________________________________________

4. How do amphibians protect themselves?
   __________________________________________________________
   __________________________________________________________

5. Make a list of amphibians that should be found in your locality.
   __________________________________________________________
   __________________________________________________________
   Identify five and tell where you found them. OR Collect pictures or sketch five different amphibians which you can identify and tell where they are found.

<table>
<thead>
<tr>
<th>Type of Frog</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
<td></td>
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</tbody>
</table>
4. __________________________  _____________________________
5. __________________________  _____________________________

6. Describe the life history of some amphibian.

____________________________
______________________________
______________________________

7. Explain the economic value of amphibians.

____________________________
______________________________
______________________________

8. Where do toads spend the winter or dry season?

____________________________
______________________________
______________________________

9. Identify two species of frogs by their sound or imitate the sounds of two different species of frogs.

10. How do frogs and toads sing?

____________________________
______________________________

What makes the noise so loud?

____________________________
______________________________

11. Do one of the following:
   a. Observe a toad in your yard or neighborhood to find out.
      (1) Where and when it sleeps __________________________
      (2) When it leaves its home for food __________________
      (3) How fast it can travel _____________________________
      (4) How far it can jump _______________________________

and as many other interesting things as you can find out about it, and write an essay covering the details requested in the first section of this question.

   b. Hatch some amphibian eggs and watch them through their growth cycle and write an essay covering the details.

   Date hatched ________________________________
Amphibians, Advanced

1. Have the Amphibians Honor

   **Note:** Must have completed all requirements for the Amphibians Honor prior to working on this next level.

2. Design and carry out a study project based on natural or captive observation of a selected amphibian(s) and write a paper on the conclusions arrived at during the study. The parameters of the study should involve a minimum of 25 hours of actual observation time and no more than a maximum total duration of one season. Intentional harm/death of the study target is not permitted.

   **Note:** Most amphibian species have had very little research carried out on them. It is a field wide open for study of even some of the simplest elements. For example very little data exists on the seasonal activities of frogs and the climatic factors that influence them. When does chorusing begin and stop, when does it reach its highest volume, what are the atmospheric conditions and variations associated with these. What are the dates for egg laying, hatching, transformation. What are the growth rates, age of sexual maturity, average and maximum longevity, average duration of breeding behavior, courtship behavior, rate of dispersal, location of brumation or estivation sites. Little is known about homing ability, territorial maintenance, interaction during breeding and non-breeding times and many other issues. It is indeed a field wide open to the curious and fascinated.
Animal Tracking

1. Know ten kinds of tracks, including two kinds of bird tracks.
   1. ____________________________ 6. ______________________________
   2. ____________________________ 7. ______________________________
   3. ____________________________ 8. ______________________________
   1. ____________________________ 9. ______________________________
   2. ____________________________ 10. ______________________________

Make plaster casts of five.

2. Name at least three things that tracks tell us.
   1. ___________________________________________________________
   2. ___________________________________________________________
   3. ___________________________________________________________

3. Trail some animal tracks, identify the animal if possible, and tell whether it was running or walking. Measure between the tracks of one animal when running and walking. (See Chart #1)

4. Maintain a tracking station for at least three days (See Chart #2)
   a. Select a flat open space in some quiet place near your camp or home.
   b. Smooth out ground, mud, sand, etc.
   c. Place food out for wildlife.
   d. Check each day for tracks and replenish food when necessary.

5. Name two animals for each tracking group.
   Flatfoots
   1. ____________________________ 2. ______________________________
   Toe walkers
   1. ____________________________ 2. ______________________________
   Toenail walkers
   1. ____________________________ 2. ______________________________
Bounders or long hindleggers

1. ______________________ 2. ______________________

6. Name four signs of the presence of mammals.

1. 
2. 
3. 
4. 

7. Distinguish between rabbit and squirrel tracks, and between dog and cat family tracks.

Rabbit/Squirrel Tracks __________________________

__________________________

__________________________

__________________________

Dog/Cat Tracks __________________________

__________________________

__________________________

__________________________

8. Name two groups of animals (mammals, birds, insects, etc.) that leave tracks or scent trails that another of their kind can follow.

1. ______________________ 2. ______________________

9. Name two birds for each of the following type of tracks:

   Hopping
   1. ______________________ 2. ______________________

   Walking
   1. ______________________ 2. ______________________

10. Besides tracks, give two other signs of the presence of birds.

1. ______________________

2. ______________________

11. Name two birds identified by their flying patterns.

1. ______________________

2. ______________________
12. In your area, observe tracks or trail of one or more of the following:
   a. Toad or frog
   b. Snake
   c. Turtle
   d. Mollusk
   e. Earthworm
   f. Mole

Animal Observed _______________________________________________________

Findings ______________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________
**Animal Tracking Chart #1**
Trail some animal tracks, identify the animal if possible, and tell whether it was running or walking. Measure between the tracks of one animal when running and walking.

<table>
<thead>
<tr>
<th>Animal</th>
<th>Walking or running</th>
<th>Distance between tracks</th>
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<tbody>
<tr>
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</tbody>
</table>
# Animal Tracking Chart #2

Maintain a tracking station for at least three days

<table>
<thead>
<tr>
<th>Notes</th>
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<tbody>
<tr>
<td>Day 1</td>
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<table>
<thead>
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<th>Day 2</th>
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<tr>
<th>Day 3</th>
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</tbody>
</table>

Check each day for tracks and replenish food when necessary

Area chosen ________________________________
Types of food placed _____________________________
Animal Tracking, Advanced

1. Have the Animal Tracking Honor.

2. What is the difference between positive and negative casts of animal tracks?
   Positive casts ______________________________________________________________________

   Negative casts ______________________________________________________________________

3. Make at least one positive cast from a negative cast or rubber mold.
   Positive Cast ______________________________________________________________________

4. What is scatology and why is it important in the study of animals?
   Scatology ______________________________________________________________________
   Why ______________________________________________________________________________

5. Find at least one trace of an animal other than its tracks. Through careful observation and/or analysis determine as many conclusions as possible from the evidence.
   Trace of animal _____________________________________________________________________
   Conclusions _______________________________________________________________________

6. With a partner set up a track and trail course covering at least one mile (1.6 km) which will include at least four change-of-directions utilizing traditional native signs and have at least two other persons successfully follow the route. Successfully follow a one mile (1.6 km) route set by someone else.

Date completed _______________ Instructor’s Signature ___________________________
Bird Pets

1. Keep one or a pair of birds for at least six months.

2. Show you have completed one of the following:
   a. If you have a cage bird, keep a record of its care for at least one month. Include food habits, water needs, cage cleaning, etc. (See Chart #1)
   b. If you do not have a cage bird now but completed requirement #1 in the past, take care of some one else’s bird for at least one week while they are on vacation, etc., and maintain a record of the required care. (See Chart #2)

3. Canaries
   Give the names of four varieties of canaries.
   1. ________________________  3. ________________________
   2. ________________________  4. ________________________

   Give a brief history of the origin and development of canaries.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

Name and distinguish five seeds used in canary feeding.
   1. ________________________  4. ________________________
   2. ________________________  5. ________________________
   3. ________________________

Describe briefly the general care of canaries.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
4. Parakeets or love birds
To what country are parakeets or love birds native?

________________________________________________________________________

Describe briefly their habits of feeding, nesting, and general behavior.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

5. Pigeons
Name and identify six varieties of pigeons.
1. ___________________________  4. ___________________________
2. ___________________________  5. ___________________________
3. ___________________________  6. ___________________________

Describe their kind of food and general management.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

6. What are the laws in your state or country regarding the capture, breeding, role and/or export of cage birds?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Be sure you are abiding by them while fulfilling the requirements of this Honor.
If you have a cage bird, keep a record of its care for at least one month. Include food habits, water needs, cage cleaning, etc.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 8</th>
<th>Day 15</th>
<th>Day 22</th>
<th>Day 29</th>
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<td>Day 2</td>
<td>Day 9</td>
<td>Day 16</td>
<td>Day 23</td>
<td>Day 30</td>
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<td>Day 3</td>
<td>Day 10</td>
<td>Day 17</td>
<td>Day 24</td>
<td>Additional Notes:</td>
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<tr>
<td>Day 4</td>
<td>Day 11</td>
<td>Day 18</td>
<td>Day 25</td>
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<td>Day 5</td>
<td>Day 12</td>
<td>Day 19</td>
<td>Day 26</td>
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<td>Day 6</td>
<td>Day 13</td>
<td>Day 20</td>
<td>Day 27</td>
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<tr>
<td>Day 7</td>
<td>Day 14</td>
<td>Day 21</td>
<td>Day 28</td>
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</tbody>
</table>
Bird Pets Chart #2

If you do not have a cage bird now but completed requirement #1 in the past, take care of some one else’s bird for at least one week while they are on vacation, etc., and maintain a record of the required care.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
<th>Day 6</th>
<th>Day 7</th>
</tr>
</thead>
</table>

Additional Notes:
Birds

1. Give two characteristics which set birds apart from all other creatures.
   1. __________________________________________________________
   2. __________________________________________________________

2. Name three flightless birds, tell what their diet consists of, and name the country or continent in which each one lives.

<table>
<thead>
<tr>
<th>Bird</th>
<th>Diet</th>
<th>Country/Continent</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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</table>

3. Give the day of the week when birds were created.

   __________________________________________________________

Find in the Bible the names of five birds and be able to name them from memory.

   1. __________________________  4. __________________________
   2. __________________________  5. __________________________
   3. __________________________

4. Write or give orally three ways in which God's love and purpose is shown in the creation of birds.

   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
5. Make a list of thirty species of wild birds, including birds from at least five different orders, that you personally have observed and positively identified by sight out of doors.

1. ____________  
2. ____________  
3. ____________  
4. ____________  
5. ____________  
6. ____________  
7. ____________  
8. ____________  
9. ____________  
10. ____________

11. ____________  
12. ____________  
13. ____________  
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15. ____________  
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17. ____________  
18. ____________  
19. ____________  
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21. ____________  
22. ____________  
23. ____________  
24. ____________  
25. ____________  
26. ____________  
27. ____________  
28. ____________  
29. ____________  
30. ____________

6. Make a list of five species of wild birds that you personally have positively identified by sound out of doors.

1. ____________  
2. ____________  
3. ____________  
4. ____________  
5. ____________

7. Do one of the following:

a. Set up a feeding station and report on the bird visitors observed for a period of seven days.

b. Find a bird's nest, during the nesting season, identify the species of bird that built it, describe the nest in detail, observe the nest for five days, and report what happened at the nest on each of the days.
c. In the Western Hemisphere: Maintain a hummingbird feeder for 2 months.

(1) What does man-made nectar consist of?

__________________________________________________________________________

__________________________________________________________________________

(2) Why shouldn't you use food coloring or honey?

__________________________________________________________________________

__________________________________________________________________________

(3) When should the feeder fluid be changed?

__________________________________________________________________________

__________________________________________________________________________

(4) How should the feeder be cared for?

__________________________________________________________________________

__________________________________________________________________________

d. In other areas of the world: Select at least three different habitats in your area and make comparative bird lists of them indicating the differences in birds expected and found.
Birds, Advanced

1. Have the Birds Honor.

2. Know the laws protecting birds in your state, province, or country.

3. Describe a bird accurately by using standard names for each part of its body.

4. Find answers to either a. OR b.
   a. In what ways are the feet, legs, and beak of birds variously modified to adapt them to their environment?
   
   b. On hummingbirds:
      (1) What do hummingbirds eat in the wild and how often?
      (2) Why aren't hummingbirds afraid of large mammals or birds?
      (3) How do their wings move differently from other birds?
(4) How fast do they fly?

(5) How fast do the wings and heart beat?

(6) How is the tongue shaped?

5. Identify on a bird's wing the primaries, secondaries, coverts, axillars, and alulae.

6. Describe the functions and purposes of bird banding, telling in particular how banding contributes to our knowledge about bird movements.

7. Name the main migratory bird flyways used by birds in your continent.

8. Give the migration routes and terminal destinations for ten different migratory bird species.

<table>
<thead>
<tr>
<th>Bird</th>
<th>Routes/Destinations</th>
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<tbody>
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<td>10.</td>
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</tbody>
</table>
9. Describe at least three different ways that birds are able to orient themselves in their movements across the globe.

1. ____________________________ 3. ____________________________
2. ____________________________

10. Make a list of 60 species of wild birds, including birds from at least ten different families, that you personally have observed and positively identified by sight out of doors. For each species on this list note the following: (Complete Chart #1)
   a. Name
   b. Date observed
   c. Place observed
   d. Habitat (i.e., field, woods, river, lake, etc.)
   e. Status where observed (permanent resident, winter resident, summer resident, migrant, vagrant)

11. Present lists of birds, showing the greatest number of species seen out of doors in: (Complete Chart #2)
   a. One day (with at least six hours in the field)
   b. One week
   c. Your lifetime (all birds observed by you since you began birding to date)

12. Make a list of ten species of wild birds that you personally have positively identified by sound out of doors, and describe or imitate these bird sounds as best you can.

<table>
<thead>
<tr>
<th>Bird</th>
<th>Sound</th>
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<tbody>
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<td>1.</td>
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<td>10.</td>
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</table>
13. Lead a group in a bird observation walk or tell two Bible stories in which a bird was significant.

Date of walk: ______________________________________________

OR

Bible Stories

1. _________________________________________________________

2. _________________________________________________________

Date completed ____________ Instructor’s Signature ____________________
List 60 species of wild birds, including birds from at least ten different families, that you personally have observed and positively identified by sight out of doors.

<table>
<thead>
<tr>
<th>Name/Order</th>
<th>Date</th>
<th>Place Observed</th>
<th>Habitat</th>
<th>Status Where Observed</th>
</tr>
</thead>
</table>
**Birds, Advanced Chart #2**

Present lists of birds, showing the greatest number of species seen out of doors in:

<table>
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<tr>
<th>ONE DAY (with at least six hours in the field)</th>
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<table>
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<th>ONE WEEK</th>
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<table>
<thead>
<tr>
<th>YOUR LIFETIME (All birds observed by you in your lifetime to date)</th>
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</table>
Cacti

1. Name the chief characteristics of a cactus.

________________________________________________________
________________________________________________________
________________________________________________________

2. Name three uses of cacti.
   1. _____________________________________________________
   2. _____________________________________________________
   3. _____________________________________________________

3. In what places are cacti the most plentiful?
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

   Why? __________________________________________________
   _______________________________________________________
   _______________________________________________________

4. Know and identify from life or pictures 15 species of cacti.
   1. _____________________________________________________
   2. _____________________________________________________
   3. _____________________________________________________
   4. _____________________________________________________
   5. _____________________________________________________
   6. _____________________________________________________
   7. _____________________________________________________
   8. _____________________________________________________
   9. _____________________________________________________
  10. _____________________________________________________
5. Photograph, observe or sketch at least 10 species of cacti and classify them or grow at least 3 different species of cacti.
1. What are succulents?

__________________________________________________________

__________________________________________________________

2. Identify from plants or photos five succulents that are not cacti? How are they different from cacti?

<table>
<thead>
<tr>
<th>Succulents</th>
<th>Different</th>
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<tbody>
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<td>1.</td>
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</tbody>
</table>

3. Know the definitions of the following terms within a cacti/succulents frame of reference.

Areole __________________________________________________

Cephalium ________________________________________________

Coalesce __________________________________________________

Corymb ___________________________________________________

Diurnal ___________________________________________________

Epiphyte ________________________________________________
4. When raising succulents—including cacti—they may be attacked by maladies. What are the most common and how can you prevent or cure the problems?

<table>
<thead>
<tr>
<th>Maladies</th>
<th>Prevent/Cure</th>
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</thead>
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</tbody>
</table>

5. Propagate at least one plant by using one of the following methods: from seed, by cuttings, or grafting.

Method used
Cats

1. What is the scientific name of the cat family?

2. How is the structure of the paw similar in all cats?

3. How are the eyes of all cats alike?

4. What is the main food of the cat family?

   How are the cat's teeth fitted for this?

5. Of what use are the cat's whiskers?

6. How are the cat's ears protected?

7. Identify from pictures or personal observation four kinds of domesticated cats. Describe each one's temperament.

<table>
<thead>
<tr>
<th>Domesticated cats</th>
<th>Temperaments</th>
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</table>
8. Of what benefit to man are domesticated cats?

__________________________________________________________

__________________________________________________________

__________________________________________________________

9. Identify from pictures or personal observation seven kinds of undomesticated cats. Tell in what part of the world they are found.

<table>
<thead>
<tr>
<th>Undomesticated cats</th>
<th>Where found</th>
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<tbody>
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</table>

10. What animal is known as the king of beasts?

__________________________________________________________

Why does it have that title?

__________________________________________________________

What is it’s temperament really like?

__________________________________________________________

11. Tell the story of Androcles and the Lion.

12. Relate four stories from the Bible in which a member of the cat family is mentioned.

1. _______________________________________________________  
2. _______________________________________________________  
3. _______________________________________________________  
4. _______________________________________________________  

Cats, Advanced

1. Have the basic Cat Honor.

2. Know about cats “open-book” quiz. (This is not an instructional pass-a-test requirement, it is designed to encourage research into the world of cats.) Enjoy new discoveries as you research the following questions about some unusual domestic cat breeds from around the world.

a. The domestic cat known as Sphynx first appeared in the late 1960s. Which of the following is true about this Canadian breed?
   (1) It is too wild to be a proper house cat.
   (2) It is the national pet of Canada.
   (3) It appears to be hairless.

b. True or False: The Chartreux, with its brilliant orange eyes and blue lips, is a breed closely associated with France.

c. Match the following cats with the special characteristics of their breed:
   (1) Korat (Thailand) (a) Goes limp when picked up.
   (2) Ragdoll (USA) (b) Is traced to wild cats from Kenya.
   (3) Sokoke (Denmark) (c) Symbolizes good fortune.

d. The Scottish Fold breed dates back to 1961. True or False: This cat acquired its name because it folds its body up to stay warm.

e. One breed was developed from a type of cat which once roamed the streets of Singapore. Now called the Singapura, it is also known by which one of the following names?
   (1) Drain cat
   (2) Fat cat
   (3) Flying cat

f. The names of breeds do not always reflect their countries of origin. For example, the Nebelung (German for “creature of the mist”) breed was developed in the USA. True or False: The Poodle cat was developed in Germany.
g. The English are renowned cat fanciers. Which one of the following is not a breed of domestic cat developed in the UK? 
(1) Abyssinian cat  
(2) Havana Brown cat  
(3) Geoffroy’s cat  

h. Developed in the USA, the Ocicat is a wild-looking feline with spotted fur. True or False: it is illegal to keep the Ocicat as a house pet in most countries.  

i. Originally called the Spotted Mist, this Australian breed’s name was changed when some were born with tabby-patterned coats. What is its new name?  
(1) Australian Mist  
(2) Dingo cat  
(3) Spotted and/or Marbled Mist  

j. The Japanese Bobtail cat originated in China centuries ago. True or False: It is the only breed of domestic cat with virtually no tail.  

3. Keep a cat for at least six months and do one of the following:  

a. If you currently have a cat, keep a record of the care for you cat for one month. Include in your record when it is watered and fed, how the liter box is taken care of. (Complete Chart #1)  
Why should your cat not be allowed to roam the neighborhood free?  

b. If you do not currently have a cat but you owned one at sometime in the past for at least 6 months, take care of someone else’s cat for at least one week. Record the care that was required and explain the relationship of house cats on the environment and why it is best they not be allowed to become feral. (Complete Chart #2)  

c. Participate in a cat related project of your choice in support of a local humane society or similar organization.  
Project ________________________________
Cats, Advanced Chart #1

If you currently have a cat, keep a record of the care for your cat for one month. Include in your record when it is watered and fed, how the litter box is taken care of.

<table>
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<tr>
<th>Day 1</th>
<th>Day 8</th>
<th>Day 15</th>
<th>Day 22</th>
<th>Day 29</th>
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Additional Notes:
Cats, Advanced Chart #2

If you do not currently have a cat but you owned one at sometime in the past for at least 6 months, take care of someone else’s cat for at least one week. Record the care that was required and explain the relationship of house cats on the environment and why it is best they not be allowed to become feral.

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<th>Day 1</th>
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<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
<th>Day 6</th>
<th>Day 7</th>
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Additional Notes:
Dog Care and Training

1. Describe the steps you should take in the following areas of dog care:
   Selection __________________________________________________
   Registration ________________________________________________
   Shots _____________________________________________________

2. Do at least two of the following:
   Describe what can be done to remove fleas, ticks, and lice from your dog. ____________________________________________
   Mention some of the diseases, pests, and worms that dogs can get.
   Explain what you should do for a dog bite.

3. Describe how to housebreak a puppy.

4. Explain in detail how you would wash a dog and care for its general hygiene.
5. Take full responsibility for feeding and watering a dog for two or three months.

6. Train your dog until you can successfully demonstrate the following:* 
   a. Heel: Your dog walks close to your left side and sits when you halt.
   b. Figure 8: Your dog stays close to your side without sniffing people, fire hydrants, or other dogs.
   c. Stand for examination: Your dog allows strangers to touch him.
   d. Recall: Your dog comes when called, sits directly in front of you, and moves to your left side on command.
   e. Long sit and long down: Your dog stays in either position while you attend to other business.

* If at all possible, dogs and handlers should get instructions from a qualified teacher, preferably in a class. A certificate of completion of training in any dog obedience class with a qualifying score of 170 out of the possible 200 will be accepted for this honor.
Dogs

1. Give the scientific name of the dog family.
   ________________________________

2. Name five distinctive characteristics of the dog family.
   1. ________________________________
   2. ________________________________
   3. ________________________________
   4. ________________________________
   5. ________________________________

3. Identify from pictures or personal observation five wild members of the dog family.
   1. ________________________________
   2. ________________________________
   3. ________________________________
   4. ________________________________
   5. ________________________________

4. Identify from pictures or personal observation 25 different breeds of dogs.
   1. ________________________________
   2. ________________________________
   3. ________________________________
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   17. ________________________________
   18. ________________________________
   19. ________________________________
   20. ________________________________
   21. ________________________________
   22. ________________________________
   23. ________________________________
   24. ________________________________
   25. ________________________________
5. Name five contributions the dog family has made to man.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________

6. Give the name of the smallest and largest breed of dog.
   Smallest _____________________________________________________
   Largest _____________________________________________________

7. Write or describe orally the value to man of the following dogs:
   Seeing-eye ___________________________________________________
   ____________________________________________________________
   Saint Bernard ________________________________________________
   ____________________________________________________________
   Shepherd ____________________________________________________
   ____________________________________________________________
   Collie _________________________________________________________
   ____________________________________________________________
   Eskimo _______________________________________________________  
   ____________________________________________________________

8. Write or tell what special contribution dogs have made to man in wartime. _____________________________________________
   ____________________________________________________________
   ____________________________________________________________

9. Identify from pictures or personal observation five dogs that are classed as "toy" dogs.
   1. _______________________________  4. _______________________________
   2. _______________________________  5. _______________________________
   3. _______________________________                                      

10. What is the only dog that has a wholly blue or black tongue?
    ____________________________________________________________
11. Which is the fastest-running dog?

12. Which member of the "toy" dogs has become the most popular?

13. What dog has been especially helpful in tracking criminals?

14. Write or tell a dog story.

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________
Ecology

1. Construct a diagram of a fresh-water pond ecosystem with pasted-on animal cutouts.

2. Pick one mammal, bird, reptile, and amphibian from your home environment, and for each construct a diagram of its ecological pyramid.

   Mammal ______________________ 
   Bird ______________________
   Reptile ______________________
   Amphibian __________________

3. Know the meaning of the following terms:

   Ecology ___________________________________________________
   ____________________________________________________________
   Community ________________________________________________
   ____________________________________________________________
   Food chain _________________________________________________
   ____________________________________________________________
   Commensalism _____________________________________________
   ____________________________________________________________
   Ecological succession _______________________________________
   ____________________________________________________________
   Plankton ___________________________________________________
   ____________________________________________________________
   Conservation _______________________________________________
   ____________________________________________________________
   Climax community __________________________________________
   ____________________________________________________________
   Eutrophication ______________________________________________
   ____________________________________________________________
   Biome _____________________________________________________
   ____________________________________________________________
4. Make detailed field observations and a careful library book study of the habitat of some small animal in your own environment. Write a report of about 700 words, one-half from your field observations and one-half from your book study.

5. Define an ecosystem and state what the basic biological and physical factors are that keep it a balanced system.

Ecosystem _________________________________________________

Biological factors ___________________________________________

Physical factors ______________________________________________

6. Investigate the disposal of trash in your community. How much is disposed per family per day?

_________________________________________________________________

per week? ______________________________________________________

_________________________________________________________________

per year? ______________________________________________________

_________________________________________________________________

How better can it be taken care of?

_________________________________________________________________

7. Check the daily paper for one month for the nearest large city for the air pollution level or air quality and plot on graph paper the results for the month. Find out what caused the peaks on your graph.
8. List ten ways in which you might actively work to improve the environment in which you live. Put four of these into practice.

1. ____________________________________________
2. ____________________________________________
3. ____________________________________________
4. ____________________________________________
5. ____________________________________________
6. ____________________________________________
7. ____________________________________________
8. ____________________________________________
9. ____________________________________________
10. __________________________________________

9. Find a Spirit of Prophecy quotation and a Bible text pertinent to ecology, and be able to explain their relevance and application to our day.

Spirit of Prophecy ____________________________________________
Bible Text __________________________________________________
Explanation ____________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
1. Have the Ecology Honor.

2. State the first and second laws of thermodynamics and explain how they are important to ecology.

   First law ______________________________________________________
   ____________________________________________________________
   Second law ____________________________________________________
   ____________________________________________________________
   Explanation ____________________________________________________
   ____________________________________________________________

3. Explain the three basic trophic (feeding) levels and give a good example of a plant or animal for each.

<table>
<thead>
<tr>
<th>Levels</th>
<th>Example</th>
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</table>

4. Explain or diagram the three types of ecological pyramids in the food web. Give an example of each layer of the pyramid.

   1. __________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   2. __________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   3. __________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
5. Define the biogeochemical cycle, and explain or diagram all the basic components the cycle passes through.

__________________________________________________________

__________________________________________________________

__________________________________________________________

6. Diagram or explain the basic steps in the flow of energy through the biotic environment (element) of an ecosystem. Begin with the sun.

__________________________________________________________

__________________________________________________________

__________________________________________________________

7. Explain Liebig's Law of The Minimum and Shelford's Law of Tolerance, and state how these laws tell us how and why certain plants and animals become endangered or are eliminated when their habitat or community gets disturbed OR out of balance.

Liebig’s Law ______________________________________________

__________________________________________________________

__________________________________________________________

Shelford’s Law _____________________________________________

__________________________________________________________

__________________________________________________________

8. Choose a biological community in your area, such as a forest or woods; a swamp, lake or pond; pasture or meadow grassland; or a canyon or creek woods, etc., that is disturbed or ecologically out of balance in some way.

Make a description of it, including how and to what extent it is disturbed. Then make recommendations as to how the community could be improved and, where possible, follow through and help to improve it in some way.

9. Spend a minimum of 20 hours doing active, productive work on an ecology project in your area. This may be done individually or as a group. Describe the project in general, but report specifically on your part in it.
10. Define the following terms:

Community ____________________________________________________________

Ecological balance ______________________________________________________

Raw materials ____________________________________________________________

Saprobe _________________________________________________________________

Photosynthesis __________________________________________________________

Decomposer _____________________________________________________________

Chemosynthesis _________________________________________________________

Producer ________________________________________________________________

Autotrophy ______________________________________________________________

Consumer ______________________________________________________________

Heterotrophy _____________________________________________________________

Limited factor __________________________________________________________
11. Find a Spirit of Prophecy quotation and a Bible text pertinent to ecology and explain their relevance and application to our day.

Spirit of Prophecy ___________________________________________
Bible Text _________________________________________________
Explanation ________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

NOTE: These requirements may be expressed either verbally or in writing to a youth leader. An instructor is recommended but not required for this honor. Counsel with your youth leader or instructor before beginning requirements seven, eight and nine.
Edible Wild Plants

1. Photograph, collect pictures of or sketch fifteen edible wild plants. Identify each plant in the wild.

   1. _______________  6. _______________  11. _______________
   2. _______________  7. _______________  12. _______________
   3. _______________  8. _______________  13. _______________
   4. _______________  9. _______________  14. _______________
   5. _______________ 10. _______________  15. _______________

2. Identify in the wild five trees and five shrubs which are edible.

   Trees                            Shrubs
   1. ___________________________  ___________________________
   2. ___________________________  ___________________________
   3. ___________________________  ___________________________
   4. ___________________________  ___________________________
   5. ___________________________  ___________________________

3. Identify, prepare, and eat three kinds of wild berries or fruits, three kinds of beverages, three salad plants, three potherbs (greens), and two tubers or roots.

   Wild Berries/Fruits            Beverages
   1. ___________________________  1. ___________________________
   2. ___________________________  2. ___________________________
   3. ___________________________  3. ___________________________

   Salad Plants                   Potherbs (greens)
   1. ___________________________  1. ___________________________
   2. ___________________________  2. ___________________________
   3. ___________________________  3. ___________________________
Tubers or Roots
1. __________________________
2. __________________________

☐ 4. Demonstrate the preparation of wild foods in each of the following ways:
   a. Boiling
   b. Frying
   c. Roasting
   d. Baking
   e. Demonstrate how to prepare four parts of the common milkweed or day lily for food.

☐ 5. Explain how to identify three "odd-shaped" edible fungi and how to identify the deadly mushroom amanitas.
   1. __________________________  3. __________________________
   2. __________________________
   Amanitas __________________________________________________
   ____________________________________________________________

☐ 6. What root plant can be dried and ground into meal?
   ____________________________________________________________
   ____________________________________________________________

☐ 7. Know at least 8 families embracing the poisonous or doubtful plants.
   1. __________________________  5. __________________________
   2. __________________________  6. __________________________
   3. __________________________  7. __________________________
   4. __________________________  8. __________________________

☐ 8. What is the cardinal edibility rule?
   __________________________________________________________________
   __________________________________________________________________

Date completed ____________  Instructor’s Signature ____________________
1. What is the difference between ecology and environmental conservation?

Ecology ___________________________________________________

__________________________________________________________

Environmental Conservation __________________________________

__________________________________________________________

2. Write a 500 word essay on how the increase in human population is threatening our existence on earth.

3. What does the term “death” of a lake or river mean?

Death of a lake or river _______________________________________

__________________________________________________________

Is there a lake or river in your area or country which is classified as “dead”?

4. Carry out a stream investigation of a small stream flowing through or near your home town. Check for the following:

   a. Signs of Purity
      - Abundance of small fish present
      - Water visually clear and fresh smelling
      - Stream banks covered with vegetation down to water's edge.
      - Small amounts of green algae in water (light green in color)
      - Some aquatic plants present, such as cattails, arrow-leaf, or pickerel weed.
      - Turtles present in the stream
      - Crayfish under stones in the stream
      - Sandbars covered with growing weeds indicating relatively stable water level
b. Signs of Stream Deterioration and Death
   - Large masses of blue-green algae present (dark green in color)
   - Scoured banks from high water level during storms
   - Putrid smell of the water
   - Detergent foam present
   - Trash sticking out of mud and sand bars along the stream
   - Water loaded with silt
   - No aquatic insects or fish present
   - Presence of raw sewage
   - Presence of oil on the surface of the water
   - No salamanders or frogs under rocks along stream bank
   - Stores or small factories dumping their wastes into the stream

5. If your stream is showing some of the above signs of death, do something about cleaning it up. Contact the closest government agency to ask what you and/or your group can do to help improve the stream. Organize a group of young people to help in cleaning the trash along your stream. If possible, get businesses to help in your campaign.

6. Make a visit to the city or county trash dump to see how this waste is handled. Find out the following:
   How many tons of trash are dumped daily?
   ____________________________________________________________
   ____________________________________________________________
   Yearly? ______________________________________________________
   ____________________________________________________________
   What attempts are made to recycle any of this trash?
   ____________________________________________________________
   ____________________________________________________________
   Is any of the trash burned or is all of it buried?
   ____________________________________________________________
   ____________________________________________________________
What is the cost per person per year for handling the trash?

__________________________________________________________

__________________________________________________________

What happens to junked autos in your area?

__________________________________________________________

__________________________________________________________

☐ 7. Make a visit to the nearest sewage plant. Draw and label a detailed diagram of what happens to the liquid and solid wastes from the time they come into the plant until they leave. In what form do they leave? Is any further use made of this waste?

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

☐ 8. Visit the nearest water purification plant. Construct a flow diagram of the steps in water purification from the time the water enters the plant until it leaves for distribution to homes and stores. Through reading and discussion with water works officials, determine whether water resources in the future are going to be enough to meet the demand.

__________________________________________________________

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9. Read and write a book report on an environment issues book such as Rachel Carson's Silent Spring.
10. What are rare and endangered species?

Determine what efforts are being put forth to protect such species in your area.

What can you do to help? Write a 300-500 word paper on your ideas.
Ferns

1. How are ferns different from flowering plants or trees?
   Ferns
   
   Flowering plants or trees

2. Where is the true stem of a fern?

   What part grows above the ground?

   What is the most favorable environment in which ferns grow?

3. How do ferns reproduce?

   Locate and describe three kinds of sori (from three kinds of ferns).
   1. 
   2. 
   3. 

4. How do spores travel from the parent plant to a new location?

   How long does it take a spore to develop into a mature plant?

   Observe from live ferns or pictures how a young fern is different from an adult fern.
5. Know the medicinal uses of three ferns.

<table>
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<tr>
<th>Ferns</th>
<th>Medical Use</th>
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6. Draw or photograph ten kinds of ferns and properly identify them.

7. In addition to the common ferns there are fernlike plants known as club mosses and horsetails. Be able to recognize two club mosses and one horsetail.

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<thead>
<tr>
<th>Club Mosses</th>
<th>Horsetail Moss</th>
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How are they similar to ferns?

__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
Fishes

1. Name ten families of fishes.
   1. __________________________   6. __________________________
   2. __________________________   7. __________________________
   3. __________________________   8. __________________________
   4. __________________________   9. __________________________
   5. __________________________  10. __________________________

2. Identify from pictures or personal observation ten tropical fishes. Explain their breeding habits. Give the habitat or country in which they are found.

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<th>Fish</th>
<th>Breeding Habits</th>
<th>Habitat</th>
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</table>
3. Identify from pictures or personal observation ten fishes native to your own country. Explain their feeding and breeding habits.

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<th>Fish</th>
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<td>9.</td>
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<td>10.</td>
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</tbody>
</table>

4. Define the following parts of a fish:

Dorsal fin ___________________________________________________________________

___________________________________________________________________________

Lateral line ___________________________________________________________________

___________________________________________________________________________

Pectoral fin ___________________________________________________________________

___________________________________________________________________________

Operculum ___________________________________________________________________

___________________________________________________________________________

Pelvic fin ___________________________________________________________________

___________________________________________________________________________

Barbels ___________________________________________________________________

___________________________________________________________________________

Anal fin ___________________________________________________________________

___________________________________________________________________________
Swim bladder ______________________________________________
__________________________________________________________

Caudal fin _________________________________________________
__________________________________________________________

Gills ______________________________________________________
__________________________________________________________

5. State briefly the proper care and feeding of fishes of:
   Tropical zone ______________________________________________
   __________________________________________________________
   Temperate zone _____________________________________________
   __________________________________________________________

6. Fill an aquarium containing at least five gallons of water with a balance of plants and fishes, either tropical or native, and maintain the same for at least six months.

7. Note the effect of the following on the fishes and aquarium in general:
   Too much light _____________________________________________
   __________________________________________________________
   Too little light ______________________________________________
   __________________________________________________________
   Overfeeding ________________________________________________
   __________________________________________________________
   Excessive change in water temperature _________________________
   __________________________________________________________
   Too few plants and too many fishes __________________________
   __________________________________________________________
Flowers

1. Draw or photograph 35 kinds of flowers and identify them correctly.

2. Draw and properly label or point out the actual parts of a flower:
   a. Pistil
   b. Stamen
   c. Petal
   d. Sepal

3. Name six flower families and their distinguishing characteristics. Name at least two flowers in each family. (Complete Chart)

4. Describe the life history of a particular flower, including the part played by insects or wind in pollination.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

5. Name at least two plants that are poisonous to touch and state which, if any, are found in your locality.

   Name                  Locality (Y/N)
   1. ____________________  _____________________________
   2. ____________________  _____________________________

6. Do three of the following:
   a. Arrange, draw, or photograph a series of at least six flowers, showing in order the colors of the rainbow-red, orange, yellow, green, blue and violet.
   b. Submit fresh, pressed, or dried flowers having five petals, four petals, three petals, and no petals.
   c. Distinguish and name two out of five wild or cultivated flowers by their odor while blindfolded.
d. List flowers that you have observed being visited for food by the following:
Birds ______________________________________________________
Honeybees ________________________________________________
Bumblebees _______________________________________________
Butterflies _________________________________________________
Moths _____________________________________________________


e. Watch a flower for at least ten minutes in the sunshine and at least ten minutes after dusk, and report on any insect visitors. State the number and kind of visitors and name of flower.
Flower _________________________________________________
Sunshine: Number and types of insects _____________________
After dusk: Number and types of insects ____________________
## Flowers Chart

<table>
<thead>
<tr>
<th>Flower Family</th>
<th>Distinguishing Characteristics</th>
<th>2 Flowers in each family</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>6</td>
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<td>1</td>
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<td></td>
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<td>2</td>
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</tbody>
</table>
Flowers, Advanced

1. Have the Flower Honor.

2. Photograph, collect pictures of or sketch 75 species of flowers. Make a scrapbook from these and correctly label each flower.

3. Give the distinguishing characteristics of the flowers of each of the 12 common plant families.

<table>
<thead>
<tr>
<th>Family</th>
<th>Distinguishing Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>11.</td>
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<td>12.</td>
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</tbody>
</table>

4. Prove ability to use plant keys to genus and species.

5. Tell the difference between perfect and imperfect flowers.

   Perfect ______________________________________________________

   Imperfect ____________________________________________________
What is meant by pistil late and staminate flowers?

Pistil _____________________________________________________

Staminate __________________________________________________

Give an example of monoecious and dioecious plants.

Monoecious ________________________________________________

Dioecious __________________________________________________

Tell the difference between monocotyledons and dicotyledons.

Monocotyledons ____________________________________________

Dicotyledons _______________________________________________

6. From the Bible point out two spiritual lessons in which writers used flowers for illustrations.

1. __________________________________________________________

2. __________________________________________________________

7. Name and describe eight poisonous plants, noting the particular part of the plant that is poisonous.

<table>
<thead>
<tr>
<th>Plant</th>
<th>Part of plant poisonous</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>7.</td>
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<td>8.</td>
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</tbody>
</table>
8. Do one of the following:
   a. Name five plants that are of medicinal value and indicate what part of each plant is used.

<table>
<thead>
<tr>
<th>Plant</th>
<th>Part of plant used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</tbody>
</table>

   b. Name ten wild plants that are edible in root, stem, or leaf.

<table>
<thead>
<tr>
<th>Plant</th>
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<tbody>
<tr>
<td>1.</td>
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</tbody>
</table>

c. An option from requirement 6 of the Flower Honor not completed for that Honor.
Fossils

1. Make a collection of at least ten different kinds of fossils and label each with its name and geographic location.

2. Have a brief definition of each of the following in your notebook:
   - Geology
   - Calamite
   - Fossils
   - Foraminifera
   - Catastrophism
   - Radiolaria
   - Paleontology
   - Paleozoic
   - Graptolite
   - Mesozoic
   - Trilobite
   - Cenozoic
   - Dinosaur
   - Pleistocene
   - Mammoth
   - Paleobotany
   - Mastodon
   - Pelecypod
   - Crinoid
   - Brachiopod
   - Lingula
3. Visit a museum where fossils are on display and make a written or oral report of your trip.

4. Describe the process of the proper removal of delicate specimens.

__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________

Tell how a skeleton of a dinosaur or other gigantic fossil would be removed.

__________________________________________________________
__________________________________________________________

Why should beginners not remove such specimens?

__________________________________________________________
__________________________________________________________

What should be done by the beginner when he finds what is obviously a valuable fossil?

__________________________________________________________
__________________________________________________________

5. Explain the difference in the account scientists give for the presence of fossils as related by evolutionists and creationists.

Evolutionists_______________________________________________
__________________________________________________________

Creationists ________________________________________________
__________________________________________________________

6. The Bible and writings of Ellen G. White cite statements to explain the origin of the following:

Coal_______________________________________________________

Petroleum _________________________________________________

Fossils ____________________________________________________

Limestone _________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

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__________________________________________________________

Date completed ____________Instructor’s Signature ________________________
1. Give the name of five classes of fungi and examples of each.

<table>
<thead>
<tr>
<th>Class</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</tbody>
</table>

2. Identify fifteen common fungi of your locality. Draw or photograph them from live specimens.

3. Name three important fungi and tell what their value is.

<table>
<thead>
<tr>
<th>Fungi</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<td>3.</td>
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</tbody>
</table>

4. Tell the life history of one example of each of the following:
Rust

Nature
General Conference
2002 Edition
Mold _____________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
Mushroom _________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
Yeast _____________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________

5. Identify five fungus plant diseases.
   1. __________________________  4. __________________________
   2. __________________________  5. __________________________
   3. __________________________

6. Know what safety precautions to observe when handling fungi.
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
Geology

1. Give the geological meaning of the following words:
   - Delta _____________________________________________________
   - Cirque __________________________________________________
   - Sand spit ________________________________________________
   - Mesa _____________________________________________________
   - Sinkhole ________________________________________________
   - Alluvial fan ______________________________________________
   - Oxbow lake ______________________________________________
   - Anticline ________________________________________________
   - Moraine _________________________________________________
   - Syncline ________________________________________________
2. Describe the following:
   a. A shield-type volcano as compared to a composite volcano
      Shield __________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      Composite ____________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
   b. How a glacier moves and what evidences it leaves behind
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
   c. How sediments are laid down by water
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
   d. The different types of mountains
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
   e. Why a river or stream bank often keeps caving in on the outside
      of a bend
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________

3. Know what category of rocks (sedimentary, metamorphic, or igneous)
the following rocks are:

<table>
<thead>
<tr>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Granite</td>
</tr>
<tr>
<td>Marble</td>
</tr>
<tr>
<td>Sandstone</td>
</tr>
<tr>
<td>Lava</td>
</tr>
<tr>
<td>Conglomerate</td>
</tr>
<tr>
<td>Limestone</td>
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<tr>
<td>Slate</td>
</tr>
<tr>
<td>Basalt</td>
</tr>
<tr>
<td>Shale</td>
</tr>
<tr>
<td>Gneiss</td>
</tr>
</tbody>
</table>

☐ 4. Take a picture or make a sketch of each of the following geological features:

a. A bed of sediment that is coarser at the bottom and finer toward the top (This is called normal graded bedding.)

b. Ripple marks in sand or mud (Show with an arrow the current direction if possible.)

c. Gulley erosion

d. Mud cracks (These can usually be found after a heavy rain or flood when mud starts to dry.)

e. Soil profile along a stream bank or road cut (You should be able to see how soil usually becomes lighter colored downward from the surface of the ground.)

f. Sand bar (Sand bars can be found in rivers or streams, or along the ocean.)
1. Have the Geology Honor.

2. Provide the following information:
   a. How do earthquakes tell us what the interior of the earth is like?
      ____________________________________________________
      ____________________________________________________
      ____________________________________________________
      ____________________________________________________

   b. How can a lot of water (as in Noah's flood) do in a few months what a little water would require thousands or millions of years to do?
      ____________________________________________________
      ____________________________________________________
      ____________________________________________________
      ____________________________________________________

   c. Why are evidences of glaciers seen in the temperate climes where there are now no glaciers?
      ____________________________________________________
      ____________________________________________________
      ____________________________________________________
      ____________________________________________________

   d. How do creationists, who believe in a universal flood and in a young age for the earth since creation, understand and use the geological time chart?
      ____________________________________________________
      ____________________________________________________
      ____________________________________________________
      ____________________________________________________

   e. What is the continental drift (plate tectonics) theory, and how can
creationists fit such geological activity into time since creation?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. Where in the world would you likely see:
   Large glaciers ______________________________________________
   Faultblock mountains ________________________________________
   Active volcanoes ____________________________________________
   Folded mountains ___________________________________________
   Sand dunes _________________________________________________
   Chalk cliffs _________________________________________________
   Sinkholes __________________________________________________
   Icebergs ___________________________________________________
   Fiords _____________________________________________________
   Atolls _____________________________________________________

4. Write a 500-word paper on one of the following:
   a. Describe the interesting geology you saw on a trip you took recently.
   b. Describe the geological activity that happened because of a heavy rain, flood, or windstorm that you experienced.
Grasses

1. What characteristics must a plant have to qualify as a grass?
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

2. What kind of roots do all grasses have?
   ____________________________________________________________
   ____________________________________________________________

3. About how many species around the world are there in the grass family called Gramineae or Poaceae?
   ____________________________________________________________
   ____________________________________________________________

4. Do the seeds of grasses have two halves as does the bean (a dicotyledon), or does the seed consist of just one part as do the lily, date, and coconut (monocotyledons)?
   ____________________________________________________________
   ____________________________________________________________

5. What unique characteristic in the growth of grass leaves makes it possible for the plant to flourish even though continually mowed or grazed?
   ____________________________________________________________
   ____________________________________________________________

6. Name three annual grasses, that is, grasses that sprout from seeds, blossom, bear seeds, and then die the same summer.
   1. ____________________________  3. ____________________________
   2. ____________________________
7. Name three perennial grasses, that is, grasses whose roots live on from year to year, although the top dies down to the crown each autumn.
   1. ___________________________
   2. ___________________________
   3. ___________________________

8. In each of the following cases name a single grass, or more where indicated, from which the product is made:
   Bread (three grasses) ___________________________
   Brooms ___________________________
   Fishing poles ___________________________
   Gluten ___________________________
   Grain alcohol (two grasses) ___________________________
   Hay ___________________________
   Hominy ___________________________
   Molasses ___________________________
   Oatmeal ___________________________
   Starch ___________________________
   Sugar ___________________________
   White flour ___________________________

9. Do one of the following:
   a. Collect and correctly label ten cultivated grasses.
   b. Write an essay on the various uses of grasses by different people around the world.

10. Press or dry, mount, and correctly label the flower stalks or seed stalks of five pestiferous grasses that are commonly considered to be weeds.

11. In addition to your collection of flower or seed stalks of pestiferous kinds, press, mount, and correctly name the flower stalks or seed stalks of ten additional grasses that grow in your neighborhood. This collection may include some of the plants whose seeds are in your collection of cultivated grasses.
1. Name at least five house plants raised for their foliage.
   1. __________________________  4. __________________________
   2. __________________________  5. __________________________
   3. __________________________

2. Name three house plants raised for their flowers.
   1. __________________________  3. __________________________
   2. __________________________

3. Name three house plants adapted to direct sunlight, dry soils, and very moist soils.

<table>
<thead>
<tr>
<th>Sunlight</th>
<th>Dry soils</th>
<th>Very moist soils</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

4. Most house plants like a 65-to 75-degree (18 C - 22 C) temperature. Name one that requires a cool room (45 to 55 degrees F.) (7 C - 13 C).

5. Prepare a special potting mix soil including at least 3 different ingredients. Select two house plants from requirement two and grow them in this soil for three weeks.

6. How much light does an African violet need?

   Where in the house is the best place to grow them?

   Grow two or more African violets.
7. All gesneriads need approximately the same growing conditions. Where do they come from originally?

__________________________________________________________

What kind of temperature, light, and humidity do they need?

__________________________________________________________

8. Name two house plants that can be propagated from leaves, stem sections or divisions.

Leaves _________________________ _________________________

Stem sections ___________________ _________________________

Divisions _______________________ _________________________

Select one plant from requirement two above, experiment with each of these methods of propagation and keep them growing for three months.

9. What is a Bonsai? _________________________________________

__________________________________________________________

10. What is humidity? _________________________________________

How is it important to house plants? ____________________________

__________________________________________________________

11. Below is a list of plants to choose from for requirement five and eight above:

   a. Narcissus  l. Spider plant
   b. Aspidistra  m. Geranium
   c. Philodendron  n. Maidenhair fern
   d. Aluminum plant  o. Begonia
   e. Daffodil  p. Ficus
   f. Sanseveria  q. Tulip
   g. Boston fern  r. Iris
   h. Piggy-back plant  s. Crocus
   i. Bird's nest fern  t. Coleus
   j. Caladium  u. Hyacinth
   k. Gloxinia

Date completed ____________  Instructor’s Signature ____________________
Insects

1. Do one of the following:
   a. Mount a collection of 20 species of insects representing at least six different orders excluding moths or butterflies. (Carelessly mounted specimens will not be acceptable.)
      (1) Place under each specimen a label showing the locality where caught, the date caught, and the collector's name. Labels should not be larger than 1/4 x 3/4 inches (6 mm x 20 mm).
      (2) Identify insects with common names and genus or species level on second labels to be mounted below the first.
      (3) Arrange all specimens neatly in an insect box according to orders and families. Orders should be pinned to the box rather than attached to the individual insect pins.
   b. Make colored drawings or paintings of 20 species of insects, representing at least six different orders. Drawings or paintings need to be life size or larger, to show the details of small insects, and in natural coloring. Label the drawings with common names and genus or species level names.
   c. Take color pictures of 20 species of insects, representing at least six different orders. All pictures should be in focus, close-ups and properly labeled, showing where photographed, the date photographed, common names and genus or species level names.

2. What are the distinguishing characteristics of an insect?

3. Name five species of injurious insects and tell how to control them.
   1. __________________________  4. __________________________
   2. __________________________  5. __________________________
   3. __________________________
   Control: __________________________
4. Name five species of useful insects.
   1. ______________________  4. ______________________
   2. ______________________  5. ______________________
   3. ______________________
   Control: ______________________

5. Tell two Bible stories in which insects played an important part.
   1. ______________________
   2. ______________________
Insects, Advanced

1. Have the Insects Honor.

2. Do one of the following:
   a. Add to your collection 50 species of insects representing at least ten different orders. Labels must include collector’s name, date, locality, order, family, and genus or species level name. (Carelessly mounted or broken specimens are not acceptable.)
   b. Add to your colored drawings or paintings 50 species of insects, representing at least ten different orders. Drawings or paintings need to be life size or larger, to show the details of small insects, and in natural coloring. Label drawings with date, order, family, and genus or species level name.
   c. Add to your colored pictures 50 species of insects, representing at least ten different orders. All pictures are to be infocuse, close-ups and properly labeled, showing where photographed, the date photographed, and order, family, and genus or species level name.

3. How do the special structures and habits of insects fit them so admirably for life?

4. Explain the life cycle of four insects in four different families.
   1. ________________________________

   2. ________________________________

   3. ________________________________

   4. ________________________________
4. ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

5. Name two kinds of social insects. How do they differ from nonsocial insects?
   
   1. ____________________________  2. ____________________________

   Social ________________________________________________________
   Nonsocial ____________________________________________________

6. Name at least four insects that carry disease to man. Name at least one disease carried by each.

<table>
<thead>
<tr>
<th>Insects</th>
<th>2 Disease</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

7. Make one of the following:
   a. Aerial net
   b. Sweeping net
   c. Aquatic net

8. Construct and use a trap for night-flying insects.

9. Do one of the following:
   a. Identify from pictures or from live insects one belonging in each of the following:
      (1) Aquatic
      (2) Leaf mining
      (3) Leaf rolling
      (4) Wood boring
      (5) Paper eating
      (6) Parasites on the body of bird or mammal.
b. Describe the castes of termites and honey bees.

Termites 

Honey Bees 

c. Compare the degree of intelligence exhibited by a grasshopper or a beetle, and an ant, bee, or wasp.

Grasshopper 

Beetle 

Ant, Bee or Wasp 

Lichens, Liverworts, and Mosses

1. Know the life cycle of a moss, lichen, or liverwort.

2. What are lichens?

3. Name at least two ways lichens have been of value to man.
   1. 
   2. 

4. How are liverworts different than all other green plants?

   Name one used in aquariums

   What is its function?

5. Describe at least three significant ways moss has played in the economy of man.
   1. 
   2. 
   3. 

6. Make a moss garden (small terrarium) or "eternal garden" using at least three different kinds of mosses and lichens.
7. Find and identify five lichens, one liverwort, and six mosses.

Lichens
1. _________________________________________________________
2. _________________________________________________________
3. _________________________________________________________
4. _________________________________________________________
5. _________________________________________________________

Liverwort
1. _________________________________________________________

Mosses
1. _________________________________________________________
2. _________________________________________________________
3. _________________________________________________________
4. _________________________________________________________
5. _________________________________________________________
6. _________________________________________________________

8. Observe the spore caps of several different kinds of moss under a magnifier to see the differences in "hair caps" and "teeth" that separate many species.
Livestock

(Changed from Domestic Animals)

1. Distinguish between the draft horse and the light horse.

Draft Horse ________________________________________________

Light Horse ________________________________________________

2. Identify from pictures or personal observation, and record the height, weight, color, and disposition of at least three of the following horses:
   a. Percheron
   b. Belgina
   c. Clydesdale
   d. Arabian
   e. Shetland

<table>
<thead>
<tr>
<th>Breed</th>
<th>Height</th>
<th>Weight</th>
<th>Color</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>______</td>
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</tbody>
</table>

3. List four physical characteristics of the mule.

1. _________________________________________________________

2. _________________________________________________________

3. _________________________________________________________

4. _________________________________________________________

4. Identify a burro from a picture or live. Give its size, color, and usefulness.

Size _________________________________________________________

Color _________________________________________________________

Usefulness _____________________________________________________
5. Identify from pictures or live animals four kinds of milk cattle and four kinds of beef cattle.

Milk Cattle
1. _________________________________________________________
2. _________________________________________________________
3. _________________________________________________________
4. _________________________________________________________

Beef Cattle
1. _________________________________________________________
2. _________________________________________________________
3. _________________________________________________________
4. _________________________________________________________

6. Know the milk-producing qualities of the Jersey, Guernsey, and Holstein breeds.

Jersey ___________________________________________________
Guernsey _________________________________________________
Holstein ________________________________________________

7. What is the difference between the Angora and milch goats?

Angora _________________________________________________
Milch ___________________________________________________

Give the distinguishing colors of at least three different breeds of goats, such as Saanen, Toggenburg, Nubian, and British Alpine.

<table>
<thead>
<tr>
<th>Breed</th>
<th>Color</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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</tbody>
</table>
8. Identify from pictures or live sheep and note wool and meat production, size, markings, and general appearance of three breeds of sheep, such as Merino, Rambouillet, Shropshire, Hampshire, and Lincoln.

<table>
<thead>
<tr>
<th>Breed</th>
<th>Size</th>
<th>Markings</th>
<th>Appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</table>

Date completed ____________ Instructor’s Signature ____________________
Mammals

1. What Bible verse gives the day mammals were created?

__________________________________________________________

2. List four characteristics of a mammal.
   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________
   4. _______________________________________________________

3. Give one or more identifying characteristics of each of the following orders of mammals, and name one or more species of mammals found in each order:

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marsupialia</td>
<td></td>
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<tr>
<td>Rodentia</td>
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<tr>
<td>Insectivora</td>
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<tr>
<td>Lagomorpha</td>
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<tr>
<td>Chiroptera</td>
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<tr>
<td>Artiodactyla</td>
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<tr>
<td>Carnivora</td>
<td></td>
</tr>
<tr>
<td>Sirenia</td>
<td></td>
</tr>
<tr>
<td>Pinnipedia</td>
<td></td>
</tr>
<tr>
<td>Cetacea</td>
<td></td>
</tr>
</tbody>
</table>

4. List four beneficial mammals and tell how they are beneficial.

<table>
<thead>
<tr>
<th>Mammals</th>
<th>How are they beneficial</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>3.</td>
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<td>4.</td>
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</tr>
</tbody>
</table>
5. List four things mammals do that are harmful.
   1. ________________________________
   2. ________________________________
   3. ________________________________
   4. ________________________________

6. List four mammals that are completely aquatic and designate their natural range.
   1. ________________________________
   2. ________________________________
   3. ________________________________
   4. ________________________________

7. Name the largest mammal in the world and tell where it lives, how it feeds, and what it eats.
   Mammal ________________________________
   Lives ________________________________
   Feeds ________________________________
   Eats ________________________________

8. List eight species of wild mammals that are in your region. Send at least 5 hours searching for wild mammals in their natural habitat.
   1. ________________________________  5. ________________________________
   2. ________________________________  6. ________________________________
   3. ________________________________  7. ________________________________
   4. ________________________________  8. ________________________________

9. Write or tell a story about "Wild Mammals I Have Observed".
Mammals, Advanced

1. Have the Mammals Honor

2. What mammals in your locality are protected by law?

________________________________________________________________________
________________________________________________________________________
Why? ____________________________________________________________________
________________________________________________________________________

3. How do the processes of birth and care for the young differ in monotremes and marsupials from all other orders of mammals?

Monotremes ____________________________________________________________
________________________________________________________________________

Marsupials ______________________________________________________________
________________________________________________________________________

4. Name five different ways in which mammals protect themselves and their young, and cite an example of each.

   Ways of protection          Examples
   1. __________________________  ________________________________
   2. __________________________  ________________________________
   3. __________________________  ________________________________
   4. __________________________  ________________________________
   5. __________________________  ________________________________

5. What mammals are agents for the transmission of tularemia, bubonic plague, trichinosis, and rabies?

   Tularemia ___________________________________________________________
   Bubonic plague ______________________________________________________
   Trichinosis __________________________________________________________
   Rabies ______________________________________________________________
6. List 15 species of wild mammals which you personally have observed and identified in the wild. For each one listed, include the following data: (Complete Chart #1)
   a. Name
   b. Date observed
   c. Locality
   d. Habitat (woods, field, swamp)
   e. Time of day
   f. Behavior (what the animal was doing)
<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>Date Observed</th>
<th>Locality</th>
<th>Habitat</th>
<th>Time of day</th>
<th>Behavior</th>
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</table>
Maple Sugar

1. What part of the world and time of year does the maple sugar industry function and why?
   Part of the world ____________________________________________
   Time of year _______________________________________________
   Why ______________________________________________________

2. Explain how sweet sap is made by the maple tree and how it is stored over the winter.
   Made _____________________________________________________
   Stored ____________________________________________________

3. Identify the sugar maple tree by its bark and leaf.

4. How deep into a maple tree does one drill for best results?

5. How long does it take for a healthy maple tree tap's hole to heal?

6. How close to an old tap hole can a new tap hole be made?

7. How many taps can be made on a healthy maple tree without injuring it?
   a. 10 inch (25.4 cm) diameter tree ___________________________
   b. 12 inch (30.5 cm) diameter tree ___________________________
   c. 24 inch (61.0 cm) diameter tree ___________________________
   d. 36 inch (91.4 cm) diameter tree ___________________________

8. Tell how maple sugar is made from maple syrup?
9. What is the ideal weather for sap to flow?

10. Does a maple tree crown (limb & leaf area) affect the sap flow and sweetness?

11. On an average, how much sap is needed to produce one gallon of syrup?

12. Taste pure maple syrup or maple sugar.

13. Observe and explain what the following maple sugaring equipment is used for:
   Drill ______________________________________________________
   Bucket ____________________________________________________
   Bit _______________________________________________________
   Bucket cover _____________________________________________
   Spigot ___________________________________________________
   Evaporator ______________________________________________

Date completed ____________    Instructor’s Signature ____________________
Maple Sugar, Advanced

1. Have the Maple Sugar Honor.
2. Make at least five taps and boil down at least two quarts of syrup.
3. Collect a leaf and bark from two maples.
4. List two usages of the sugar maple other than maple sugaring.
   1. _______________________________________________________
   2. _______________________________________________________
5. What do you look for in tapping a maple tree?
   _______________________________________________________
6. When is the right time to tap a maple tree in the spring?
   _______________________________________________________
7. Name the four maples that produce sweet sap.
   1. __________________________  3. __________________________
   2. __________________________  4. __________________________
8. What is the size of the drill bit? (2 sizes)
   1. __________________________  2. __________________________
9. How can sap spoil and how is it like milk?
   _______________________________________________________
10. What is the maple sugaring legend?
    _______________________________________________________
11. To make one quart of syrup, how many quarts of sap will you need?
    __________________________ Quarts
12. How can one tell if syrup is ready or near ready during boiling without a thermometer or hydrometer?

13. How did the early settlers become acquainted with maple sugaring?

14. Visit two sugar operations.

15. Use three recipes and display them at Investiture time.

16. Make one pound of maple sugar candy and explain how it was made.

17. What is maple wax on snow?

18. When the sap is yellow and/or moths collect in the buckets, what does that usually mean?
Marine Algae

1. What is marine algae? ________________________________

2. Where is it found? ________________________________

3. What is the organ of attachment to the substratum called?
   How does it differ from a true root?

4. How does size vary in marine algae? ________________________________

5. Name the four groups of marine algae, indicating opposite the name of each group whether it is unicellular, multicellular, or both.
<table>
<thead>
<tr>
<th>Group</th>
<th>Unicellular, multicellular, both</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</tr>
</tbody>
</table>

6. Is most green algae found in fresh or salt water? ________________________________

7. What are diatoms? ________________________________

8. Where does algae grow—the polar, temperate, or tropic zone?
   ________________________________

9. Where is brown algae most invariably found—in fresh or salt water?
   ________________________________

10. What is the greatest depth that algae grows in the ocean?
    Why can it not grow in deeper water?
    ________________________________
11. Name the three parts of a large kelp. How do they compare to the leaf, stem, and root of a plant?

<table>
<thead>
<tr>
<th>Part</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</tbody>
</table>

12. Describe the two ways that algae reproduce.

1.                                                                                             
2.                                                                                             

13. What are some of the commercial values of algae? Give at least one for each group.

Green group                                                                                       
Brown group                                                                                      
Red group                                                                                        

14. Make a collection of at least twenty specimen of marine algae properly identified, mounted, and labeled. There must be at least four specimens from the Green group, eight from the Brown group, and eight from the Red group.

15. Be able to identify by generic name at least ten types of marine algae.
1. Be able to identify at least one example of fifteen of the following seashore animals:
   a. Tunicate (Sea Squirt)
   b. Anemone (Sea Flower)
   c. Chiton
   d. Hermit Crab
   e. Brittle Star or Serpent Star
   f. Sea Urchin
   g. Sea Cucumber
   h. Bryozoa colony (Moss animal)
   i. Barnacle
   j. Sea Star
   k. Mussel or Clamworm
   l. Sea Jelly
   m. Limpet
   n. Tube Worm
   o. Oyster
   p. Amphipod (Sand Flea)
   q. Sponge
   r. Sand Dollar
   s. Coral
   t. Ghost Crab

2. Make a collection or photographs of the following seashore animals:
   a. Three kinds of crabs
   b. One kind of sea star
   c. Any other five animals listed in requirement 1. Hard-bodied animals, such as crabs, sea star, and chitons, may be killed in a 5% solution of formaldehyde or a 70% solution of alcohol, and then dried by a fire. The sun will cause the color to fade. Soft-bodied animals must be kept in a 3% solution of formaldehyde or a 70% solution of alcohol. If commercial formalin is used in place of formaldehyde, the above percentage figures should be doubled.

3. Describe the following processes:
   a. The swimming action of a sea jelly
   b. The method of an anemone capturing food

Nature
General Conference
2002 Edition
c. The running of a crab ____________________________________
   ______________________________________________________
   ______________________________________________________

d. How does a sea star digest a clam or oyster when it has such a small mouth opening?
   ______________________________________________________
   ______________________________________________________

4. Name four low-tide animals and two high-tide animals.
   Low-tide
   1. __________________________  3. __________________________
   2. __________________________  4. __________________________
   High-tide
   1. __________________________  2. __________________________

5. Answer the following questions on relationships:
   a. What relationship do crabs and barnacles have to insects?
      ______________________________________________________
      ______________________________________________________

   b. What relationship does the sea squirt have to man?
      ______________________________________________________
      ______________________________________________________

   c. Name a common land dweller that is related to the clamworm.
      ______________________________________________________
      ______________________________________________________

   d. The octopus belongs to the phylum Mollusca. Which two animals listed in No. 1 are related to the octopus?
      1. __________________________  2. __________________________

   e. Sea star, sea cucumber, and sea urchin all belong to the phylum Echinodermata. Why do they belong together? (Clue: Find out what "Echinodermata" means.)
      Enchinodermata ______________________________________
      Why together ______________________________________
      ______________________________________________________
6. Give an oral report on two of the following activities:
   a. Visit a seashore at night and by means of a flashlight observe the activity of animals on shore and in the water. Notice the many plants and animals visible when the beam of light is directed into the water. These minute organisms are called plankton.
   b. Tow a fine-mesh cloth or regular plankton net through the water and observe through a microscope the many tiny animals and plants that are collected.
   c. Select three items under #1 that are important economically. Explain why they are important.

<table>
<thead>
<tr>
<th>Animal</th>
<th>Importance</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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</table>
Marine Mammals

1. Be able to identify three of each of the following and know where each is found. Know at least one by scientific name from each group:

<table>
<thead>
<tr>
<th></th>
<th>Where found</th>
<th>Scientific name</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Toothed Whales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Baleen Whales</td>
<td></td>
<td></td>
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<tr>
<td>c. True Seals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Eared Seals</td>
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<td></td>
</tr>
<tr>
<td>e. Dolphins/Porpoises</td>
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<td></td>
</tr>
<tr>
<td>f. Walruses (one kind)</td>
<td></td>
<td></td>
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<tr>
<td>g. Sea Otter (one kind)</td>
<td></td>
<td></td>
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<tr>
<td>h. Manatees</td>
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</tbody>
</table>

2. Know and locate the story of how God used a whale in Bible times.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. What is the largest mammal in the sea? _________________________________

4. Explain the following words:
   Breaching ____________________________________________________________
   Echolocation _________________________________________________________
Spyhopping

Baleen

Pod

Harem

Plankton

5. Draw a food chain of two different marine mammals.
6. What is the purpose of blubber?

7. Know two reasons that seals are hunted.
   1.
   2.

8. Describe why seals and dolphins can move so quickly in the water.

9. Do one of the following:
   a. Take a trip to an aquarium. Learn about and observe the daily feeding schedule of a marine mammal.
   b. Write a 500-word report on a marine mammal. Include pictures.
   c. Write a 500-word report on current events involving marine mammals and their environment and how they could be endangered.
1. List four major types of microscopics. What are some of the characteristics of each? Be able to identify the different types of microscopes from pictures, or visit a laboratory in a university or industry which has these microscopes.

<table>
<thead>
<tr>
<th>Types of Microscopes</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
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2. Be able to identify the following parts of a microscope and explain or demonstrate the function of each:

- eye-piece or ocular
- objective
- body tube
- nosepiece
- stage
- diaphragm
- base
3. Know how to calculate the magnification of a compound microscope. Calculate the magnification of the microscope you use for this honor.

4. Define the following microscopic terms:
   - slide
   - coverslip
   - wetmount
   - fixing
   - staining
   - oil immersion
   - unicellular
   - multicellular
   - cilia
   - flagella
5. Collect samples of water (from ponds, streams, ditches, gutters, puddles, etc.) and search for living organisms using a microscope with at least 100X magnification. Draw five of these organisms as accurately as possible. As far as possible, identify and label your diagrams (include the magnification used.)

Organisms drawn
1. ____________________________  4. ____________________________
2. ____________________________  5. ____________________________
3. ____________________________

6. Draw and label a cell which includes the following parts:
   cell membrane
   nucleus
   cytoplasm.
7. Know the kingdoms that have microscopic life forms and know two members from each.

<table>
<thead>
<tr>
<th>Kingdoms</th>
<th>Members</th>
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<tbody>
<tr>
<td>1.</td>
<td>a.</td>
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<td>b.</td>
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<td>3.</td>
<td>a.</td>
</tr>
<tr>
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<td>b.</td>
</tr>
<tr>
<td>4.</td>
<td>a.</td>
</tr>
<tr>
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<td>b.</td>
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<tr>
<td>5.</td>
<td>a.</td>
</tr>
<tr>
<td></td>
<td>b.</td>
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</tbody>
</table>

8. Give at least one example of how microscopic life is important for:
   - human food
   - human health
   - medicine
   - other organisms

9. Give at least three health habits that have been established as a direct result of harmful microscopic life. Put these habits into practice.

1. 
2. 
3. 

Date completed ____________
Instructor’s Signature ____________________
Moths and Butterflies

1. What is the distinction between moths and butterflies?
   - Moths _____________________________________________________
   - Butterflies ________________________________________________

2. Define the following terms:
   - antennae ___________________________________________________
   - cocoon _____________________________________________________
   - pupa _____________________________________________________
   - larva _____________________________________________________
   - chrysalis __________________________________________________

3. Be able to identify three moths and/or butterflies by their cocoons.
   - Moths
     1. __________________________  3. __________________________
     2. __________________________
   - Butterflies
     1. __________________________  3. __________________________
     2. __________________________
4. What causes colored powder to come off on your hands when you handle the wings of a butterfly or moth?

__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
Examine the powder of a butterfly or moth with a magnifying lens and describe your findings.

__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________

5. Name three harmful tree moths and one harmful house moth and tell during what stage of their lives they each do their damage.

<table>
<thead>
<tr>
<th>Tree moths</th>
<th>Damage</th>
<th>Stage of life</th>
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</thead>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>House moths</th>
<th>Damage</th>
<th>Stage of life</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</table>

6. What famous butterfly follows the birds southward every winter and comes northward in the spring?
7. Identify in the field, then draw, photograph or collect 25 species of moths and butterflies, with not more than two specimens of any one variety. When collecting, specimens should be anesthetized by using carbon tetrachloride or other chemical in collecting jar. In either project correctly label and include the following information:
   a. Name
   b. Date observed
   c. Location
   d. Time of day
   e. Plant on which the insect was feeding or the material on which it was perched

8. Describe the life cycle of a butterfly or moth. What lesson can be learned in connection with the resurrection of the righteous.

________________________________________________________________________

________________________________________________________________________

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________________________________________________________________________
Orchids

1. Define the characteristics of an orchid.

________________________________________________________________________

________________________________________________________________________

2. What are the two main groupings of orchids? Name and show examples of each from a live plant or picture.

   1. __________________________________________________________
   2. __________________________________________________________

3. What are the differences between epiphytic, parasitic, and saprophytic orchids?

   Epiphytic __________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   Parasitic __________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   Saprophytic ________________________________________________
   ____________________________________________________________
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   ____________________________________________________________
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   ____________________________________________________________

4. Discuss the distribution of orchids, making particular reference to the occurrence of these in your area.

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5. Name the main cultivated genera of orchids. Identify three from plants or picture.

________________________________________________________________________
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What is cultivar? ____________________________________________
6. Discuss the main essentials to observe in the cultivation of orchids. Grow at least one orchid for at least six months.

7. What are the main uses of orchids?

What orchid is used commercially?

8. Know the laws in your area (if any) that protect wild orchids.
Poultry

1. Identify by description and from pictures at least five breeds of chickens such as:
   Plymouth Rock (any color) ________________________________
   _________________________________________________________
   Wyandotte (any color) ____________________________________
   _________________________________________________________
   Rhode Island Red ________________________________________
   _________________________________________________________
   Orpington (any color) ____________________________________
   _________________________________________________________
   Leghorn (any color) ______________________________________
   _________________________________________________________

2. State orally or write a short paragraph regarding the egg-laying or meat-producing qualities of each breed.
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________

3. Identify by description a Peking duck. ______________________
   _________________________________________________________

4. Identify by description and from pictures three breeds of large domestic foul such as the following turkeys:
   Mammoth bronze turkey ________________________________
   _________________________________________________________
   White Holland turkey _______________________________
   _________________________________________________________
   Bourbon Red turkey ________________________________
   _________________________________________________________
5. Identify by description and from pictures two breeds of Domestic geese such as:
   Toulouse goose ____________________________________________
   _________________________________________________________
   Emden ____________________________________________________
   _________________________________________________________
   Chinese Geese _____________________________________________
   _________________________________________________________
   Sebastopol Geese _________________________________________
   _________________________________________________________
   Cape Barren Goose _______________________________________
   _________________________________________________________

6. Visit a poultry farm or Agricultural Fair and write a brief report on the various types of poultry observed.
   _________________________________________________________
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Date completed ____________  Instructor’s Signature ____________________
1. What characteristics must an animal have to be classed as a reptile?

__________________________________________________________

__________________________________________________________

__________________________________________________________

2. Name 15 reptiles (lizards, snakes, and/or turtles) found in your locality. Tell where they live, their food habits, and their economic importance. (Complete Chart #1)

3. Name five venomous reptiles of your area describing each as to the location of their fangs and geographical distribution.

<table>
<thead>
<tr>
<th>Reptile</th>
<th>Fang Position</th>
<th>Geographical Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</tbody>
</table>

4. Tell what to do if you are bitten by a venomous snake.

__________________________________________________________

__________________________________________________________

5. Tell what to do if you are bitten by a non-venomous snake.

__________________________________________________________

__________________________________________________________
6. Do one of the following:
   a. Tell the life history of one representative of each:
      lizard ________________________________________________
      ____________________________________________________
      ____________________________________________________
      snake ________________________________________________
      ____________________________________________________
      ____________________________________________________
      turtle ________________________________________________
      ____________________________________________________
      ____________________________________________________
      Compare lizards, snakes, turtles, and crocodiles as to life
      history, variation in eyes and ears, teeth, heart, lungs, limbs, tails,
      and scales (shells). (Complete Chart #2)
   b. Keep a small reptile in a terrarium and maintain a record if its
      care for three months. (Complete Chart #3)

7. Locate two Bible stories in which a reptile played an important part.
   1. ______________________________________________________
   2. ______________________________________________________
# Reptiles, Chart #1

<table>
<thead>
<tr>
<th>#</th>
<th>Reptile</th>
<th>Locality</th>
<th>Food Habits</th>
<th>Economic Importance</th>
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<tbody>
<tr>
<td>1</td>
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</table>
# Reptiles, Chart #2

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<thead>
<tr>
<th></th>
<th>Lizards</th>
<th>Snakes</th>
<th>Turtles</th>
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<tbody>
<tr>
<td>Eyes</td>
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<td>Ears</td>
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<td>Limbs</td>
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<td>Tails</td>
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<tr>
<td>Scales or Shells</td>
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</table>
# Reptiles, Chart #3

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 8</th>
<th>Day 15</th>
<th>Day 22</th>
<th>Day 29</th>
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<tr>
<td>Day 2</td>
<td>Day 9</td>
<td>Day 16</td>
<td>Day 23</td>
<td>Day 30</td>
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<td>Day 3</td>
<td>Day 10</td>
<td>Day 17</td>
<td>Day 24</td>
<td>Additional Notes:</td>
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<td>Day 4</td>
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<td>Day 18</td>
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<td>Day 5</td>
<td>Day 12</td>
<td>Day 19</td>
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<td>Day 6</td>
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<td>Day 7</td>
<td>Day 14</td>
<td>Day 21</td>
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</table>
1. Have the Reptile Honor.

2. What is the study of Reptiles called?

__________________________________________________________

__________________________________________________________

3. Discover and record (or tell) at least three folk tales and three related facts about reptiles.

4. Why might it be that a major portion of humans fear reptiles and there are so many false stories involving reptiles?

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

5. How do reptiles protect themselves?

__________________________________________________________

6. What are the two primary types of reptile poisons and how do they affect their target prey or enemy?

<table>
<thead>
<tr>
<th>Primary types</th>
<th>Affect their target prey or enemy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</table>

7. Identify in the wild at least half of your list from requirement 2 of the basic honor. (Complete Chart #1)

8. Find a reptile in the wild and record your observations of its activity during the daylight hours of one or more days. (Complete Chart #2)
## Reptiles, Advanced Chart #1

<table>
<thead>
<tr>
<th>#</th>
<th>Reptile</th>
<th>Locality</th>
<th>Food Habits</th>
<th>Economic Importance</th>
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</table>
## Reptiles, Advanced Chart #2

<table>
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<tr>
<th>Area chosen ______________________________________________________</th>
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<thead>
<tr>
<th>Notes</th>
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<tbody>
<tr>
<td>Day 1</td>
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| Day 2  |
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| ______ |
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| ______ |

| Day 3  |
| ______ |
| ______ |
| ______ |
| ______ |
| ______ |
Rocks and Minerals

1. What is the difference between rocks and minerals?
   Rocks _____________________________________________________
   _________________________________________________________
   Minerals __________________________________________________
   _________________________________________________________

2. Have a collection of at least 15 specimens correctly labeled with collector’s name, date, and the locality in which it was found.

3. Define and name two examples each (from specimens or pictures) of:
   Igneous ___________________________________________________
   __________________________
   Sedimentary ______________________________________________
   __________________________
   Metamorphic ______________________________________________
   __________________________

4. What is meant by Mohs' scale of hardness?
   __________________________
   __________________________
   Name the minerals in order in Mohs' scale.
   __________________________
   __________________________

5. Define the following:
   Cleavage __________________________
   __________________________
   Specific gravity __________________________
   __________________________
   Luster __________________________
6. Name four uses for rocks and four uses for minerals.

<table>
<thead>
<tr>
<th>Rocks</th>
<th>Minerals</th>
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<tbody>
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</tbody>
</table>

7. Locate four Bible incidents in which a rock was significant.

1. 
2. 
3. 
4. 

8. What are the foundation stones of the New Jerusalem?

1. 
2. 
3. 
4. 
5. 
6. 
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12. 

Rocks and Minerals, Advanced

1. Have the Rocks and Minerals Honor

2. Have a collection of 30 rocks and minerals properly named, 20 of which you have personally collected. Label with collector’s name, date and locality in which it was found.

3. Know two minerals that belong to each of the following crystal systems:
   - Isometric
     1. __________________
     2. __________________
   - Hexagonal
     1. __________________
     2. __________________
   - Tetragonal
     1. __________________
     2. __________________

4. Know Mohs’ scale of hardness and the simplified field tests of hardness. By using these field tests, collect a scale range of specimens from your own region to form your own hardness test set.

   Moh’s Scale ________________________________________________
   1. ___________________________ 6. ___________________________
   2. ___________________________ 7. ___________________________
   3. ___________________________ 8. ___________________________
   4. ___________________________ 9. ___________________________
   5. ___________________________ 10. ___________________________

   Field tests _________________________________________________
   _________________________________________________________
   _________________________________________________________

5. Do one of the following:
   a. Know and tell two different processes by which metals are extracted from ores.
      1. __________________
      2. __________________
b. Know eight minerals and tell how each is used.

<table>
<thead>
<tr>
<th>Minerals</th>
<th>Used</th>
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<tbody>
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</tbody>
</table>

6. Define the following:

- **Crystalline**: 
  
  
- **Cryptocrystalline**: 
  
  
- **Breccia**: 
  
  
- **Noncrystalline**: 
  
  
- **Fibrous fracture**: 
  
  
- **Vitreous luster**: 
  
  
- **Geode**: 
  
  
- **Petrification**: 
  
  
- **Stalactite**: 
  
  
- **Fluorescence**: 
  
  
---

*Rocks and Minerals, Advanced 2002 Edition*
7. What four metals are frequently found in native or free form?
   1. __________________________  3. __________________________
   2. __________________________  4. __________________________

8. Discuss the content of three statements from the writings of Ellen G. White concerning rocks or minerals.
   1. __________________________________________________________
      __________________________________________________________
   2. __________________________________________________________
      __________________________________________________________
   3. __________________________________________________________
      __________________________________________________________
1. Make a collection of 30 various colored sands. Correctly label with the name and locality where each was secured.

2. What does the term "sand" mean?

________________________________________________________
________________________________________________________

Name two kinds of sand.
1. ______________________________________________________
2. ______________________________________________________

3. Give the origin of sand and mineral content.

________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

4. What is the difference between sand and soil?
   Sand ______________________________________________________
   ______________________________________________________
   Soil ______________________________________________________
   ______________________________________________________

5. What is meant by
   shape ______________________________________________________
   ______________________________________________________
   surface ______________________________________________________
   ______________________________________________________
   grain fracture ______________________________________________________
   ______________________________________________________
   grain size ______________________________________________________
   ______________________________________________________
6. Define the following and give the use of each:

Glacial

Use

Calcareous

Use

Quicksand

Use

Glass sand

Use

Molding sand

Use

Polishing sand

Use

Building sand

Use

Filter sand

Use

Furnace sand

Use

Lake shore sand

Use
7. Examine five types of sand specimens under magnification and observe their various characteristics.

Seeds

1. What is the main purpose of a seed? _____________________________
   _____________________________

2. What foods were first given to man in the Garden of Eden?
   _____________________________
   _____________________________

3. Identify from a seed or drawing and know the purpose of each of these parts of a seed:
   seed coat _____________________________
   _____________________________
   cotyledon _____________________________
   _____________________________
   embryo _____________________________
   _____________________________

4. List from memory four different methods by which seeds are scattered.
   1. _____________________________
   2. _____________________________
   3. _____________________________
   4. _____________________________

   Name three kinds of plants whose seeds are scattered by each method.
   1. _____________________________
   2. _____________________________
   3. _____________________________
5. List from memory ten kinds of seeds that we use for food.
   1. ____________________________ 6. ____________________________
   2. ____________________________ 7. ____________________________
   3. ____________________________ 8. ____________________________
   4. ____________________________ 9. ____________________________
   5. ____________________________ 10. ____________________________

6. List from memory five kinds of seeds that are used as sources of oil.
   1. ____________________________ 4. ____________________________
   2. ____________________________ 5. ____________________________
   3. ____________________________

7. List from memory five kinds of seeds that are used for spices.
   1. ____________________________ 4. ____________________________
   2. ____________________________ 5. ____________________________
   3. ____________________________

8. What conditions are necessary for a seed to sprout?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

9. Make a collection of 30 different kinds of seeds, of which only ten may be collected from commercial seed packages, the other 20 you are to collect yourself. Label each kind as follows: seed name, date collected, location collected, and collector’s name.

Date completed ____________  Instructor’s Signature ____________________

Seeds
2002 Edition
Seeds, Advanced

1. Have the Seeds Honor

2. Identify from drawings and know the purpose of each of the following parts of a seed:
   - endosperm
   - radicle
   - plumule
   - micropyle

3. Know several differences between a monocotyledon seed and a dicotyledon seed, and give three examples of each.

<table>
<thead>
<tr>
<th>Monocotyledon</th>
<th>Dicotyledon</th>
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</thead>
<tbody>
<tr>
<td>Differences</td>
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<td>Examples</td>
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</tbody>
</table>
4. Explain the purpose and use of a "rag doll" seed tester. Use it to test the germination of 100 seeds of a wild plant and 100 seeds of a domestic plant. Report the results of each test.

Purpose __________________________________________________________

_________________________________________________________________

Wild plant _________________________________________________________

_________________________________________________________________

Domestic plant _____________________________________________________

_________________________________________________________________

Test results _________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

5. How does a seed differ from a spore?

Seed _____________________________________________________________

_________________________________________________________________

Spore _____________________________________________________________

_________________________________________________________________

6. Write or tell orally two spiritual lessons we may learn from seeds. You will find help in *Christ's Object Lessons* by Ellen G. White, pages 33 to 89.

Lesson 1 _________________________________________________________

_________________________________________________________________

Lesson 2 _________________________________________________________

_________________________________________________________________

7. Make a collection of 60 different kinds of seeds, of which only 15 may be collected from commercial seed packages, the other 45 you are to collect yourself. Label each kind as follows: seed name, date collected, location collected, and collector’s name.

8. Have in your collection four kinds of seeds from each of two families of plants, showing the similarity between the seeds of plants in any one family.
Shells

1. What is the meaning of the term "mollusk?"

2. Identify from shells or drawings the following:
   a. Mantle
   b. Foot
   c. Teeth
   d. Ribs
   e. Valve
   f. Dorsal border
   g. Apex
   h. Operculum
   i. Canal

3. Are all shells found on beaches? ___________________________________________
   Where else are they found? ___________________________________________
   What areas of the world offer the largest variety of shells?
_____________________________________________________________________

4. Describe the movement of shells from place to place.
_____________________________________________________________________

5. How do shell animals protect themselves?
_____________________________________________________________________

6. How are shells made and from what materials are they made?
_____________________________________________________________________
7. List and explain five uses made of shells by man.
   1. __________________________________________________________
      __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________

8. Explain the terms "univalve" and "bivalve" as applied to shells.
   Univalve ______________________________________________________
   _____________________________________________________________
   Bivalve _______________________________________________________
   _____________________________________________________________

9. Name in common terms five different classes of shells and name in your collection a shell for each class.

<table>
<thead>
<tr>
<th>Classes of shells</th>
<th>Shell for each class</th>
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</thead>
<tbody>
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</table>

10. Make a collection of 20 different shells, classify them, and tell where each is found and when it came into your possession.
11. What is the source of pearls? ________________________________

What spiritual lessons does the pearl teach us? Read and discuss Christ's Object Lessons by Ellen G. White, pages 115 to 118.

Lesson 1 __________________________________________________

________________________________________________________________

Lesson 2 __________________________________________________

________________________________________________________________

12. Match the Bible texts that best answers A-J:

a. Water creatures were created on Acts 16:14
   what day? Leviticus 11:9,10
b. The number of water creatures is Revelation 21:21
   innumerable. Isaiah 50:2
c. Water creatures perish out of water. 1 Timothy 2:9
d. Job considered coral of great value. Genesis 1:20, 21
e. Solomon was acquainted with marine life. 1 Kings 4:33
f. Jesus twice used a shell product to Matthew 7:6; 13:45,46
   teach a spiritual lesson. Psalms 104:25
   g. A businesswoman was engaged in selling Job 28:18
      the famous purple dyes secured from the
      shellfish Mediterranean Murex.
h. Paul does not support the wearing of pearls.
i. Shell creatures are unfit for food.
j. The twelve gates of Holy City are twelve pearls.
### Shells, Advanced

- **1.** Have the Shell Honor.

- **2.** Define the term "mollusca" or "mollusk."
  
  Mollusca __________________________________________________
  
  _________________________________________________________

  Mollusk __________________________________________________
  
  _________________________________________________________

- **3.** Learn the classification terms of mollusks, know the distinguishing characteristics of each, and become acquainted with several species under each class.

<table>
<thead>
<tr>
<th>Classifications</th>
<th>Characteristics</th>
<th>Species</th>
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</table>
4. Distinguish between univalve and bivalve mollusks from the following considerations:

- Shell
- Reproduction
- Securing food
- Mollusk body
- Movements
- Self-preservation

Univalve __________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________

Bivalve __________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________

5. Identify from shells or drawings and know the meaning of the following conchological terms:

- Valve ___________________________________________________
- Apex _____________________________________________________
- Aperture _________________________________________________
- Byssus __________________________________________________
- Canal ____________________________________________________
- Concentric lines ___________________________________________
- Epidermis _________________________________________________
- Foot ______________________________________________________
- Lips ______________________________________________________
6. Explain the development of a shell.

How long do mollusks live?

7. Give some facts about the life of a strombus pugilis (fighting conch) and explain why this shell is so named.
8. Explain the activities of the shipworm.


10. Name two mollusks that have no shells.
    1. ________________________  2. ________________________

11. Find answers for the following interesting questions:
    a. How are bivalve and univalve animals fastened to their shells?
       Bivalve ________________________
       Univalve ________________________
    b. How is shell color controlled? ________________________
    c. What mollusk has four gills? ________________________
    d. From what sea animal was India ink formerly made? _________
    e. What mollusk spins a silken thread? ________________________
    f. What shells were used for money by ancient tribes? _________
    g. What shell is considered sacred by the Tibetans? _________
    h. Purple dye of ancient times came from the secretion of what mollusk? ________________________
    i. What is the source of pearls? ________________________
How are they formed? ___________________________________

12. Name six commercial uses for shells.
   1. ____________________________  4. ____________________________
   2. ____________________________  5. ____________________________
   3. ____________________________  6. ____________________________

13. Do one of the following:
   a. Personally find and collect 40 species of shells representing the five classifications. List each shell as to the place and date it was found, common name, scientific name, and class.
   b. Make a collection of 50 species of shells you have found, received, or purchased representing the five classifications. List each shell collected as follows: if personally found, give the information called for under letter "a" above; if received or purchased, give the name of the person from whom the shell was received, the habitat of the shell, the date of its acquisition, and its common name, scientific name, and class.
1. Note three characteristics of shrubs that distinguish them from trees and herbs.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   Why is a grape vine sometimes regarded as a shrub?
   ____________________________________________________________

2. Name three important wild or cultivated food shrubs of your locality.
   1. ____________________________  3. ____________________________
   2. ____________________________
   Name a shrub that produces edible nuts. ____________________________

3. Name two cultivated shrubs and two wild shrubs of your locality that produce showy flowers.
   Cultivated                     Wild
   1. ____________________________  _______________________________
   2. ____________________________  _______________________________

4. Do most shrubs blossom in the spring, summer, or autumn? __________
   Name one shrub whose flowers open before the leaves appear.
   ____________________________________________________________

5. What parasitic shrub frequently used for indoor decoration grows on the high branches of different kinds of trees?
   ____________________________________________________________

6. Give an example of a shrub whose leaves in autumn turn from green to brilliant shades of yellow, orange, or red.
   ____________________________________________________________
7. Observe some shrub which is in bloom and list as many kinds of insects as you can (at least three) which come to its blossoms for pollen or nectar.

Shrub ________________________________
Insects
______________________________ _____________________________
______________________________ _____________________________
______________________________ _____________________________

8. From what shrubs do birds prefer to eat the fruit or seeds?

________________________________________________________
Name a shrub whose flowers attracts birds. ________________________

9. In what shrubs do birds prefer to build their nests? ________________________

________________________________________________________

10. Collect, preserve, and correctly identify the flowers, leaves, seeds, seed pods, or twigs with buds of ten wild shrubs.
1. Have the Mammal Honor.

2. Keep a small mammal pet for at least six months. (Dogs and cats are not included as small mammal pets.) For a suggested list of pets to choose from, see #5 below.

3. Complete one of the following:
   a. If you currently have a small mammal pet, keep a record of the care for your small mammal for one month. Include in your record when it is watered, fed, and when its cage is cleaned. (Complete Chart #1)

   b. If you do not currently have a small mammal pet, but you have kept one for at least six months, “babysit” someone else’s small mammal pet for at least one week. Record the care that was required. (Complete Chart #2)

4. Give an oral report (at least 3 minutes) on what you have observed about your small mammal pet. Include favorite foods, some of its habits, when it is most active, and favorite story about pet, etc.

5. a. Be able to distinguish between the following groups of small mammal pets:

   (1) Hamster  (5) Guinea pigs
   (2) Gerbils    (6) Chinchillas
   (3) Rats      (7) Rabbits
   (4) Mice      (8) Ferrets

   Note: If the list of domesticated small mammals above are not found in your area you may substitute local domesticated small mammals from your area.

   b. Describe the basic care for one of the above list and describe one way the care of another one of the list differs from the one you selected.

   c. Which two of these pets are not rodents?

   1. ______________________________________
   2. ______________________________________

6. Write a 200 word essay on the history and value of one of the above and what characteristics they have that make them good pets.
7. Be able to identify five varieties of hamsters and five varieties of rabbits.

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<thead>
<tr>
<th>Hamsters</th>
<th>Rabbits</th>
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</table>

8. Why is it not good to make pets out of small mammals taken from the wild?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

________________________________________________________________________
How is it spread? ___________________________________________
________________________________________________________________________
Can you get rabies from small mammals? _________________________
Is it curable? ________________________________________________
How can you avoid getting it? _________________________________
________________________________________________________________________
Which small mammal pets can carry it? __________________________
________________________________________________________________________

10. Why should you not handle your small mammal pets when you have a cold?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
11. Find in the Bible three references to animals that we now consider to be small mammal pets. According to the Bible, are they considered to be clean or unclean meat?

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<thead>
<tr>
<th>Bible References</th>
<th>Clean/Unclean</th>
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Date completed ___________  Instructor’s Signature ________________
If you currently have a small mammal pet, keep a record of its care for at least one month. Include food habits, water needs, cage cleaning, etc.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 8</th>
<th>Day 15</th>
<th>Day 22</th>
<th>Day 29</th>
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<th>Day 9</th>
<th>Day 16</th>
<th>Day 23</th>
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<tr>
<th>Day 3</th>
<th>Day 10</th>
<th>Day 17</th>
<th>Day 24</th>
<th>Additional Notes:</th>
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<th>Day 13</th>
<th>Day 20</th>
<th>Day 27</th>
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<th>Day 14</th>
<th>Day 21</th>
<th>Day 28</th>
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</table>
Small Mammal Pets, Chart #2

If you do not have a small mammal pet now but completed requirement #1 in the past, take care of someone else’s small mammal pet for at least one week while they are on vacation, etc., and maintain a record of the required care.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
<th>Day 6</th>
<th>Day 7</th>
</tr>
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</table>

Additional Notes:
Spiders

1. Do one of the following:
   a. Collect, identify, and preserve at least 16 species of spiders. Place on each specimen bottle a label showing the locality and date of capture and the spider's common or scientific name.
   b. Make colored drawings or paintings of at least 16 species of spiders, life size or larger and in natural coloring. Label each with its common or scientific name.
   c. Take color photos of at least 16 species of spiders. Identify each picture as to its locality, date taken and the common or scientific name of the spider.

2. What is the largest member of the spider family? ___________________

3. Write or give orally a description (forty words or more) of a spider that has gained notoriety in your region.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

4. Give three ways in which spiders differ from insects.
   1. __________________________________________________________________
   2. __________________________________________________________________
   3. __________________________________________________________________

5. Make a careful drawing of an orb web.

6. What other kinds of webs are there besides the orb web?

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
7. What do spiders eat? __________________________________________

Make a list of victims found in spider webs.
________________________________________________________
________________________________________________________
________________________________________________________

8. For what is a spider web useful? ______________________________
________________________________________________________
________________________________________________________
________________________________________________________

9. Find two references in the Bible to spiders and their webs.
   1. ______________________________________________________
   2. ______________________________________________________

10. What are the chief enemies of spiders? ________________________

11. How do spiders:
    Help us? _______________________________________________

Hurt us and our property? ___________________________________
1. Answer the following questions:
   What is the earth's nearest celestial neighbor? _____________________
   What is its distance from the earth? ______________________________
   What governs the tides? _________________________________
   What causes an eclipse? _________________________________
   What is a shooting star? _________________________________

2. Make a diagram showing relative positions and movements of the earth, sun, and moon. Show positions and area events for eclipses of the sun and moon. One may demonstrate by using an orange, walnut, and marble, or similar objects, to show positions and movements of the earth, sun, and moon when there is an eclipse of the sun and when there is an eclipse of the moon.

3. Make a diagram of our solar system

   Name the planets in order from the sun.
   1. _____________________  6. _____________________
   2. _____________________  7. _____________________
   3. _____________________  8. _____________________
   4. _____________________  9. _____________________
   5. _____________________
4. How fast does light travel? ________________________________
   How far does light travel in a year? __________________________

5. What is the difference between planets and fixed stars?
   __________________________________________________________________

Identify in the sky eight fixed stars.
1. __________________________  5. __________________________
2. __________________________  6. __________________________
3. __________________________  7. __________________________
4. __________________________  8. __________________________

6. What is a constellation? _______________________________________
   __________________________________________________________________

Name and point out six.
1. __________________________  4. __________________________
2. __________________________  5. __________________________
3. __________________________  6. __________________________

Name two constellations visible throughout the year.
1. __________________________  2. __________________________

7. For the Northern Hemisphere: draw a chart of the Big Dipper,
   Cassiopeia, and the North Star. For the Southern Hemisphere: draw a
   chart of the Southern Cross, Orion and Scorpio.

8. What is the Milky Way? Observe the Milky Way in the night sky.
   __________________________________________________________________
   __________________________________________________________________

9. What is the morning star and evening star?
   Morning star __________________________
   Evening star __________________________
   Why does it carry both names? __________________________
   Observe the morning and evening star in the sky.

10. Explain zenith and nadir.
    Zenith __________________________
    Nadir __________________________
11. What is the aurora borealis? ____________________________________
                                               ____________________________________
                                               ____________________________________
What causes it? ____________________________________
                                               ____________________________________

12. Discuss the statement made by Ellen G. White in *Early Writings*, page 41, concerning the opening in Orion.
                                               ____________________________________
                                               ____________________________________
                                               ____________________________________
                                               ____________________________________
                                               ____________________________________
                                               ____________________________________
Stars, Advanced

1. Have the Star Honor.

2. How can you account for the apparent daily motion of the stars?

3. What are each of the following:
   - Planet ________________________________
   - Meteor ______________________________
   - Constellation _________________________
   - Satellite _____________________________
   - Meteorite ____________________________
   - Fixed star ___________________________
   - Comet ______________________________
   - Nebula ______________________________
   - Sunspot ______________________________

Identify personally or from pictures an example of each.
4. Define the following terms:

Celestial sphere ________________________________

________________________________________________________________________

Horizon ________________________________

________________________________________________________________________

Transit ________________________________

________________________________________________________________________

Celestial pole ________________________________

________________________________________________________________________

Right ascension ________________________________

________________________________________________________________________

Conjunction ________________________________

________________________________________________________________________

Celestial equator ________________________________

________________________________________________________________________

Declination ________________________________

________________________________________________________________________

Ecliptic ________________________________

________________________________________________________________________

5. Explain the major difference between a refractor and reflector type of telescope.

Refractor ________________________________

________________________________________________________________________

Reflector ________________________________

________________________________________________________________________

Describe an equatorial telescope mounting ________________________________

________________________________________________________________________
6. Into what colors is sunlight dispersed when passed through a prism?

________________________________________________________________________
________________________________________________________________________

In what way are colors of stars used to indicate their temperature?
________________________________________________________________________
________________________________________________________________________

7. What connection is there between the ecliptic and the vernal and autumnal equinoxes?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

What dates are usually associated with the equinoxes?
________________________________________________________________________
________________________________________________________________________

8. Learn the 12 constellations called the signs of the zodiac.
Know the history of the signs of the zodiac.

1. ___________________________  7. ___________________________
2. ___________________________  8. ___________________________
3. ___________________________  9. ___________________________
4. ___________________________ 10. ___________________________
5. ___________________________ 11. ___________________________
6. ___________________________ 12. ___________________________

History ___________________________

________________________________________________________________________

9. Identify by their name and point out in the sky the constellations that can be seen all night long on a clear night in your hemisphere.
10. Name five constellations that are visible between sunset and midnight in your hemisphere during:
   a. The summer months.
   b. The winter months.

11. At what time of year is the constellation Orion best seen? Locate and identify in the sky the three brightest stars of this constellation.

   Time of year ____________________________________________

12. How are the letters of the Greek alphabet used to name stars in a constellation?

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   Give five illustrations of the use of the letters of the Greek alphabet in naming the stars of a constellation.

<table>
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<tr>
<th>Proper name</th>
<th>Constellation name</th>
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13. Locate the 15 first-magnitude stars as they appear throughout the year.

14. With the use of a diagram, show the relative positions of the earth and moon during high and low tides.
15. Describe the peculiar individual characteristics of the planets in our solar system.

Mercury ________________________________________________________

Venus _________________________________________________________

Earth _________________________________________________________

Mars __________________________________________________________

Jupiter _________________________________________________________

Saturn _________________________________________________________

Uranus _________________________________________________________

Neptune _______________________________________________________

Pluto _________________________________________________________

Which ones cannot be seen without the aid of a telescope?

___________________________________________________________

Which two planets are seen only near the hours of sunrise or sunset?

1. ___________________________  2. _____________________________

16. Where and in what way does the Bible refer to Orion, the Pleiades, and Arcturus?

<table>
<thead>
<tr>
<th>Where</th>
<th>What way</th>
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<tbody>
<tr>
<td>Orion</td>
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<tr>
<td>Pleiades</td>
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<tr>
<td>Arcturus</td>
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</table>
Trees

1. Describe the ways in which trees and shrubs differ.
   Trees _____________________________________________________
   _________________________________________________________
   Shrubs __________________________________________________________________

2. Collect and identify typical leaves from 15 different species of trees. Spread neatly, press dry, mount, and label in a suitable notebook or on uniform-size sheets of paper.

3. Name two examples each of trees that have been named for:
   What they are used for
   1. ___________________________________________________________________
   2. ___________________________________________________________________
   The surroundings or environment in which they grow
   1. ___________________________________________________________________
   2. ___________________________________________________________________
   Some distinctive feature
   1. ___________________________________________________________________
   2. ___________________________________________________________________
   The geographic region in which they live
   1. ___________________________________________________________________
   2. ___________________________________________________________________
   Persons who first found and described them
   1. ___________________________________________________________________
   2. ___________________________________________________________________
4. Give the common name and tell the difference between the two great classes of trees.

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<td>Difference</td>
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5. Describe the importance of forest conservation in your area.

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6. Name several examples of the kinds of wood used in each of the following:

<table>
<thead>
<tr>
<th>Flooring for houses</th>
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<thead>
<tr>
<th>Common plywood</th>
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<th>Furniture</th>
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<th>Ax handles</th>
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<th>Fence posts</th>
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<th>Railroad ties</th>
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<th>Support beams for construction work</th>
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</table>
Bows and arrows
1. _________________________ 3. _________________________
2. _________________________ 4. _________________________

Ideal for use as kindling
1. _________________________ 3. _________________________
2. _________________________ 4. _________________________

Burns slowly and leaves a bed of hot coals
1. _________________________ 3. _________________________
2. _________________________ 4. _________________________

7. Name two examples each of trees which:

Grow best in wet lands
1. _________________________ 2. _________________________

Grow best at high levels in mountains
1. _________________________ 2. _________________________

Date completed ____________  Instructor’s Signature ____________________
Trees, Advanced

1. Have the Trees Honor.

2. Collect, identify, press, and mount leaves of 35 different species of trees.

3. Separately collect, press, mount, and label specimens that demonstrate the following terms:
   - a. Serrate
   - b. Doubly serrate
   - c. Entire
   - d. Crenate
   - e. Dentate
   - f. Lobe
   - g. Incise
   - h. Whorled
   - i. Opposite
   - j. Alternate
   - k. Pinnately compound
   - l. Triple compound (if possible)

4. Describe the advantages in using the Latin or scientific names.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

5. Name six families of trees in the angiosperm class and three families in the gymnosperm class.

   Argiosperm Class
   1. ____________________________ 4. ____________________________
   2. ____________________________ 5. ____________________________
   3. ____________________________ 6. ____________________________

   Gymnosperm class
   1. ____________________________
   2. ____________________________
   3. ____________________________
6. Know and describe the function of leaves in the life of a tree.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

7. Name the families of trees in your area which have opposite leaves.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

8. Define the following terms:
   Stipule ________________________________________________________________
   ________________________________________________________________
   Springwood _____________________________________________________________
   ________________________________________________________________
   Petiole ________________________________________________________________
   ________________________________________________________________
   Summerwood ____________________________________________________________
   ________________________________________________________________
   Blade ________________________________________________________________
   ________________________________________________________________
   Annual ring ____________________________________________________________
   ________________________________________________________________
   Pitch ________________________________________________________________
   ________________________________________________________________
   Cambium ______________________________________________________________
   ________________________________________________________________
   Heartwood _____________________________________________________________
   ________________________________________________________________
   Xylem ________________________________________________________________
   ________________________________________________________________
9. What families of trees have:
   Thorns
   Pods
   Catkins
   Capsules
   Winged seeds
   Nuts
   Acorns
   Berries

10. Identify ten deciduous trees by their “winter” characteristics, (features other than leaves) such as twig and bud, characteristic form, and growth habits.

<table>
<thead>
<tr>
<th>Tree</th>
<th>Characteristics</th>
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<tbody>
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<td>10.</td>
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</tbody>
</table>
Weather

1. Explain how each of the following is formed:
   Fog ______________________________________________________
   ____________________________
   Sleet ____________________________________________________
   ____________________________
   Rain ____________________________________________________
   ____________________________
   Hail ____________________________________________________
   ____________________________
   Dew ____________________________________________________
   ____________________________
   Frost __________________________________________________
   ____________________________
   Snow __________________________________________________
   ____________________________

2. Identify either in the sky or from pictures the following types of clouds: cirrus, cumulus, stratus, nimbus. What kind of weather is associated with each.

3. Explain the action of a mercury or spirit thermometer, a mercury barometer, an aneroid barometer, and a rain gauge.
   Mercury or spirit thermometer ________________________________
   ____________________________
   Mercury barometer ____________________________
   ____________________________
   Aneroid barometer ____________________________
   ____________________________
4. Why is it possible to be rainy on one side of the mountain range and dry on the other? Give an illustration for your country or region.

Why is it cooler and more moist in the mountains than in the lowlands?

From which direction do rain and clear weather usually come in your locality?

5. Show with the help of a diagram how the earth's relationship to the sun produces the seasons.

6. What causes lightning and thunder?
What different kinds of lightning are there?

7. Show with the help of a diagram what a convection is.

What is its relation to winds?

8. Explain how radar, satellites, and computers are used in weather forecasting.
   Radar ___________________________________________________
   _______________________________________________________
   Satllites ___________________________________________________
   _______________________________________________________
   Computers _________________________________________________
   _______________________________________________________

9. Tell how the following can affect our weather:
   Jet stream _______________________________________________
   _______________________________________________________
   Volcano eruption _________________________________________
   _______________________________________________________
   Weather 2002 Edition
10. Make a drawing showing the water cycle in weather.

11. Make a simple wind vane or rain gauge.

12. Keep a weather chart for one week and record readings at 12-hour intervals. Include the following: (Complete Chart #1)
   Temperature
   Moisture (dew, fog, rain, frost, or snow)
   Cloud formation
   Wind direction
<table>
<thead>
<tr>
<th>Day/ Hour</th>
<th>Temperature</th>
<th>Moisture</th>
<th>Cloud Formation</th>
<th>Wind Direction</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>
Weather, Advanced

1. Have the Weather Honor.

2. Explain cyclonic and anticyclonic weather conditions and know how they bring about weather changes.
   - Cyclonic __________________________________________________
   - Anticyclonic ________________________________________________

3. What are cold fronts and warm fronts? How do they move and what weather conditions do they produce?
   - Cold front __________________________________________________
   - Warm front _________________________________________________

4. Explain the following weather conditions:
   - Chinook winds ______________________________________________
   - Trade winds ________________________________________________
   - Belt of calms _______________________________________________
   - Tornadoes __________________________________________________
   - Squall line _________________________________________________
   - Typhoons __________________________________________________
   - Hurricanes _________________________________________________
   - Blizzards __________________________________________________
   - Ice storm _________________________________________________

Pathfinder’s Name
5. Explain the action of a registering thermometer, registering barograph, hygrometer, and an anemometer.

Registering thermometer ____________________________
Registering barograph ____________________________
Hygrometer ____________________________
Anemometer ____________________________

6. Correctly read a daily weather map as published by the National Weather Service, explaining the symbols and telling how predictions are made.

7. What is meant by relative humidity and dew-point?

Relative humidity ____________________________
Dew point ____________________________

8. Draw a cross section of the atmosphere, showing its five layers and describe them.

9. Keep a daily weather chart for three weeks. Include the following:
   (Complete Chart #1)
   Amount of precipitation (Secure this either from your own home-made device or from official records.)
   Barometer reading
   Cloud formation
   High and low temperature
   Wind speed and direction
   Weather forecasts and comparison to what really happened.

10. Discuss the effect of mankind on weather.
Weather, Advanced Chart #1

Instructions

Keep a daily weather chart for three weeks to include the following:
- Amount of precipitation
- Dew or frost in the morning
- Barometer reading
- Wind speed and direction
- Cloud formation
- National Weather Service forecast with
- High and low temperature
- what really happened

Use your own observation as well as information obtained from the radio, TV or newspaper.

<table>
<thead>
<tr>
<th>Week # _______</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
<th>Day 6</th>
<th>Day 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>High temperature (Fahrenheit degrees)</td>
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<td>Low temperature (Fahrenheit degrees)</td>
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<tr>
<td>Current temperature (Fahrenheit degrees)</td>
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<td>Cloud type</td>
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<td>% cloud cover</td>
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<td>Air pressure</td>
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<td>Humidity</td>
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<td>Wind direction</td>
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<tr>
<td>Wind speed (mph)</td>
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<td>Rain daily (inches)</td>
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<td>Rain total (inches)</td>
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<td>Prediction/Actual Weather</td>
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</tbody>
</table>
Outdoor Industries Index

Agriculture
Beekeeping
Cattle Husbandry
Dairying
Flower Culture
Fruit Growing
Gardening
Goat Husbandry
Horse Husbandry
Island Fishing South Pacific Div/Island Ed.
Pigeon Raising
Poultry Raising
Sheep Husbandry
Small Fruit Growing
Subsistence Farming South Pacific Div/Island Ed.
Pathfinder’s Name

Agriculture

1. List the components of soil.

________________________________________________________________________

Why is soil important to plants?

________________________________________________________________________

2. Explain the difference between clay, sand, and loam soils. List three crops that grow well in each.

Clay ___________________________________________________________________

1. ___________ 2. ___________ 3. ___________

Sand ___________________________________________________________________

1. ___________ 2. ___________ 3. ___________

Loam ___________________________________________________________________

1. ___________ 2. ___________ 3. ___________

3. Test the germination of three varieties of seeds, 100 seeds in each variety. Record germination percentage after three, four, and five days.

<table>
<thead>
<tr>
<th></th>
<th>Variety #1</th>
<th>Variety #2</th>
<th>Variety #3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Type: ______</td>
<td>Type: ______</td>
<td>Type: ______</td>
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<tr>
<td>Day 3</td>
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<td>Day 4</td>
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<td>Day 5</td>
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</tbody>
</table>
4. Explain how plants obtain nutrients and convert them to food.

Explain the differences between primary, secondary, and micronutrients.
Primary
Secondary
Micronutrients

5. Name and identify ten common weeds of your community and tell how to best eliminate them, using cultural or chemical methods.

<table>
<thead>
<tr>
<th>Weeds</th>
<th>Elimination</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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</tbody>
</table>
6. Identify six common insect pests or diseases. Tell what plants they usually affect and how to eliminate or prevent their occurrence.

<table>
<thead>
<tr>
<th>Pest/Disease</th>
<th>Plants affected</th>
<th>Eliminated</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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</tbody>
</table>

7. Locate two sources of agricultural weather information.

1. __________________________  3. __________________________

How is this information helpful to the farmer?

_________________________________________________________

_________________________________________________________

8. Assist in planting, cultivating, and harvesting at least four different crops. Maintain a log of work done and problems encountered from seeding to harvest.

9. Know the purpose of the following:

Plowing ___________________________________________________

_________________________________________________________

Disking ____________________________________________________

_________________________________________________________

Cultivating _________________________________________________

_________________________________________________________

Irrigation __________________________________________________

_________________________________________________________

Harvesting _________________________________________________

_________________________________________________________
10. Name and identify ten common birds of your locality, and state their value to the farmer.

<table>
<thead>
<tr>
<th>Birds</th>
<th>Value</th>
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<tbody>
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</tbody>
</table>

11. What is erosion? ____________________________________________
_________________________________________________________

How can it be prevented? ______________________________________
_________________________________________________________

12. Visit your local cooperative extension service and find out how the organization helps the farmer. Write a one-page report of your visit.
Beekeeping

1. Know a brief history of keeping bees for honey.

2. List at least five uses of each of the following:
   
   **Honey**
   1. 
   2. 
   3. 
   4. 
   5. 

   **Beeswax**
   1. 
   2. 
   3. 
   4. 
   5. 

   **Propolis**
   1. 
   2. 
   3. 
   4. 
   5.
3. Name ten foods that would be very difficult to grow if there were no honey bees.

1. ______________________  6. ______________________
2. ______________________  7. ______________________
3. ______________________  8. ______________________
4. ______________________  9. ______________________
5. ______________________ 10. ______________________

4. List the duties of the drone, the worker, and the queen bees.

Drone _____________________________________________________
___________________________________________________________
Worker ____________________________________________________
___________________________________________________________
Queen bee _________________________________________________
___________________________________________________________

5. Describe how bees build combs.

___________________________________________________________
___________________________________________________________
___________________________________________________________
___________________________________________________________
Why does the comb turn dark with age?

___________________________________________________________
___________________________________________________________

6. What is meant by the following terms:

Movable-frame hive __________________________________________
___________________________________________________________
Crossed comb _______________________________________________
___________________________________________________________
Bee space __________________________________________________
___________________________________________________________
Swarming ___________________________________________________
___________________________________________________________
7. What is a smoker? __________________________________________
   __________________________________________________________
What materials make good fuel for a smoker? ______________________
   __________________________________________________________

8. What consideration should be given when choosing a hive location?
   __________________________________________________________
   __________________________________________________________

9. How are honey bee diseases spread from hive to hive?
   __________________________________________________________
   __________________________________________________________

10. What is robbing?
    __________________________________________________________
    __________________________________________________________
    Describe a robber bee.
    __________________________________________________________

11. Name four ways to help prevent swarming.
    1. _______________________________________________________
    2. _______________________________________________________
    3. _______________________________________________________
    4. _______________________________________________________
    Why should swarming be prevented?
    _________________________________________________________

12. What three requirements must be met for the colony to successfully
    weather a winter?
    1. _______________________________________________________
    2. _______________________________________________________
    3. _______________________________________________________
13. What is the advantage of using a double-brood chamber system?


14. Carry out the following duties of successful beekeeping:
   a. Spring feed to stimulate brood production
   b. Supering and other swarm prevention techniques
   c. Extract honey and put into jars
   d. Fall feeding and "taking the hive down" to prepare it for the winter months

15. How do you know when a frame is ready to be removed from the hive for extraction?


Date completed ___________  Instructor’s Signature ____________________  Beekeeping 2002 Edition
Cattle Husbandry

1. Name at least 25 parts of a steer.
   1. __________________________  14. __________________________
   2. __________________________  15. __________________________
   3. __________________________  16. __________________________
   4. __________________________  17. __________________________
   5. __________________________  18. __________________________
   6. __________________________  19. __________________________
   7. __________________________  20. __________________________
   8. __________________________  21. __________________________
   9. __________________________  22. __________________________
  10. __________________________  23. __________________________
  11. __________________________  24. __________________________
  12. __________________________  25. __________________________
  13. __________________________

2. What are four characteristics of a good heifer?
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. _________________________________________________________

3. What is castration?
   ___________________________________________________________
   ___________________________________________________________
   What is its purpose?
   ___________________________________________________________
4. Why is dehorning done?

What age is best for dehorning?

5. What is creep feeding?

6. When is a calf weaned?

7. What are the housing needs of cattle?

8. Why is it best to put feed and water at opposite ends of the pen from each other?

9. Identify live or from pictures three breeds of beef cattle and three breeds of dairy cattle.

<table>
<thead>
<tr>
<th>Beef Cattle</th>
<th>Dairy Cattle</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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</tbody>
</table>

10. What type of feed is required during the following:
    First 90 days
    From 90 to 180 days
    From 180 days to selling

11. How can a heifer be trained to become a gentle cow?

12. Care for one or more calves for a period of six months.
Dairying

   1. ____________________________ 14. ____________________________
   2. ____________________________ 15. ____________________________
   3. ____________________________ 16. ____________________________
   4. ____________________________ 17. ____________________________
   5. ____________________________ 18. ____________________________
   6. ____________________________ 19. ____________________________
   7. ____________________________ 20. ____________________________
   8. ____________________________ 21. ____________________________
   9. ____________________________ 22. ____________________________
  10. ____________________________ 23. ____________________________
  11. ____________________________ 24. ____________________________
  12. ____________________________ 25. ____________________________
  13. ____________________________

2. What considerations are made when selecting a calf?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

3. Know the care, management, and feeding of dairy cows during their following stages: (Complete Chart #1)
   a. Calves
   b. Weaning to six months
   c. Six months to fifteen months
   d. Fifteen months to springers
   e. The dry cow
4. Know the proper feeding techniques for a lactating cow.

5. Know how milk is produced in the cow.

6. Know the steps in milking a cow either by hand or machine.
   By hand
   By machine

7. Know eight parts of a milking machine.
   1. __________________________
   2. __________________________
   3. __________________________
   4. __________________________
   5. __________________________
   6. __________________________
   7. __________________________
   8. __________________________

8. What is mastitis?
   What steps can be taken to prevent mastitis?

9. Know five herd health problems, their symptoms, and how to prevent and/or treat them. (Complete Chart #2)

10. Know the meaning of the following terms:
    Concentrates
    Crude protein
☐ 11. Explain the pasteurization of milk and the proper care of dairy utensils and appliances.

☐ 12. Assist with the care and milking of a dairy herd of cows for at least three months.
Dairying, Chart #1

Know the care, management, and feeding of dairy cows during their following stages

<table>
<thead>
<tr>
<th></th>
<th>CARE</th>
<th>MANAGEMENT</th>
<th>FEEDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calves</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Weaning to 6 months</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6 months to 15 months</td>
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<td>15 months to springers</td>
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<tr>
<td>Springers</td>
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</tr>
</tbody>
</table>
Dairying, Chart #2

Know the care, management, and feeding of dairy cows during their following stages:

<table>
<thead>
<tr>
<th>Stage</th>
<th>CARE</th>
<th>MANAGEMENT</th>
<th>FEEDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calves</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Weaning to 6 months</td>
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<td>6 months to 15 months</td>
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<td>15 months to springers</td>
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<td>Springers</td>
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</tbody>
</table>
1. Define each of the following
   Perennials _________________________________________________
   _________________________________________________________
   Annuals ___________________________________________________
   _________________________________________________________
   Biennials _________________________________________________
   _________________________________________________________

2. Give general instructions for making a hotbed.
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________

   What is the difference between a hotbed and a cold frame?
   Hotbed __________________________________________________
   _________________________________________________________
   Cold frame _______________________________________________
   _________________________________________________________

3. What is drainage?
   _________________________________________________________
   _________________________________________________________

   Of what importance is it?
   _________________________________________________________
4. Name three plant pests and tell how to control them.

<table>
<thead>
<tr>
<th>Pests</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ____________</td>
<td>1. ____________</td>
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<tr>
<td>2. ____________</td>
<td>2. ____________</td>
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<tr>
<td>3. ____________</td>
<td>3. ____________</td>
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</tbody>
</table>

5. Give instructions for making a window box and tell its use.

Instructions

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Use _____________________________________________________________________
________________________________________________________________________

6. Prepare the soil, fertilize, plant, and grow to maturity three different kinds of annuals.

1. _____________________________________________________________________
2. _____________________________________________________________________
3. _____________________________________________________________________

7. Care for two or more perennial flowers growing outdoors for one season by fertilizing, watering, weeding, and treating for pests as needed. Maintain a written record with weekly entries, listing work done. (Complete Chart #1 as many times as needed to complete the growing season)

Perennials grown

1. _____________________________________________________________________
2. _____________________________________________________________________

8. Which three plant nutrients are most important to flowering plants?

1. _____________________________________________________________________
2. _____________________________________________________________________
3. _____________________________________________________________________
9. Identify three flowering plants adapted to each of the following conditions:

**Shade**
1. ________________________________
2. ________________________________
3. ________________________________

**Dry soil**
1. ________________________________
2. ________________________________
3. ________________________________

**Full sun**
1. ________________________________
2. ________________________________
3. ________________________________

**Moist soil**
1. ________________________________
2. ________________________________
3. ________________________________

10. What is the purpose of a soil test?

__________________________________________________________________________

11. Make a picture collection of ten annuals, five perennials, and two biennials. Label and know the name of each from memory.
Flower Culture, Chart #1

Care for two or more perennial flowers growing outdoors for one season by fertilizing, watering, weeding, and treating for pests as needed.

Perennial grown ________________________________

<table>
<thead>
<tr>
<th>Week #</th>
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</tr>
</tbody>
</table>
Fruit Growing

1. Why are fruit trees grafted?

________________________________________________________________________

________________________________________________________________________

2. What does hardiness mean?

________________________________________________________________________

________________________________________________________________________

3. What site and soil conditions are required to grow three of the following:
   a. Apples
   b. Peaches
   c. Pears
   d. Plums
   e. Cherries
   f. Oranges
   g. An equivalent choice

<table>
<thead>
<tr>
<th>Fruit</th>
<th>Site</th>
<th>Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>3.</td>
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</tbody>
</table>

4. What is a dwarf fruit tree?

________________________________________________________________________

________________________________________________________________________

How is it dwarfed?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
5. Plant at least two fruit trees and train them by pruning for at least two seasons, or train and prune an existing tree. With supervision fertilize and spray as needed for one growing season. Show an example of harvested fruit to your examiner.

Trees cared for
1. ______________________________________________________
2. ______________________________________________________

6. Answer the following questions:
What is pollination? ________________________________________
________________________________________________________________
What is a pollinator? _________________________________________
________________________________________________________________
Which trees need a pollinator? _________________________________
________________________________________________________________

7. How are young trees protected from rodent damage?
________________________________________________________________
________________________________________________________________
Protect your young trees from rodents.

8. Compare the qualities of flavor, texture, and appearance of two different varieties of the same fruit.
Fruit compared _____________________________________________
________________________________________________________________
Results ______________________________________________________
________________________________________________________________
1. Prepare soil, fertilize, and plant a vegetable plot of not less than 100 square feet (30.5 square meters). Grow at least six different vegetables, three from seeds and three from seedlings, through harvesting.

Vegetables grown from:
- Seeds
  1. ____________________
  2. ____________________
  3. ____________________
- Seedlings
  1. ____________________
  2. ____________________
  3. ____________________

2. List ways to control insects and/or disease in your garden.

_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________

Know when and how to apply insecticides and fungicides.

_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________

3. What is mulch? ____________________

How and why is it used in the garden?

How ____________________

_________________________________________________________
_________________________________________________________
Why ____________________

_________________________________________________________
4. What is hardiness? ___________________________________________
_________________________________________________________

Which vegetables are considered hardy in your area?
_________________________________________________________
_________________________________________________________
_________________________________________________________

5. Do one of the following:
   a. Test germination for 100 of the same kind of seeds.
   b. Make and use a hotbed or cold frame.
   c. Prepare any three varieties of vegetables for market.
   d. Make and use a storage bin or pit for your vegetables.
1. Identify live or from pictures at least two breeds of goats. Tell if they are raised for milk, meat, or wool.

<table>
<thead>
<tr>
<th>Breeds identified</th>
<th>Reason Raised</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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</tbody>
</table>

2. What type of housing should be provided for goats?

3. What types of feed are used for the following:
   - First month
   - Second month
   - Pregnancy
   - Freshened doe
   - Yearling

4. Name three poisonous plants to goats.
   - 1. 
   - 2. 
   - 3. 

5. When are kids weaned?

6. When must the buck kids be removed from the does, and why?

7. How are goat's hoofs trimmed?
8. Why are goats good for clearing brush land?

________________________________________________________________________
________________________________________________________________________

9. Name at least six items that are made from goat skins.
   1. ___________________________________________________________________
   2. ___________________________________________________________________
   3. ___________________________________________________________________
   4. ___________________________________________________________________
   5. ___________________________________________________________________
   6. ___________________________________________________________________

10. What are wattles? __________________________________________________________

________________________________________________________________________

11. Raise at least two goats for six months.
    Dates of caring for goats ________________________________________________

12. If milch goats are raised, answer the following questions:
    What are the points to consider when choosing a good milk goat?
    ___________________________________________________________________
    ___________________________________________________________________
    How is pasteurization done?
    ___________________________________________________________________
    ___________________________________________________________________
    What is its purpose?
    ___________________________________________________________________
    ___________________________________________________________________

13. If milch goats are raised, do the following:
    a. Do the milking morning or evening for two goats, or morning and evening for one goat, for at least three months.
       Dates goat(s) milked _________________________________________________
    b. Keep daily milk production records.
Horse Husbandry

1. What line of profit is derived by the use of specially-selected mares?

2. Why is it preferable to raise purebred colts rather than common grades?

3. Name at least five points that are desirable in selecting a horse.
   1. ______________________________________________________
   2. ______________________________________________________
   3. ______________________________________________________
   4. ______________________________________________________
   5. ______________________________________________________

4. What type of training will help colts to grow into gentle, dependable horses?
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

5. Describe the proper care and feeding of horses and give three different types of food for horses.
   Care ______________________________________________________
   ______________________________________________________
   ______________________________________________________
   Types of food
   1. ______________________________________________________
   2. ______________________________________________________
   3. ______________________________________________________
6. Know the following:
   Halter _____________________________________________________
   ___________________________________________________________
   Bridle _____________________________________________________
   ___________________________________________________________
   Saddle ____________________________________________________
   ___________________________________________________________

7. Know how to properly put a halter, bridle, and saddle on a horse.
8. Know how to properly care for the hoofs of a horse.
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   Know the parts of the hoof.
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

9. Care for a colt or horse for at least one week.
   Date of care _______________________________________________
   Date completed ____________ Instructor’s Signature ____________________
Pigeon Raising

1. Describe the proper type of pigeon house or loft, perch, trap, and nest box to use for pigeon raising.

Loft ______________________________________________________
Perch _____________________________________________________
Trap ______________________________________________________
Nest Box __________________________________________________

List the needed interior equipment for a loft.
_________________________________________________________
_________________________________________________________
_________________________________________________________

2. Know a good formula for seeds, grain, and grit to be used for feed and in what proportions they should be mixed.

_________________________________________________________
_________________________________________________________

Why should less corn be used in warm climates?
_________________________________________________________

3. What is the importance of the different parts of the pigeon's wing, especially the primary and secondary flight feathers?

_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________

4. What is the importance of proper molting?

_________________________________________________________
_________________________________________________________
How can the molting season be controlled?

5. Raise at least two pairs of pigeons. If homing pigeons, train them to return to their loft from a distance of 25 miles (40 km). If fancy or show pigeons, prepare them for exhibition and exhibit them in a fair or show.

Type(s) of pigeons raised ________________________________

6. Submit a brief report, covering your experience in the care and training of the above pigeons, including sanitation, avoiding disease, lice, mites, rats, mice, and other vermin.

Date completed ____________ Instructor’s Signature ____________________

Pigeon Raising
2002 Edition
Poultry Raising

1. Have the Poultry Honor.

2. Tell briefly the egg-laying or meat-producing qualities of the following:
   - Plymouth Rock
   - Wyandotte
   - Rhode Island Red
   - Orpington
   - Leghorn
   - Peking duck
   - Mammoth Bronze turkey
   - White Holland turkey
   - Toulouse goose

3. What is the purpose of the following:
   - Incubators
   - Hovers
Sanitary fowl houses

Coops

Runs

☐ 4. Candle a number of eggs, finding at least one bad egg. What is the purpose of candling eggs?

☐ 5. Outline the feeding program for domestic fowl, from hatching to maturity.

☐ 6. What is the temperature, humidity, and number of days needed to hatch the following eggs:

<table>
<thead>
<tr>
<th></th>
<th>Temperature</th>
<th>Humidity</th>
<th># of days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duck</td>
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<tr>
<td>Chicken</td>
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<tr>
<td>Goose</td>
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<tr>
<td>Quail</td>
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<td></td>
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<tr>
<td>Turkey</td>
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</tbody>
</table>

☐ 7. Make, buy, or rent an incubator and hatch six poultry eggs of your choice, with a 50% hatch.

Types hatched

Date of hatch

% of hatch

☐ 8. Raise these fowl for at least three months.

Date of care

Date completed ___________  Instructor’s Signature ____________________

Poultry Raising
2002 Edition
Sheep Husbandry

1. What kinds of areas do sheep naturally inhabit?

2. What kind of vegetation furnishes the feed most ideal for sheep?

3. What type of shelter or barn should be provided for sheep?

4. How much space is needed for each animal in the following conditions:
   - Loose barn space for adult sheep ________________________________
   - Outside lot space for adult sheep ________________________________
   - Loose barn space for large lamb _________________________________
   - Loose barn space for small lamb ________________________________
   - Pasture required for one ewe _________________________________
   - Feed trough space for mature sheep ______________________________
   - Feed trough space for lambs _________________________________
   - Lambing ________________________________________________

5. What are the most favorable seasons of the year in which to make a start in sheep raising?

6. What considerations should be taken into account when selecting the breed of stock?

7. What is the ideal size of flock for inexperienced beginners in sheep raising?
8. What winter feed is most ideal for sheep?
________________________________________________________

9. What type of care should be given to lambs?
________________________________________________________
________________________________________________________

10. Know the meaning of the following terms:
Castration __________________________________________________
________________________________________________________

Commercial ________________________________________________
________________________________________________________

Concentrate ________________________________________________
________________________________________________________

Cross bred _________________________________________________
________________________________________________________

Dam ______________________________________________________
________________________________________________________

Dock _____________________________________________________
________________________________________________________

Drench ____________________________________________________
________________________________________________________

Ewe ______________________________________________________
________________________________________________________

Flushing ___________________________________________________
________________________________________________________

Forages or roughages ________________________________________
________________________________________________________

Gain _____________________________________________________
________________________________________________________

Gestation __________________________________________________
Grease weight ________________________________

_____________________________________________

Heat ___________________________________________

_____________________________________________

Lactation ______________________________________

_____________________________________________

Polled __________________________________________

_____________________________________________

Purebred _______________________________________

_____________________________________________

Ram ____________________________________________

_____________________________________________

Ration __________________________________________

_____________________________________________

Registered ______________________________________

_____________________________________________

Scours __________________________________________

_____________________________________________

Scurred _________________________________________

_____________________________________________

Sire ____________________________________________

_____________________________________________

Wether _________________________________________

_____________________________________________

11. Care for two or more lambs until marketed or until three months of age.
   Dates of care _________________________________
   Number of lambs cared for _______________________

Date completed ____________ Instructor’s Signature ____________________

Sheep Husbandry
2002 Edition
Small Fruit Growing

1. What are the soil requirements for growing
   - Bramble berries _____________________________________________
   - Strawberries ______________________________________________
   - Grapes ____________________________________________________
   - Blueberries ________________________________________________

2. Write a one-page report telling how to grow one of the above fruits. Include the following:
   a. Variety selection
   b. Soil preparation
   c. Planting techniques
   d. Fertilizing
   e. Pruning (where applicable)
   f. Watering
   g. Pest control
   h. Harvesting

3. Name three varieties of each fruit that will grow well in your area.
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________

4. Prune two blueberry bushes, two grape vines, or a ten-foot row of bramble berries at the proper time in the family garden or for a friend or neighbor.
   Type trimmed ______________________________________________
   Who trimmed for ____________________________________________

5. What is a perishable crop?
   ___________________________________________________________
   ___________________________________________________________
6. How long can the following be stored?
   Strawberries ________________________________
   Bramble berries ________________________________
   Blueberries ________________________________
   Grapes ________________________________

7. Describe a serious insect or disease pest for each fruit. Include when the problem occurs, damage caused, and chemical or cultural treatments. Use as many pictures or drawings as possible. (Complete Chart #1)

8. Take a soil test from a garden and determine which fruits will grow there. Ask for fertilizer recommendations for one of the crops and determine the cost of fertilizer needed for six 100-foot (30.5 meters) rows.
   Soil test results _______________________________________________________
   Fruits that will grow ___________________________________________________
   Fertilization recommendation _________________________________________
   Cost of fertilizer ____________________________________________________
Small Fruit Growing, Chart #1

Describe a serious insect or disease pest for each fruit. Include when the problem occurs, damage caused, and chemical or cultural treatments. Use as many pictures or drawings as possible.

<table>
<thead>
<tr>
<th>Type of fruit ______________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe insect or disease</td>
</tr>
<tr>
<td>When did problem occur</td>
</tr>
<tr>
<td>Damage caused</td>
</tr>
<tr>
<td>Chemical or cultural treatments</td>
</tr>
<tr>
<td>Outreach Ministries Index</td>
</tr>
<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>Adventurer for Christ</td>
</tr>
<tr>
<td>Adventurer for Christ, Advanced</td>
</tr>
<tr>
<td>Bible Marking</td>
</tr>
<tr>
<td>Bible Marking, Advanced</td>
</tr>
<tr>
<td>Christian Citizenship</td>
</tr>
<tr>
<td>Christian Drama</td>
</tr>
<tr>
<td>Christian Grooming and Manners</td>
</tr>
<tr>
<td>Christian Storytelling</td>
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<td>Community Assessment</td>
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<tr>
<td>Community Service</td>
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<td>Crises Intervention</td>
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<tr>
<td>Cultural Diversity Appreciation</td>
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<tr>
<td>Cultural Heritage</td>
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<tr>
<td>Disaster Response</td>
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<tr>
<td>Family Life</td>
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<tr>
<td>Hunger Relief</td>
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<tr>
<td>Junior Witness</td>
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<tr>
<td>Junior Youth Leadership</td>
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<tr>
<td>Language Study</td>
</tr>
<tr>
<td>Literature Evangelism</td>
</tr>
<tr>
<td>Maori Lore</td>
</tr>
<tr>
<td>Music, Beginners</td>
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<tr>
<td>Music</td>
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<tr>
<td>Music, Advanced</td>
</tr>
<tr>
<td>Peace Maker</td>
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<tr>
<td>Peace Maker, Advanced</td>
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<tr>
<td>Personal Evangelism</td>
</tr>
<tr>
<td>Preach It</td>
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<tr>
<td>Preach It, Advanced</td>
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<tr>
<td>Puppetry</td>
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<tr>
<td>Puppetry, Advanced</td>
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<tr>
<td>Refugee Resettlement</td>
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<td>Rural Development</td>
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<tr>
<td>Sanctuary</td>
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<tr>
<td>Sign Language</td>
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<td>Sign Language, Advanced</td>
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<tr>
<td>Stewardship</td>
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<td>Temperance</td>
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<td>Tutoring</td>
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<td>Urban Development</td>
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</table>
Adventurer for Christ

To get the full benefit of this honor it is essential that you spend at least six months to a year working on it. You must choose a date to start this honor, and only projects started after this date will apply toward the honor.

Start date _____________________________

1. Choose any two of the following and do them consistently for at least six months.
   a. Read the Junior Morning Devotional book each day.
   b. Faithfully study your Sabbath School lesson each week.
   c. Faithfully follow the Jr. Bible Year reading plan.
   d. Develop a personal prayer diary, listing people and requests you are praying for and answers to prayer.
   e. Plan and conduct at least one family devotion a week.

2. Choose three from the following:
   a. Send five homemade cards with personal messages, poems, or Bible verses to people who are in need of encouragement.
   b. Visit ten or more people and invite them to a special church or Pathfinder event.
   c. Choose a friend and visit someone who was absent from Sabbath School or church. Take them a card and homemade treat. Have a sharing time about this experience with your family and pray for this person.
   d. For one month keep your bedroom clean, your bed made, and do at least three kindness projects for each parent that show that you love them.
   e. Collect fifteen left-over Guides and pass them out to absent Sabbath School members, children in hospitals, laundromats, etc.
   f. Take a cassette recording of your pastor's sermon and special music to a shut-in for three weeks.
   g. Call you pastor, church elder, or deacon and volunteer to help him with any task he wants you to do for a period of two hours each week for three weeks.

3. Choose one of the following and do it with a group.
   a. Look for yards that need raking, and rake and bag their leaves. In the winter, shovel snow or split firewood. Leave a note and Steps to Christ. Accept no money.
b. Plan a birthday party with games, presents, and treats at a nursing home for a patient who has a birthday close to yours.

c. Get the whole family involved in a witnessing project, such as giving Bible studies, passing out Steps to Christ to motels, adopting a needy family, doing a work project for an elderly person.

d. Read Matthew 25:35-40, then take a walk through your neighborhood and make a list of the needs of your neighbors. (Lonely, grass needs cutting, weeds need pulling, etc.) Go about taking care of as many needs as you can.

e. Respond to a tragedy in your community by personally getting involved in reaching out to help the people.

Group members

________________________________________  __________________________________

________________________________________  __________________________________

________________________________________  __________________________________

________________________________________  __________________________________

________________________________________  __________________________________

________________________________________  __________________________________

☐ 4. Make up your own adventure, which must involve three different times of two hour each.

Adventure ____________________________________________________________

Dates  1. __________________________

2. __________________________

3. __________________________
Adventurer for Christ, Advanced

1. Have the Adventurer for Christ Honor.

2. Complete this honor within nine months to a year. Choose a starting date to begin.
   Start date _______________________________

3. Choose three activities from Section 1 of the Adventurer for Christ Honor and do them consistently for at least nine months beyond the six months required for the basic Adventurer for Christ Honor.
   Activities chosen
   1. __________________________________________
   2. __________________________________________
   3. __________________________________________

4. Choose and do one activity (not previously selected) from Section 2 of the basic Adventurer for Christ Honor.
   Activity chosen
   1. __________________________________________

5. Choose and do two activities (not previously selected) from Section 3 of the basic Adventurer for Christ Honor.
   Activity chosen
   1. __________________________________________
   2. __________________________________________
6. Design and do three new adventures (not previously selected) from Section 4 of the basic Adventurer for Christ Honor. All three must involve three different time periods of two hours each.

<table>
<thead>
<tr>
<th>Adventures</th>
<th>Dates</th>
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<tbody>
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Date completed ____________  Instructor’s Signature ____________________
1. Describe the following flags
   National ___________________________________________________
   ____________________________________________________________
   State of provincial ___________________________________________
   ____________________________________________________________
   AY _________________________________________________________
   ____________________________________________________________
   Pathfinder _________________________________________________
   ____________________________________________________________
   Christian __________________________________________________
   ____________________________________________________________

2. Know how to display the national flag with two other flags under the following situations:
   Camp out/camporee __________________________________________
   ____________________________________________________________
   Fair _______________________________________________________
   ____________________________________________________________
   Pathfinder Day program _______________________________________
   ____________________________________________________________
   Parade ____________________________________________________
   ____________________________________________________________

3. Demonstrate how to fold and salute your national flag. Mention when and how it should be displayed.
4. Explain the meaning of and reason for the National Anthem, and recite the words from memory.

Meaning

Reason for the National Anthem

Words of the National Anthem

5. Give the rights and responsibilities of a citizen of your country.

6. Have an interview with a local, regional, or national official of your country, and learn about his duties.

Person interviewed

Office held

Duties held

7. Write a one-page essay or give a two-minute oral report about a famous person in your country. Mention what he has done to gain his recognition.

Person written about
8. Do one of the following:
   a. Make a list of ten famous quotations from leaders of your country.

<table>
<thead>
<tr>
<th>Leader</th>
<th>Quotation</th>
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</table>

   b. Make a list of ten famous historic places in your country.

   1. 
   2. 
   3. 
   4. 
   5. 
   6. 

   (Christian Citizenship 2002 Edition)
7. ____________________________________________________________
8. ____________________________________________________________
9. ____________________________________________________________
10. ____________________________________________________________
c. Make a list of ten famous historic events in your country.

<table>
<thead>
<tr>
<th>Event</th>
<th>Date of event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>6.</td>
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<td>9.</td>
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<td>10.</td>
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</tbody>
</table>

9. Describe what you can do as a citizen to help your church and country.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

10. Go through the steps of an individual acquiring citizenship in the country and learn how this is done.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Christian Citizenship
2002 Edition
11. Know how to explain the process of government in your country.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

12. Explain the meaning of this statement Jesus made in Matthew 22:21: "Render therefore unto Caesar the things which are Caesar's, and unto God the things that are God's.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

13. Explain why laws are established in your country.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
1. What well-balanced combination of strengths did Jesus develop as a growing youth? (Luke 2:52)

__________________________________________________________
__________________________________________________________

2. According to Psalm 8 what estimate does God place on your personal worth?

__________________________________________________________
__________________________________________________________

3. Are names important to God? ________________________________
   Does He know your name? (Isaiah 43:1, Exodus 33:17, Isaiah 45:4)

__________________________________________________________

4. Demonstrate or discuss proper conversational skills, including:
   The proper way to talk to adults

__________________________________________________________
__________________________________________________________

   How to address people and make proper introductions

__________________________________________________________
__________________________________________________________

   Questions to avoid

__________________________________________________________
__________________________________________________________

   How to think of pleasant things to say

__________________________________________________________
__________________________________________________________

   How to show concern for the feelings of others

__________________________________________________________
What to say when you answer the door


How to answer the telephone correctly


5. If you want to use your gift of speech to God's glory, what should your prayer be? (Psalm 19:14)


6. List seven points showing the power of correct posture.
   1. 
   2. 
   3. 
   4. 
   5. 
   6. 
   7. 

Check your posture and body profile. Demonstrate how to stand and sit correctly.

Read *Education*, by Ellen G. White, page 198, paragraph 3, and note the benefits mentioned that come to you as a result of correct posture.


7. Give two reasons why physical fitness is important.
   1. 
   2. 
Explain the relationship between proper diet, exercise, and weight control.

8. Tell the importance of proper grooming, including bathing, body hygiene, breath, proper care of clothes, shoes, etc.

9. Describe the proper way to wash your hair and care for your "hair tools."

10. Describe the proper care for your hands and fingernails.

11. Know the importance of daily "soul-grooming" and of building a Christian character and why "belonging to Christ" makes a difference in the way you dress and act.
12. Discuss scriptural guidelines that will help you cope with your sexuality and keep your thoughts-life clean.

Discuss intelligently the "dos and don'ts" of dating.

13. List four reasons why your face is important to you

1. 
2. 
3. 
4. 

Show how the way you exercise and sleep can improve your facial appearance.

What relationship do thoughts have to facial "print-out"?

Describe proper facial care.
14. Know the rules of table etiquette which make it easier for you and those around you, such as what to do with your knife and fork after using them.

Know how to be a welcome dinner guest and a joy to your hostess.

15. List ten principles to help you overcome self-consciousness and social embarrassment.

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 

Christian Grooming and Manners
2002 Edition
For Young Ladies

16. Demonstrate two exercises that will improve your posture.
   1. __________________________________________________________
   2. __________________________________________________________

17. Know how to choose a hairstyle that makes you look your best.
    __________________________________________________________
    __________________________________________________________

18. Tell the proper style of clothes to wear if you are:
    Tall _______________________________________________________
    __________________________________________________________
    Plump _____________________________________________________
    __________________________________________________________
    Short _____________________________________________________
    __________________________________________________________
    Thin ______________________________________________________
    __________________________________________________________
    Heavy hipline _____________________________________________
    __________________________________________________________
    Full bosom _______________________________________________
    __________________________________________________________

19. Demonstrate the correct way to put on a coat or outer wrap.
For Young Men

16. Tell how to have well-groomed hair and how to choose a hairstyle that makes you look your best.

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

17. List clothing rules and the proper style of clothes to wear if you are:

tall and thin ________________________________________________________
____________________________________________________________________
short and stocky ____________________________________________________
____________________________________________________________________

18. Tell why Christians should practice good manners.

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

Demonstrate how to seat a girl or woman at a table and how to properly escort her from home to a social function.
Christian Storytelling

1. Name one source where you have found material for stories for each of the following categories. Tell a story from each category. (Begin Chart #1)
   a. Sacred history
   b. Church history
   c. Nature
   d. Character story
   e. Object lesson with visual aids

2. For the above stories you tell, do the following: (Complete Chart #1)
   a. Tell one of your stories to children, aged five and under, for at least three minutes.
   b. Tell one of your stories to the 10-12 year olds for at least five minutes.

3. Make a written outline of a story you are to tell.

4. State how and under what circumstances course material is to be modified for the following:
   Telling the story in
   first person
   second person
   third person
Different

audiences _____________________________________________

_____________________________________________________

ages _________________________________________________

_____________________________________________________

purposes ______________________________________________

_____________________________________________________

Making the story shorter ______________________________________

________________________________________________________

Making the story longer _______________________________________

________________________________________________________

☐ 5. Tell why a definite aim is necessary in telling a story.

________________________________________________________________

________________________________________________________________

☐ 6. Tell one story of foreign missionaries, not less than five minutes in length.

Story title __________________________________________________

Who told to ________________________________________________

Length of story ______________________________________________

☐ 7. Tell one story that teaches health principles.

Story title/topic _____________________________________________

Who told to ________________________________________________
## Christian Storytelling, Chart #1

<table>
<thead>
<tr>
<th>Source</th>
<th>Story title</th>
<th>Who told to</th>
<th>Date told</th>
<th>Duration of story</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sacred History</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Church History</td>
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<tr>
<td>Nature</td>
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<tr>
<td>Character Story</td>
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<tr>
<td>Object Lesson</td>
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</tbody>
</table>
Cultural Diversity Appreciation

Your national origin __________________________________________
Origin of study ______________________________________________

1. Define culture and cultural diversity.
   Culture ____________________________________________________
   ___________________________________________________________
   Cultural diversity __________________________________________
   ___________________________________________________________

2. Define stereotype and identify how you may have stereotyped people in the past.
   Stereotype _________________________________________________
   ___________________________________________________________
   Identify ___________________________________________________ 
   ___________________________________________________________
   ___________________________________________________________

3. Study the following Bible texts and answer the questions.
   1 Corinthians 9:20
   How does this text explain the importance for a Christian to have a cultural diversity awareness?
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

   Galatians 3:27
   What does this text say about all who are in the family of Christ?
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
Ephesians 2:14
What should be the result of accepting Christ Jesus into our lives?
_________________________________________________________
_________________________________________________________
_________________________________________________________

How do you plan to apply this message to your everyday life?
_________________________________________________________
_________________________________________________________
_________________________________________________________

4. Develop a friendship with a boy, girl or older person from your church, school or community whose cultural background is different from yours and conduct research from the following: library, internet, videos, encyclopedia, etc, about the culture. Arrange an interview with this family and complete the following:
Where did the culture originate? ________________________________

_________________________________________________________

What language is spoken? _____________________________________

_________________________________________________________

What religions are prominent in that society? ______________________

_________________________________________________________

What foods are typically eaten for:
(1) Breakfast _______________________________________________

_________________________________________________________

(2) Lunch __________________________________________________

_________________________________________________________

(3) Supper _________________________________________________

_________________________________________________________

How are eating habits influenced by the food available in that country?
_________________________________________________________

_________________________________________________________
Are there cultural traditions that are different from yours?

What are they?

Do people of this culture celebrate the holidays that we celebrate?

What customs do they have for celebrating the different holidays?

What customs or traditions from the original culture have been continued by the family in this country?

Is the dress different from dress in your culture?

Identify at least 5 ways in which you are similar and 5 things which make you different.

Similar

1. 
2. 
3. 
4. 
5. 
Different
1. _______________________________________________________
2. _______________________________________________________
3. _______________________________________________________
4. _______________________________________________________
5. _______________________________________________________

Tell how your attitude or feelings towards people of different cultural backgrounds has effected you?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

How do you feel about your differences?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Attend church with your friend if it is a different church than yours, or attend a church service of a different cultural group. Identify 3 similarities and 3 differences you observe in the church services.

Similarities
1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________

Differences
1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________

Date completed ____________  Instructor’s Signature ____________________

2002 Edition
Family Life

1. Explain the roles of the father, mother, sister, and brother as given in the Bible and Spirit of Prophecy.

   Father _____________________________________________________
   ___________________________________________________________
   ______________________________________________________________________

   Mother _____________________________________________________
   ___________________________________________________________
   ______________________________________________________________________

   Sister _____________________________________________________
   ___________________________________________________________
   ______________________________________________________________________

   Brother _____________________________________________________
   ___________________________________________________________
   ______________________________________________________________________

2. What is the difference between self-respect and pride?

   Self-respect ________________________________________________
   ___________________________________________________________
   ______________________________________________________________________

   Pride ______________________________________________________
   ___________________________________________________________
   ______________________________________________________________________

   Write a paragraph about some of the things that make you feel good about your family. Include the things you are proud of and your family's good qualities and accomplishments.

   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
3. Do one of the following in your home for one week:
   a. Dust and keep the floors clean
   b. Wash the clothes
   c. Wash the dishes
   d. Properly dispose of garbage

4. Care for the younger members of your family or a neighbor's family for at least a couple of hours.
   Cared for __________________________________________________
   Length of care _____________________________________________

5. Make a list of some of the things your family spends money on.
   ___________________________________________________________
   ___________________________________________________________
   Explain your responsibility to the finances of your family.
   ___________________________________________________________
   ___________________________________________________________

6. Make a list of family activities that you think your family would enjoy.
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

7. How would you make a family worship meaningful for preschoolers, juniors, and teens?
   Preschoolers ______________________________________________
   ___________________________________________________________
   Juniors _____________________________________________________
   ___________________________________________________________
   Teens _____________________________________________________
   ___________________________________________________________
   Plan and conduct a family workshop for one of these age groups.
   Topic _____________________________________________________
   Date of worship _____________________________________________
   Age group selected _________________________________________
8. Know what to do in the following circumstances in your home:
   Accident ___________________________________________________
   ___________________________________________________________
   Bad storm _________________________________________________
   ___________________________________________________________
   Financial crisis ____________________________________________
   ___________________________________________________________
   Fire _______________________________________________________
   ___________________________________________________________
   Loss of a relative __________________________________________
   ___________________________________________________________

9. Plan and conduct a fire drill in your home.
   Date of drill _______________________________________________

10. List five ways you can show concern for or interest in your neighbors.
    1. _______________________________________________________
    2. _______________________________________________________
    3. _______________________________________________________
    4. _______________________________________________________
    5. _______________________________________________________

11. Study the recreational activities of your family. What improvements, if
    any, can be made?
    _______________________________________________________
    _______________________________________________________
    _______________________________________________________
    _______________________________________________________
    _______________________________________________________
1. Be a member of a Pathfinder Club or AY Society.

2. Participate in at least five Outreach activities during one year.
   
<table>
<thead>
<tr>
<th>Activities</th>
<th>Dates</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<td>4.</td>
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</tbody>
</table>

3. Enroll at least two people in a Bible correspondence course.
   
<table>
<thead>
<tr>
<th>People enrolled</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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</tbody>
</table>

4. Know from memory at least two key texts for each of the following Bible teachings:
   
<table>
<thead>
<tr>
<th>Text 1</th>
<th>Text 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second coming of Christ</td>
<td></td>
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<tr>
<td>Seventh-day Sabbath</td>
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<td>State of the dead</td>
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<td>Law and grace</td>
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<td>Conversion</td>
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<td>Judgment</td>
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<tr>
<td>Inspiration of the Bible</td>
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<tr>
<td>Spirit of Prophecy</td>
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<td>The saints’ reward</td>
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</tr>
</tbody>
</table>
5. Give at least two Bible studies, using the open-Bible method, using visual aids, audio or electronic equipment.

Topics
1. __________________________________________________________
2. __________________________________________________________

To whom given _____________________________________________
Dates given ________________________________________________

6. Make at least 50 one-to-one contacts using outreach literature, ADRA annual solicitation, health/church survey or other one-to-one contact programs.

Literature used ______________________________________________
Activity _____________________________________________________

Date completed ____________ Instructor’s Signature ____________________

Junior Witness
2002 Edition
Junior Youth Leadership

1. Be a Master Guide

2. Read two books on junior youth leadership written in the last five years.
   Books read
   1. __________________________________________________________
   2. __________________________________________________________

3. Serve in any one of the following offices:
   a. Junior Youth Group leader for one year.
   b. Junior or Earliteen Sabbath School leader for one year.
   c. Staff member in an active Pathfinder club for one year.
   d. Staff member at a summer youth camp for a full summer.

4. Prepare a group to be invested in one of the Adventist Youth/Pathfinder classes during the current year and assist in conducting the Investiture service.
   Group prepared ______________________________________________
   Class prepared ______________________________________________
   Date of investiture ___________________________________________

5. Know at least ten qualities of a good youth leader.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________
   6. __________________________________________________________
   7. __________________________________________________________
   8. __________________________________________________________
   9. __________________________________________________________
   10. _________________________________________________________
6. Know the difference between juniors (10-12 years old) and teens (13-15 years old) in the following areas:

<table>
<thead>
<tr>
<th></th>
<th>Juniors</th>
<th>Teens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
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<td>Emotional</td>
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<td>Mental</td>
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<tr>
<td>Spiritual</td>
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</table>

7. Know principles in the proper administration of discipline to youth.

Learn the following areas of discipline
Ten ways to prevent having to discipline

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 

Junior Youth Leadership
2002 Edition
Nine ways to have balanced discipline
1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
4. __________________________________________________________
5. __________________________________________________________
6. __________________________________________________________
7. __________________________________________________________
8. __________________________________________________________
9. __________________________________________________________

Five types of discipline
1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
4. __________________________________________________________
5. __________________________________________________________

Five discipline procedures
1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
4. __________________________________________________________
5. __________________________________________________________
Language Study

1. Read and translate from sight a passage of at least 300 words from a book or magazine in a language not native to you.
   Material translated ________________________________

2. Carry on a simple but sustained conversation in a modern foreign language for a period of not less than five minutes.
   Topic of conversation ________________________________
   Length of conversation ________________________________

3. Listen to an address or statement of not less than two minutes’ duration made by a person to whom the foreign language is a native tongue, and translate the same into your own language.
   Person listened to ________________________________
   Topic ____________________________________________

4. Write a simple letter in the foreign language of your choice, telling what contacts you have been able to make with persons whose native tongue is the language you have chosen.

5. Know and repeat from memory the Pathfinder Pledge and Law in this foreign language.

6. Write or tell orally about the foreign population in your vicinity and what opportunity you have to converse with those who speak the language you have studied.

Note: After your choice of a modern foreign language has been made, obtain a suitable textbook in that language and study it thoroughly.

Date completed ____________  Instructor’s Signature ________________________
1. From the Bible and writings of Ellen G. White, write a summary, at least 250 words in length, on the importance of the use of literature in leading people to Christ.

2. Name five essential qualifications of a colporteur.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________

3. How is the colporteur supported?
   ___________________________________________________________
   ___________________________________________________________

4. What four steps are taken in the sale of a book or magazine?
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________

5. Briefly outline how to arouse an interest in purchasing a book or magazine?
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

6. Know how to meet objections to purchasing a book or magazine.
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
7. Do one of the following:
   a. Maintain a literature rack for four months, keeping a log of which books are the most and least popular.
   b. Do a project of house-to-house or mail distribution of literature in your community for ten hours. Include in the literature a response card for additional literature, Bible studies, and/or a Bible correspondence course.
   c. Engage in selling Seventh-day Adventist books and/or magazines during a period of at least five weeks, or at least 20 hours each.
   d. Do a project of distributing religious books to local government officials. Spend at least ten hours on your project.
   e. Do a project of supplying religious literature to patients in a hospital or nursing home. Spend at least ten hours on your project.
   f. Make a project of supplying a year’s subscription to Liberty magazine to the judges and/or lawyers in your community. Raise the money or get contributions for the gift subscriptions.
   g. Make a project of sending literature and/or Bibles to the mission field. Part of this project is collecting the literature and/or Bibles, determining where to send the material and packaging and sending the material.

Project selected _____________________________________________
Date completed _____________________________________________

Date completed ____________ Instructor’s Signature ____________________
Personal Evangelism

1. Through Bible and the writings of Ellen G. White study how Jesus treated people on a one-to-one basis. Write a 500-word report or give a five-minute oral report of what you learned.

2. Show that you have a personal daily devotional life for at least six months.

3. Do two of the following:
   a. Take part in one of the following:
      (1) Evangelistic meetings
      (2) Youth Evangelistic meetings
      (3) Community service van activities
      (4) Cooking school seminars
      (5) Stop Smoking seminars
      (6) Weight loss seminars
      (7) Stress management seminars

   In your choice of the above, do the following:
      (a) Take part in the organization of the activity.
      (b) Take part in the setting up of the meeting place.
      (c) Assist in the advertising.
      (d) Find out where the finances came from for the outreach project and what expenses were incurred.
      (e) Be involved in the operation and running of the outreach project on a regular basis.

   b. Assist in the organization and planning of one of the following outreach projects and participate in the project at least ten hours:
      (1) Community beautification project, such as landscaping or improving a public area
      (2) Story hour
      (3) Clown ministry
      (4) Puppet ministry
      (5) Prepare Christmas stockings for underprivileged children.
      (6) Food and/or clothing distribution to the needy.
      (7) Programs and visits to a nursing home, orphanage, or pediatrics ward of a hospital.
      (8) Similar project approved by a Master Guide or AY leader.
c. Do all of the planning and organization and participate at least 15 hours in one of the following outreach projects:

(1) Free yard care or housework for the elderly
(2) Teach in a lower division Sabbath School department.
(3) Temperance talks
(4) Tutoring of younger students
(5) Volunteer work in a hospital or nursing home
(6) Supplying books and games to a hospital
(7) Help with the rehabilitation of a physically handicapped person
(8) Make posters and art projects for a hospital, nursing home, or orphanage.
(9) Adopt a Grandparent Program.
(10) Similar project approved by a Master Guide, AY or Pathfinder leader.
Pathfinder’s Name

Sign Language

☐ 1. Learn the manual alphabet used by the deaf.

☐ 2. Have a minimum of three hours of instruction in signing.

☐ 3. Send and receive finger spelling at the rate of five words per minute using a minimum of 25 letters.

   Message sent and received ________________________________
   ________________________________
   ________________________________
   ________________________________

☐ 4. Learn at least 100 signs from one or more of the below referenced books. (Use chart #1)

☐ 5. Learn and present in sign language (note finger spelling) at least two simple songs.

   1. ________________________________
   2. ________________________________

☐ 6. Do one of the following:
   a. Explain the difference between Ameslam and signed English, and demonstrate the use of both.

      Ameslam ________________________________
      ________________________________
      ________________________________
      English ________________________________

   b. Read and give an oral or written report on a school in your country or state specializing in deaf education.

Date completed ____________    Instructor’s Signature ____________________

Outreach Ministries
General Conference
2002 Edition
List at least _____ signs that you have learned. Copy this page and use as many times needed.
Pathfinder’s Name

Sign Language, Advanced

1. Have the Sign Language Honor.

2. Have a minimum of 5 hours of instruction in signing.

3. Send and receive finger spelling at a rate of 12 words per minute using a minimum of 50 letters.

   Message sent and received __________________________
   ________________________________________________
   ________________________________________________
   ________________________________________________

4. Learn at least 350 signs. (Use chart #1)

5. Sign at least 6 songs to a hearing impaired friend.

   1. ________________________________________________
   2. ________________________________________________
   3. ________________________________________________
   4. ________________________________________________
   5. ________________________________________________
   6. ________________________________________________

6. Be able to sign to a hearing impaired friend:
   b. Beatitudes - Matthew 5:3-12.

Date completed ____________ Instructor’s Signature ____________________

Outreach Ministries
General Conference
2002 Edition
List at least _____ signs that you have learned. Copy this page and use as many times needed.

| _______________ | _______________ | _______________ |
| _______________ | _______________ | _______________ |
| _______________ | _______________ | _______________ |
| _______________ | _______________ | _______________ |
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| _______________ | _______________ | _______________ |
| _______________ | _______________ | _______________ |
| _______________ | _______________ | _______________ |
| _______________ | _______________ | _______________ |
Stewardship

1. Discover the Bible principles of stewardship by answering the following questions:

What does 1 Corinthians 6:19-20 say about the stewardship of the body?
_________________________________________________________
_________________________________________________________

What does Matthew 25:15 tell us about the stewardship of talents?
_________________________________________________________
_________________________________________________________

What does Colossians 4:5 say about the stewardship of time?
_________________________________________________________
_________________________________________________________

What does John 3:16 tell us about who owns the earth?
_________________________________________________________
_________________________________________________________

What does Genesis 1:26 say about who is the steward over the earth?
_________________________________________________________
_________________________________________________________

What does Proverbs 3:9 say about who is always first?
_________________________________________________________
_________________________________________________________

How do we know that tithe means a tenth? Genesis 28:22
_________________________________________________________
_________________________________________________________

Who does Leviticus 27:30 say the tithe belongs to?
_________________________________________________________
How does Malachi 3:8 say that God is robbed?

What does 1 Corinthians 9:13,24 say about the use of the tithe?

How do we know that the tithe is different from offerings? Malachi 3:8

What does 1 Corinthians 16:2 say about how we are to give our offerings?

What does Matthew 6:20 say about where to keep our treasures?

What does 2 Corinthians 9:7 say about our attitude in giving?

What promised blessing is given in Malachi 3:10?

What does Psalms 24:1 tell us about who owns the earth?

☐ 2. Read and discuss with your counselor or pastor the following: Section IV (pp. 111 to 130); paragraph 1 and 2, p. 14; and paragraph 1, p. 66 of *Counsels on Stewardship* written by Ellen G. White.
3. Learn what is done with the tithe in your local church, your local conference, your union, and the General Conference.

Local church ________________________________________________

__________________________________________________________

Local conference ___________________________________________

__________________________________________________________

Union ____________________________________________________

__________________________________________________________

General Conference __________________________________________

__________________________________________________________

4. From your pastor, church treasurer, or elder learn about your church budget, what finances your church must meet and the purpose of each item listed on your church tithe and offering envelope.

5. Keep a chart on how you spend your time for one weekend and one week day. In this chart make a list of how much time you spend in the following areas: (Complete Chart #1)

   a. Work for pay
   b. Family time
   c. Personal devotions
   d. Public worship
   e. Family worship
   f. Fun things
   g. Reading
   h. Television
   i. Meals
   j. Sleep
   k. Personal needs
   l. Class time
   m. School study
   n. Travel
   o. Music lesson
   p. Music practice
   q. Home chores
   r. Shopping

For each of the three days be sure your time adds up to 24 hours. After completing the chart, discuss with your pastor or counselor your responsibility in the stewardship of your time.

6. Do one of the following: (Complete Chart #2)
   a. If you have an income-producing job or an allowance, make a list of how you spend your money for one month.
   b. If you are not in the category above, make a list of how you would spend an income of $50 a month in the following categories:
      (1) Clothes
      (2) Entertainment
      (3) Eating out
      (4) Gifts
      (5) Personal items (toiletries)
(6) School supplies  
(7) Tithe and offerings  
(8) Transportation

From your list determine what percentage of your total income is spent on each item. After completing the chart and percentages, discuss with your pastor or counselor the advantages of a budget and how to stay within a budget.

☐ 7. From the Bible and the writings of Ellen G. White determine what instruction has been given concerning the variety and use of God-given talents.

________________________________________________________
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☐ 8. List three talents or skills that you have, such as building things, mechanics, gardening, painting or drawing, writing, speaking, music, teaching, sewing, etc. Choose one of these three talents and do a project to help develop you talent further. Your project must follow these guidelines:

a. The project is to be a benefit or outreach to others.

b. The project is to be a new endeavor not previously accomplished.

c. Spend at least five hours in the planning and implementation of the project.

d. Present a written or oral report to your counselor about your project.

Talents/Skills

1. _____________________________________________________________________

2. _____________________________________________________________________

3. _____________________________________________________________________

Project ____________________________________________________________________
________________________________________________________________________
________________________________________________________________________
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________________________________________________________________________

Stewardship
2002 Edition
Stewardship, Chart #1
Day ___________

Keep a chart on how you spend your time for one weekend and one weekday. In this chart make a list of how much time you spend in the following areas:
**Work for pay, family time, personal devotions, family worship, fun things, reading, television, meals, sleep, personal needs, class time, school study, travel, music lessons, music practice, home chores, shopping**

<table>
<thead>
<tr>
<th></th>
<th>Activity</th>
<th>Time</th>
<th>Activity</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Morning</strong></td>
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</table>
**Stewardship, Chart #2**

If you have an income-producing job or an allowance, make a list of how you spend your money for one month.

If you are not in the category above, make a list of how you would spend an income of $50 a month in the following categories:

*Clothes, entertainment, personal items (toiletries), gifts, school supplies, tithe and offerings, eating out; transportation*

<table>
<thead>
<tr>
<th>Expense</th>
<th>Itemized listing</th>
<th>Amount spent</th>
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</table>
Temperance

1. Memorize and sign the Temperance Pledge:

   “Realizing the importance of healthy body and mind, I promise, with the help of God, to live a Christian life of true temperance in all things and to abstain from the use of tobacco, alcohol, or any other narcotic.”

   ______________________________
   Your Signature

2. Memorize two of the following Bible texts and two of the following quotations from the writings of Ellen G. White:

   **Bible Texts**
   a. Romans 12:1-2
   b. 1 Corinthians 10:31
   c. 1 Corinthians 6:19-20
   d. Proverbs 20:1
   e. Galatians 5:22-23
   f. 3 John 2

   **Writings of Ellen G. White**
   a. “True temperance teaches us to abstain entirely from that which is injurious, and to use judiciously only healthful and nutritious articles of food.” *Temperance*, p. 3.
   b. “The only safe course is to touch not, taste not, handle not, tea, coffee, wines, tobacco, opium, and alcoholic drinks.” *Counsels on Diet and Foods*, p. 428.
   c. “...temperance alone is the foundation of all the graces that come from God, the foundation of all victories to be gained.” *Temperance*, p. 201.
   d. “A pure and noble life, a life of victory over appetite and lust, is possible to everyone who will unite his weak, wavering, human will to the omnipotent, unwavering will of God.” *Temperance*, p. 113.
   e. “Tobacco is a slow, insidious, but most malignant poison, in whatever form it is used, it tells upon the constitution; it is all the more dangerous because its effects are slow and at first hardly perceptible.” *Ministry of Healing*, p. 327-328.
3. Do four of the following: Refer to Adventist Youth for Better Living (AYBL) Manual for details.
   a. Write and deliver a five-to eight-minute speech (oration).
   b. Write an essay on alcohol, tobacco, drugs, or physical fitness of 150 to 200 words and your commitment to a healthy lifestyle.
   c. Write a four-line jingle on a Drug Prevention topic.
   d. Draw/make a poster 22 x 28 inches (55.9 x 63.5 cm) that tells about the harmful effects of a drug, tobacco, or alcohol.
   e. Make a substance abuse exhibit for a local shopping mall, library, or school.
   f. Make a scrapbook of at least 20 pages showing various Drug Prevention advertisements.
   g. Share with at least five other persons (excluding your immediate relatives) what you have accomplished from the above list and obtain their signed Temperance Pledges.

4. Know and explain:
   a. The reason behind the warning on the cigarette packet: “Warning—smoking is a health hazard.”
   b. Seven ingredients of tobacco smoke:
      Nicotine
      Arsenic
      Formaldehyde
      Carbon monoxide
      Cyanide
Phenolbenzophyrine

Amonia

c. Know and explain
Emphysema
cirrhosis
addiction
d. Know the effects of during pregnancy
tobacco
alcohol
drugs

5. Read the chapter “Stimulants and Narcotics” in *Ministry of Healing*. Be able to discuss briefly or provide a written summary approximately two or three paragraphs in length.
6. After studying the following materials, list three things that contribute to temperance and good health. (Other than abstaining from that which is harmful.)
   a.  *Temperance* page 139 paragraph 1
   b.  *Counsels on Diet and Foods*, page 406 paragraph 1
   c.  *Temperance* page 140 paragraph 2
   d.  *Temperance* page 143 paragraph 3
   e.  *Counsels on Health*, page 127 paragraph 4
   f.  *Temperance* page 148 paragraph 2

   1. ______________________________________
   2. ______________________________________
   3. ______________________________________

7. Discuss the following situations and role-play what you would do if:
   a. Your best friend asks you to try a cigarette.
   b. A classmate offers you money to sell marijuana.
   c. An older relative offers you a drink of beer.
   d. The smoke from a stranger’s cigarette is bothering you.
   e. A friend asks you to smoke marijuana.
   f. You are at a party with a friend, he gets drunk and insists on driving you home.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Division</th>
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</thead>
<tbody>
<tr>
<td>Abseiling</td>
<td>South Pacific Division</td>
</tr>
<tr>
<td>Abseiling, Advanced</td>
<td>South Pacific Division</td>
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<tr>
<td>Abseiling, Instructor</td>
<td>South Pacific Division</td>
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<tr>
<td>Archery</td>
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<tr>
<td>Archery, Advanced</td>
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<tr>
<td>Backpacking</td>
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<tr>
<td>Basketball</td>
<td>North American Division</td>
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<tr>
<td>Camp Craft</td>
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<td>Camping Skills I</td>
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<td>Camping Skills II</td>
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<td>Camping Skills III</td>
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<td>Camping Skills IV</td>
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<tr>
<td>Canoe Building</td>
<td>South Pacific Div/Island Ed.</td>
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<tr>
<td>Canoeing</td>
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<td>Caving</td>
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<td>Caving, Advanced</td>
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<td>Community Water Safety</td>
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<tr>
<td>Community Water Safety, Advanced</td>
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<td>Cycling</td>
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<td>Cycling, Advanced</td>
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<tr>
<td>Drilling and Marching</td>
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<tr>
<td>Drilling and Marching, Advanced</td>
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<tr>
<td>Fire Building and Camp Cookery</td>
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<tr>
<td>Hiking</td>
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<td>Horsemanship</td>
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<tr>
<td>Horsemanship, Advanced</td>
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<tr>
<td>Kayaking</td>
<td>South Pacific Division</td>
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<td>Kites</td>
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<td>Knot Tying</td>
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<tr>
<td>Mountain Biking</td>
<td>North American Division</td>
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<tr>
<td>Navigation</td>
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<tr>
<td>Orienteering</td>
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<tr>
<td>Outdoor Leadership</td>
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<tr>
<td>Outdoor Leadership, Advanced</td>
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<tr>
<td>Physical Fitness</td>
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<tr>
<td>Pioneering</td>
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<tr>
<td>Power Boating</td>
<td>North American Division</td>
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<tr>
<td>Rock Climbing</td>
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<tr>
<td>Rock Climbing, Advanced</td>
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<tr>
<td>Rowing</td>
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<tr>
<td>Sailing</td>
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<tr>
<td>Scuba Diving</td>
<td></td>
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</tbody>
</table>
Scuba Diving, Advanced
Skate Boarding (Not for North America) South Pacific Division
Skiing, Cross-Country North American Division
Skiing, Downhill
Skin Diving
Soccer North American Division
Springboard Diving
Swimming, Beginner’s South Pacific Div/Island Ed.
Swimming, Beginner’s, Advanced
Swimming, Intermediate
Swimming
Swimming, Advanced
Track and Field
Tree Climbing South Pacific Division
Triathlon
Triathlon, Advanced South Pacific Division
Tumbling and Balancing
Tumbling and Balancing, Advanced
Water Skiing
Water Skiing, Advanced
Wilderness Leadership
Wilderness Leadership, Advanced
Wilderness Living
Windsurfing
Winter Camping
Archery

1. Identify the parts of a bow.
2. Identify the parts of an arrow.
3. Name and explain the safety rules for archery.

4. Correctly and safely string a bow.
5. Describe and show how to use the following:
   a. Arm guard
   b. Finger tab or glove
   c. Quiver
   d. Bow sling
   e. String kisser

6. Demonstrate the following shooting techniques:
   a. The stance
   b. Nocking the arrow
   c. The draw
   d. The anchor
   e. The hold and aim
   f. The release
   g. The follow-through

7. Why is it necessary to have an arrow "nocking point" properly positioned on the bow string?

8. Using a standard (Olympic bow) score one of the following:
   a. Indoors: 30 arrows (5 rounds) at 70.8 feet (18 meters) score 50 points on a 23.5 inch (60 cm) target.
   b. Outdoors: 30 arrows (5 rounds) at 98 feet (25 meters) score 170 points on a 48 inch (122 cm) target.


Date completed ____________ Instructor’s Signature ____________________
<table>
<thead>
<tr>
<th>Archery Instructor’s Chart</th>
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<tbody>
<tr>
<td><strong>IDENTIFY:</strong></td>
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<tr>
<td>Parts of a bow</td>
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<tr>
<td>Parts of an arrow</td>
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<tr>
<td>Bow</td>
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<tr>
<td>String</td>
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<td>Arm guard</td>
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<td>Finger tab or glove</td>
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<td>Draw</td>
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<tr>
<td>Anchor</td>
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<tr>
<td>Hold and aim</td>
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<tr>
<td>Demonstrate</td>
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<tr>
<td>Shows required score</td>
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<tr>
<td>Name</td>
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<tr>
<td>Practices safety rules</td>
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<table>
<thead>
<tr>
<th>DEMONSTRATES</th>
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<tbody>
<tr>
<td>Follow-through</td>
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<tr>
<td>Release</td>
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<tr>
<td>Stance</td>
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<tr>
<td>String kisser</td>
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<tr>
<td>Quiver</td>
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<tr>
<td>Bow sling</td>
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<tr>
<td>Nocking the arrow</td>
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</tbody>
</table>

*Note: The chart is incomplete and requires filling in the names of the archery components.*
Archery, Advanced

1. Have the Archery Honor.

2. Explain the advantages to be found by the target archer in making use of the following equipment:
   - Aluminum shaft target arrows
   - Bow level
   - Bow sight
   - Bow sling
   - Bow square
   - Bow stabilizer(s)
   - Clicker
   - Flexible arrow plate
   - Kisser button
   - Plastic arrow fletching
   - String peep
3. Explain what is meant by arrow spine.

4. Read the following chapters in The National Archery Association Instructor's Manual:
   a. Problem Correction
   b. Advanced Shooting
   c. Bow Tuning

5. Using a standard (Olympic bow) score one of the following:
   a. Indoors: 30 arrows (5 rounds) at 70.8 feet (18 meters) score 200 points on a 23.6 inch (60 cm) target.
   b. Outdoors: 30 arrows (5 rounds) at 196.8 feet (50 meters) score 200 points on 48 inch (122 cm) target.

6. Review and practice the archery safety rules.
Backpacking

☐ 1. Discuss with your instructor the meaning of the motto: "Take nothing but pictures and leave nothing but footprints."

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

☐ 2. Know the essentials of proper clothing, shoes, and rain gear to use in backpacking.

Clothing ____________________________________________________________

________________________________________________________________________________________

Shoes ____________________________________________________________

________________________________________________________________________________________

Rain gear ____________________________________________________________

________________________________________________________________________________________

☐ 3. Know the principles in selecting a good quality backpack.

________________________________________________________________________________________

________________________________________________________________________________________

In an emergency, what might be used in place of a backpack?

________________________________________________________________________________________

☐ 4. Know the essential items to be taken on a backpack trip.

________________________________________________________________________________________

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☐ 5. What kind of sleeping bag and pad are best for your camping area?

________________________________________________________________________________________
Know at least three kinds of each that are available.

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<tr>
<th>Sleeping Bags</th>
<th>Pads</th>
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<tbody>
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6. Know how to pack a pack properly.

7. What types of food are best for backpacking?

Visit a grocery store and list the foods found there that are suitable for backpacking. With your instructor:

a. Prepare a menu for a weekend backpack trip using foods obtained from a grocery store. (Complete Chart #1)

b. Learn the techniques of measuring, packaging, and labeling backpack foods for your trip.

c. Make a trail snack.

8. Know the prevention and symptoms of, and the first aid for: (Complete Chart #2)

a. Sunburn
b. Blisters
c. Frostbite
d. Hypothermia
e. Heat stroke
f. Heat exhaustion
g. Snake bite
h. Cramps
i. Dehydration

9. Have a first aid kit in your pack and know how to use it.

10. According to your weight, what is the maximum number of pounds you should be allowed to carry?

11. Know three ways to find direction without a compass. Demonstrate at least two.

1. 
2. 
3. 
12. Show the proper way to put on and take off a backpack alone and with a partner.

13. Participate in a weekend backpack trip of at least five miles (8 km) to a site not accessible by a vehicle and cook your own meals.
   Campout date ____________________________________________________
   Number of miles ________________________________________________
## Backpacking, Chart #1

Menu for a weekend backpack trip

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<th></th>
<th>Breakfast</th>
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## Backpacking, Chart #2

Know the prevention and symptoms of, and the first aid for:

<table>
<thead>
<tr>
<th>Prevention</th>
<th>Symptoms</th>
<th>First Aid</th>
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<tbody>
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<td>Blisters</td>
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<td>Frostbite</td>
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<td>Hypothermia</td>
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<td>Heat Stroke</td>
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<td>Heat Exhaustion</td>
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<tr>
<td>Snake Bite</td>
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<td>Camps</td>
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<tr>
<td>Dehydration</td>
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</tbody>
</table>
1. Explain how and why weather, season, and water supply are considered when choosing a campsite.

Weather

__________________________________________________________

__________________________________________________________

__________________________________________________________

Season

__________________________________________________________

__________________________________________________________

__________________________________________________________

Water

__________________________________________________________

__________________________________________________________

__________________________________________________________

Explain what care to take with regard to safe water, sanitary facilities, and emergencies.

Safe Water

__________________________________________________________

__________________________________________________________

__________________________________________________________

Sanitary facilities

__________________________________________________________

__________________________________________________________

__________________________________________________________

Emergencies

__________________________________________________________

__________________________________________________________

__________________________________________________________

2. Prepare a list of clothing you would need for an overnight camp in warm and cold weather.

Warm

__________________________________________________________

__________________________________________________________
3. Know and practice the safety rules in camping.

4. Show your ability to use a camp knife by demonstrating or explaining safety rules for its use and making shavings for tinder.

5. Prepare for an overnight camp with a group by making a list of personal items and group items that will be needed. (Complete Chart #1)

6. Prepare balanced menus for one cooked breakfast, lunch, and supper. (Complete Chart #2)

7. Complete the following while on an overnight camping trip:
   a. Prepare ground properly for comfortable sleeping.
   b. Correctly pitch and strike a tent.
   c. Prepare a proper safe area for a campfire. Show proper use of wood tools in getting and preparing fuel for a fire.
   d. Show how to protect your camp against animals, insects, and wet or bad weather.
   e. Show how to take proper care of the environment as you camp and leave the area with no trace of having been there.

8. Know eight things to do when lost.
   1. 
   2. 
   3. 
   4. 
   5. 
   6. 
   7. 
   8. 
9. Camp for a continuous three days and two nights, sleeping each night under the stars or in a tent. Be actively involved in cooking at least two of the meals.

Date of campout ________________________________

Meal cooked
1. __________________________________________
2. __________________________________________

10. Considering the things learned in this honor and the camping done, what is the meaning and the reason of the Pathfinder Camping Code?

Meaning _______________________________________

________________________________________________________________________________

Reason ______________________________________

________________________________________________________________________________
**Campcraft, Chart #1**

Prepare for an overnight camp with a group by making a list of personal items and group items that will be needed.

<table>
<thead>
<tr>
<th>Personal Items</th>
<th>Group Items</th>
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**Campcraft, Chart #2**

Prepare balanced menus for one cooked breakfast, lunch and supper.

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<td>Breakfast</td>
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<td>Supper</td>
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</table>
Camping Skills I

1. Be at least in the 5th grade.

2. Understand and practice wilderness and camping etiquette, regarding preservation of the outdoors.

3. Know eight things to do when lost.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________
   6. __________________________________________________________
   7. __________________________________________________________
   8. __________________________________________________________

4. Be familiar with various types of sleeping equipment suitable to location and season.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

5. List personal items needed for a weekend campout. (Complete Chart #1)

6. Plan and participate in a weekend camping trip.
   Campout date ______________________________________________

7. Know how to properly pitch and strike a tent. Observe fire precautions when tent is in use.
8. Know and practice the proper principles for camp sanitation for both primitive and established campsites.

   Primitive
   
   
   
   
   Established

9. Properly use the knife and hatchet. Know ten safety rules for their use.
   1. 
   2. 
   3. 
   4. 
   5. 
   6. 
   7. 
   8. 
   9. 
   10. 

10. Fires:
    a. Demonstrate ability to choose and prepare a fire site.
    b. Know fire safety precautions.
c. Know how to properly strike a match.

______________________________

______________________________

d. Practice building a fire with the use of one match, using only natural materials.

Materials used ____________________________

______________________________

e. Demonstrate how to protect firewood in wet weather.

______________________________

______________________________

☐ 11. Bake bread on a stick.

☐ 12. Describe the proper procedures for washing and keeping clean the cooking and eating utensils.

______________________________

______________________________

______________________________

☐ 13. Describe sleeping wear and how to stay warm at night.

______________________________

______________________________

______________________________

☐ 14. Draw a spiritual object lesson from nature on your camping trip.

Lesson ____________________________

______________________________

______________________________

☐ 15. Explain and practice the motto: "Take only pictures and leave only footprints."

______________________________

______________________________

______________________________

Date completed ____________     Instructor’s Signature ____________________
Camping Skills 1, Chart #1
Prepare for an overnight camp by making a list of personal items that will be needed.

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</table>
Camping Skills II

☐ 1. Be at least in the 6th grade.

☐ 2. Develop a personal philosophy of outdoor etiquette, such as courtesy to other campers and outdoor conservation.

☐ 3. Know and understand the following six W's for the selection of a good campsite:
   - Water _____________________________________________________
   - Weather ___________________________________________________
   - Wild things _________________________________________________
   - Willingness ________________________________________________
   - Wind _____________________________________________________
   - Wood _____________________________________________________

☐ 4. Demonstrate your ability to protect the wilderness and your water source by proper personal hygiene and cooking sanitation.

☐ 5. Participate in a weekend campout.
   - Campout date ______________________________________________

☐ 6. Take part in a camp worship service to include one of the following:
   a. Leading song service
   b. Sabbath School lesson study
   c. Story
   d. Worship thought

☐ 7. Know how to safely light and use a camp stove and lantern.
8. Know safety rules and demonstrate your ability to properly cut fire wood.

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

Demonstrate how to break dead wood properly.

________________________________________________________

9. Using fuzz sticks or shaved sticks, build and know the use of a council or crisscross fire and one type of cooking fire.

   Use

   Council ________________________________________________
   Crisscross _____________________________________________
   Cooking ______________________________________________

Review firebuilding safety rules.

________________________________________________________

________________________________________________________

________________________________________________________

10. Explain two ways to keep camp food cool.

    1. _________________________________________________
    2. _________________________________________________

11. Build two different camp cranes.

    1. _________________________________________________
    2. _________________________________________________
   Boiling ____________________________________________________
   Frying ____________________________________________________
   Baking ____________________________________________________


Properly pitch and strike a tent.
What precautions should be taken when striking a wet tent?

Properly clean, dry, and store a tent.

14. Bedding:
a. Show proper ways to stuff or roll your sleeping bag or bed roll for travel.
   b. Tell how to keep a sleeping bag or bed roll dry on a camping trip.
      __________________________________________________________
      __________________________________________________________
   c. Describe how to properly clean your sleeping bag or bed roll.
      __________________________________________________________
      __________________________________________________________
1. Be at least in the 7th grade.

2. Review six points in the selection of a good campsite. Review the safety rules of firebuilding.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________
   6. __________________________________________________________

3. Go on a weekend campout.

4. Lay the following three fires and tell their uses:
   - Hunter's fire ________________________________________________
   - Reflector fire _______________________________________________
   - Star fire __________________________________________________

5. Know six ways to start a fire without a match. Build a campfire using one of these:
   a. Compressed air  d. Friction
   b. Curved glass    e. Metal match
   c. Flint          f. Spark

6. Know how to properly sharpen a hatchet and knife.
   - Hatchet ___________________________________________________
   - Knife _____________________________________________________

7. Cook a one-pot meal using fresh or dried food.
   - Meal _______________________________________________________
8. Describe the various types of tents and their uses.
   Mountaineering
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   Alpine
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   Tube
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   Backpack
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

9. How does condensation occur in tents, and how can it be prevented?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
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10. Demonstrate your ability to anchor a tent down, using the taut-line hitch and two half hitches.

11. While camping, plan and give a ten-minute devotional or organize and lead a nature or Bible game or lead out in Sabbath School, camp church, or camp vespers.
   Activity
   __________________________________________________________
   Date Completed
   __________________________________________________________

12. Properly locate and build one of the following and describe its importance to the individual and the environment:
   Camp sink and dishwashing area
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   Latrine
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   Shower
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
13. Demonstrate four basic lashings and construct a simple object using these lashings.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________

14. Know how to replace the mantels on a camp lantern.
    __________________________________________________________

    __________________________________________________________

    Demonstrate how to refill gas in a camp lantern and stove.
    Know how to maintain the pressure pump on a camp stove in good working order.
    __________________________________________________________

    __________________________________________________________

    __________________________________________________________
Camping Skills IV

1. Be in at least the 8th grade.

2. Plan and execute a one-hour Sabbath camping activity other than worship to make the Sabbath a meaningful experience.
   Activity ________________________________

3. Write a 200-word report or give a two-minute oral presentation on the preservation of the wilderness, discussing etiquette and conservation.

4. Plan your menu for a two-day camping trip and estimate the cost. (Complete Chart #1)

5. Participate in two weekend campouts.
   Campout dates
   1. _____________________________________________
   2. _____________________________________________

6. Start a fire in wet weather, knowing where to get tinder and how to keep your fire going.
   Date fire started ________________________________
   Where tinder was found ________________________________
   How fire was kept going ________________________________

7. Know the wood best suited for making a quick, hot fire.
   ________________________________________________
   ________________________________________________

8. Know the wood best suited for making coals for cooking.
   ________________________________________________
   ________________________________________________

9. Demonstrate how to split firewood.
10. Demonstrate the proper care and storage of camp foods and how to build various caches to protect food from animals.

11. Prepare a camp dinner with soup, vegetables, entree, and drink, all of which must be cooked.
   Menu

   _____________________________________________________
   _____________________________________________________
   _____________________________________________________

12. Bake your food in a reflector oven.
   Menu

   _____________________________________________________

13. Purify water by three different methods.
   1. ___________________________________________________
   2. ___________________________________________________
   3. ___________________________________________________
# Camping Skills IV, Chart #1

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<th>Breakfast</th>
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Total Estimated Cost: $ __________________________
Canoeing

1. Have the Intermediate level of the Swimming Honor.

2. Demonstrate, first alone and then with a companion, the proper method of:
   a. Entering and launching a canoe
      - (1) From a beach
      - (2) From a landing dock or pier.
   b. Landing and leaving a canoe
      - (1) On a beach
      - (2) On a landing dock or pier.

3. Accompanied by examining counselor, demonstrate correctly the following strokes:
   Bow
   Reverse half sweep
   Diagonal draw
   Push over
   Half sweep
   Full sweep
   J-stroke
   Combination draw and J-stroke

4. Alone and with a companion in both the bow and stern, paddle a canoe in a straight course for 100 yards (91.4 meters). Turn right about and left about. The paddle should be kept always on the same side of the canoe. Demonstrate two kneeling positions for paddling.
   Alone:
   Bow
   Stern
   Paddle 100 yards in straight course
   Turn right about
   Turn left about
   Keeps paddle on same side of canoe
   Two kneeling positions for paddling
With a companion: Bow Stern
Paddle 100 yards in straight course __________ __________
Turn right about __________ __________
Turn left about __________ __________
Keeps paddle on same side of canoe __________ __________
Two kneeling positions for paddling __________ __________

☐ 5. Demonstrate with a canoe the rescue of a companion who has capsized his canoe offshore by:
a. Emptying the swamped canoe of water by drawing it upside down across the gunwales of the rescue canoe.
b. Launch the rescued canoe again.
c. Steady canoe while companion climbs aboard.

☐ 6. Jump out of a canoe in deep water and get back in again in the proper form without shipping water. (Candidate must be accompanied by lifeguard in an equipped lifeboat.)

☐ 7. With clothes on:
a. Capsize a canoe in deep water.
b. Right canoe and stow paddles and kneeling pad.
c. Get in canoe filled with water and paddle with hands or paddle for 25 yards (22.9 meters).
d. Disrobe, stow clothes and paddle, go overboard, hold on to bow of canoe with one hand, swim and tow swamped canoe to shore.
e. Empty canoe properly and land it. (Candidate must be accompanied by a lifeguard in an equipped lifeboat.)

☐ 8. Fully satisfy the examiner of a thorough knowledge of safety rules which will make the candidate a safe canoeist and competent to take others out in a canoe. Promise to observe these rules at all times.

“I solemnly swear that I will observe safe canoeing rules at all times when canoeing, whether alone or with a companion.”

_____________________________________ ____________________
Candidate’s Signature Date
9. Explain how to do the following emergency repair work:
   a. Repairing a one-inch hole in a canoe
      fiberglass
      canvas
      aluminum canoe
   b. Repairing a broken paddle shaft
Caving

1. Know at least three light sources for caving.
   1. __________________________________________
   2. __________________________________________
   3. __________________________________________

Know the importance of having extra light supplies and backup lights.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Have an experienced person in caving show you how a carbide light works.

2. List all equipment needed for a successful caving trip excluding vertical equipment and start putting together your own set of equipment.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. Locate an experienced caver and join that person in exploring at least three relatively easy caves accumulating a total of ten hours of actual caving time.

<table>
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<th>Caves</th>
<th>Hours completed</th>
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Experienced caver __________________________________________
4. Keep a log of these explorations, noting date, cave locations, conditions, features, hours spent in each, names of other members in your party and trip leader’s name. (Complete Chart #1)

5. Learn, know well and practice caving safety rules.

6. Practice “walking” yourself up a steep slope by pulling yourself along a rope.

7. Describe several ways caves were used in Bible times.

8. Participate in the mapping process of a small cave you have explored.

9. Know the names of at least five different speleothems and three cave dwelling animals. Include in your report those you have observed while caving.

Speleothems
1. ________________________________
2. ________________________________
3. ________________________________
4. ________________________________
5. ________________________________
Animals
1. _______________________________________________________
2. _______________________________________________________
3. _______________________________________________________

☐ 10. Write a report of at least 500 words on ten or more hours of your caving experience and include all you have learned while carrying out the previous nine requirements.
<table>
<thead>
<tr>
<th>Date: __________</th>
<th>Number of hours in cave: __________</th>
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<tbody>
<tr>
<td>Cave location:</td>
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</table>
Caving, Advanced

- 1. Have the Caving Honor.

- 2. Obtain geological survey maps of the area where you go caving. Map out on them the location of all known caves you have explored.

- 3. Be able to give an explanation for:
  
  How these caves were formed ________________________________________________________________
  
  ________________________________________________________________
  
  ________________________________________________________________

  What they have in common ________________________________________________
  
  ________________________________________________________________
  
  ________________________________________________________________

  What can be expected in them in the way of physical characteristics:
  Types and extent of formations ________________________________________________
  
  ________________________________________________________________
  
  ________________________________________________________________

  Effects of prior water activity ________________________________________________
  
  ________________________________________________________________
  
  ________________________________________________________________

  Presence and nature of fossils ________________________________________________
  
  ________________________________________________________________
  
  ________________________________________________________________

  Presence and nature of life forms including bats _____________________________
  
  ________________________________________________________________

- 4. Obtain proper rappelling equipment and learn how to use it either by studying a book or mountain climbing techniques or locating a person or club group already experienced who are willing to instruct you.
Plan and execute a cave trip where it is necessary to rappel at least forty feet (12 meters) and climb back out.

Date of trip: _________________________________

☐ 5. Conduct a biological survey of a cave entrance, the cave twilight zone, the deep cave floor, the deep cave wall and the deep cave ceiling. Photograph single specimens of, and identify every form of plant and animal life in each of these troglodytic zones. Compare pictures with nearest natural history museum for help in identification. Publications on cave flora and fauna of the National Speleological Society will help also. Remember slogan, “Take nothing but photographs, leave nothing but footprints.”

☐ 6. Log 100 hours of caving experience. Keep accurate records of each caving trip. (Complete Chart #1)

☐ 7. Conduct a caving course, to be climaxed by several field trips for a group of young people in your community or church.

☐ 8. Make friends with at least one cave owner. Determine what he expects of cavers exploring his cave, and do more than he expects you to do in following these directions.

Cave owner ________________________________________________
Expectations ________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

Date completed ____________ Instructor’s Signature ____________________
# Caving, Advanced, Chart #1

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<th>Number of hours in cave:</th>
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Cave location: ____________________________________________________________
_____________________________________________________________________________

| Interesting Cave Features | |
|---------------------------||
|                           | |
|                           | |
|                           | |
|                           | |
|                           | |
|                           | |
|                           | |
|                           | |
|                           | |
|                           | |
|                           | |
|                           | |

Names of persons in exploring group
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

Signature of trip leader ______________________________________________________
Community Water Safety

1. Have the Swimming Honor.

2. Know the value of disrobing before making a swimming rescue.

   Practice disrobing on dry land in 20 seconds or less. Disrobe yourself of your shoes, socks, pants, belt, and shirt. Don't be alarmed—you are allowed a swimming suit underneath!

3. Know the value of avoiding contact with a victim

   Know the tactics of leading and waiting

   Know the value of using equipment in a rescue

4. Learn to properly do the following nonswimming rescues:
   a. Three different kinds of body reaching rescues
   b. A wading rescue
   c. Free-floating support rescue
   d. Three different kinds of throwing assists

5. Know the points to be considered in the following when rescuing:
   Condition of the victim
   ____________________________________________
   ____________________________________________
   ____________________________________________
   Condition of the rescuer
   ____________________________________________
   ____________________________________________
Condition of the environment __________________________________
__________________________________________________________
__________________________________________________________

6. Surface dive in eight feet of water, recovering various objects three times and a ten-pound weight once.

7. Swim 100 yards (91.4 meters), using the lifesaving stroke.

8. Learn to properly do the following defenses:
   a. Block
   b. Block and carry
   c. Block and turn

9. Learn to properly do the following releases and escapes:
   a. Double-grip-on-one-wrist release
   b. Escape from double grip on wrist
   c. Front head-hold release
   d. Escape from front head hold
   e. Rear-head-hold release
   f. Escape from rear head hold
   g. Double drowning release

10. Learn to properly do the following assists:
    a. Arm assist on front
    b. Arm assist on back
    c. Arm assist by two rescuers
    d. Tired swimmer assist

11. Learn to properly do the following approaches:
    a. Rear approach - armpit level-off
    b. Rear approach - chin level-off
    c. Rear approach with two-hand level-off
    d. Front surface approach
    e. Underwater approach
    f. Approach by diving to rear of victim

12. Correctly approach 30 feet (9.1 meters) and correctly carry 30 feet (9.1 meters), using the following carries:
    a. Cross-chest
    b. Cross-chest control
    c. Hair
    d. Wrist
    e. Shirt or collar

13. Complete a minimum of three hours of being instructed in cardiopulmonary resuscitation, or have the CPR Honor.

Date completed ____________ Instructor’s Signature ____________________
<table>
<thead>
<tr>
<th>NAME</th>
<th>Non swimming rescues</th>
<th>Defenses</th>
<th>Releases and Escapes</th>
<th>Assists</th>
<th>Approaches</th>
<th>Approach and Carries</th>
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<td>3 body reaching rescues</td>
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<td>Surface Dive/Recover Obj.</td>
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<td>100 Yards life saving stroke</td>
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<td></td>
<td>Block</td>
<td>Block and Carry</td>
<td>Block and Turn</td>
<td>DBL-Grip-on-one Wrist Rel.</td>
<td>Escape DBL Grip on Wrist</td>
<td>Front Head-Hold Rel.</td>
</tr>
</tbody>
</table>
Community Water Safety, Advanced

- Have the Community Water Safety honor.

If residing in the United States or other country in which Red Cross instruction is given, satisfactorily pass the American Red Cross - Water Safety Instructor Aids examination and receive your certificate.
Cycling

1. Know the name and explain the purpose of the various parts of a bicycle.

<table>
<thead>
<tr>
<th>Name</th>
<th>Purpose</th>
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</table>

2. Repair a punctured bicycle tire.

3. Take apart, clean, and properly reassemble a bicycle.

4. Adjust the brakes and front and rear derailer properly.
5. Know and practice courtesy and safety rules in bicycling.

6. What is the advantage of wearing a cycling helmet?

7. Have the following riding record:
   a. Take three separate 10-mile (16.1 km) rides in different locations.
      
      | Dates | Locations |
      |-------|-----------|
      | 1.    |           |
      | 2.    |           |
      | 3.    |           |

   b. Take a 50-mile (80.6 km) ride in ten hours or less.
      
      Date ____________________________

8. Know how to read a road map by routing out your 50-mile (80.6 km) course and following it accurately on an actual ride.
Cycling, Advanced

1. Have the Cycling Honor.

2. Describe how to select the correct frame size, handlebar, assembling, and saddle height to fit one's body size.

   Frame Size _________________________________________________
   __________________________________________________________
   Handlebar _________________________________________________
   __________________________________________________________
   Assemblying _______________________________________________
   __________________________________________________________
   Saddle Height ______________________________________________
   __________________________________________________________

3. Describe briefly all the desirable features of a bicycle used for long distance touring.

   __________________________________________________________
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4. Take apart, clean, and reassemble the bearings in the front and rear wheels, headset, and bottom brackets.

5. True a rear wheel, making sure it is properly dished.

6. Select the front and rear sprockets combination that would give the best results under the following conditions:

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Front/Rear sprocket combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riding in hilly terrain</td>
<td></td>
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<tr>
<td>Touring with packs on the bicycle</td>
<td></td>
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<tr>
<td>Riding in level country</td>
<td></td>
</tr>
</tbody>
</table>

7. Explain how the riding characteristics of a bicycle are affected by:

a. The geometry of the bicycle frame including:
   - Head and seat tube angles
   - Fork rate
   - Chain stay length
   - Bottom bracket height
   - Wheel base length

b. The kind of wheels used including:
   - Clincher or tubular tires
   - Small or large frame hubs
   - Number of spokes used on each wheel
   - Number of spokes each spoke crosses
8. Make a list of desirable equipment items to be taken on a multi-day bicycle tour, including shelter and cooking equipment.

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9. Know safety precautions to observe while bicycling.

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10. What are the advantages of drafting?

__________________________________________________________

Know how to safely and properly draft.
11. Know the different clothing and safety equipment used in bicycling and the advantages of each.

<table>
<thead>
<tr>
<th>Clothing/Equipment</th>
<th>Advantages</th>
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<tbody>
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</tbody>
</table>

12. Have the following riding record while working on this honor:
   a. Make three single-day 20-mile (30.2 km) rides in different locations.
      - Dates
      - Locations
      1. ____________________  __________________
      2. ____________________  __________________
      3. ____________________  __________________
   b. Make a 100-mile (161.3 km) tour, involving three days of riding.
      Date ____________________ Location ____________________

13. Write a 500-word description or give a three-minute oral report of the 100-mile (161.3 km) tour.
Drilling and Marching

1. Explain five or more objectives of drilling.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________

2. Define the following:
   - Formation __________________________________________________
   - File _______________________________________________________
   - Line _______________________________________________________
   - Distance ___________________________________________________
   - Rank ______________________________________________________
   - Cover _____________________________________________________
   - Interval ____________________________________________________
   - Flank _____________________________________________________
   - Column ___________________________________________________
   - Cadence ___________________________________________________

3. Explain the actions in each of the following groups:
   At Ease, Stand At Ease, and Parade Rest _______________________
   _____________________________________________________________
   Mark Time, Quick Time, and Double Time ______________________
   _____________________________________________________________
   Hand Salute and Present Arms _________________________________
   _____________________________________________________________
   Right (Left) Flank and Column Right (Left) ____________________
   _____________________________________________________________
4. Properly execute the following basic movements:
   a. Attention  
   b. Parade Rest  
   c. Stand At Ease  
   d. At Ease  
   e. Dress Right Dress  
   f. Prayer Attention  
   g. Present Arms  
   h. Order Arms  
   i. Right Face  
   j. Left Face  
   k. About Face  
   l. Fall Out

5. Properly execute the following movements:
   a. Mark Time  
   b. Forward March  
   c. Right Flank  
   d. Left Flank  
   e. Column Right (with columns of three or four persons)  
   f. Column Left (with columns of three or four persons)  
   g. Rear March  
   h. Halt

6. Explain and demonstrate how to use, display, fold, and care for the national flag.
   Use _________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   Display and care _____________________________________________
   ____________________________________________________________
   ____________________________________________________________
   How to properly fold __________________________________________
   ____________________________________________________________
   ____________________________________________________________
Drilling and Marching, Advanced

1. Have the Drilling and Marching Honor.

2. With a unit guidon, demonstrate the following basic positions:
   a. Order Guidon
   b. Carry Guidon
   c. Salute at Order
   d. Salute at Carry
   e. Present Guidon
   f. Raise Guidon

3. Demonstrate how and when to use the guidon's basic position during all drill commands.

4. Be a member of an active drill team that has performed at least twice in the past year in a special community, conference, or public activity.

   Dates                Events
   1. ___________________________  ____________________________
   2. ___________________________  ____________________________

5. Demonstrate ability to keep in step with the drill team and move as a part of it at all times.

6. As a member of a drill team, do four fancy (precision) drill routines, at least one of which includes combination commands.

   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________
   4. _______________________________________________________

7. Command a drill team of at least four people, putting the team through basic maneuvers, starting directional commands on the proper foot, and distinguishing between preparatory commands and commands of execution.

8. Command an entire Pathfinder Club in at least ten basic drill movements, including Open Ranks.

   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________
   4. _______________________________________________________
   5. _______________________________________________________
   6. _______________________________________________________
   7. _______________________________________________________
   8. _______________________________________________________
   9. _______________________________________________________
  10. _______________________________________________________
With a unit (or a selected flag guard), formally raise and lower the national flag at a summer camp ceremony, a special Pathfinder meeting, Pathfinder Day program, camporee, or some similar program or ceremony. Also demonstrate posting the national and Pathfinder flag.

Date ____________________ Event ___________________________

Date completed ____________ Instructor’s Signature ____________________
Fire Building and Camp Cookery

1. Lay five different kinds of fires and know their uses. Two of these fires must be cooking fires.

<table>
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<tr>
<th>Fires</th>
<th>Uses</th>
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</table>

2. Safely make wood shavings or fuzz sticks.

3. Show correct techniques for starting a fire.

4. Start a fire with one match and keep it going for at least ten minutes.

5. Know and practice fire safety rules.

6. Show how to correctly and safely cut and split wood for a fire.

7. Start a fire on a rainy day.

8. Demonstrate the following cooking techniques:
   a. Boiling
   b. Frying
   c. Baking bread on a stick
   d. Aluminum foil baking
   e. Reflector oven baking
   f. Simmering

9. Know one method of keeping food cool while camping other than with ice.
10. Know ways to keep your food and utensils safe from animals and insects.

________________________________________________________________________
________________________________________________________________________

11. Why is it important to keep your cooking and eating utensils clean?

________________________________________________________________________

12. Showing knowledge of proper nutrition and food groups, make up a complete and balanced menu for six camping meals. Include the following: (Complete Chart #1)
   a. A breakfast, lunch, or supper good for a trail hike where light weight is important. The meal should not need cooking but should be nutritious.
   b. The remaining five meals may be made up of any type of food: canned, fresh, frozen, or dried. One of the five must be a one-pot meal.

13. Make up a supply list of items that will be needed to prepare the above six meals. (Complete Chart #2)

14. Know how to:
   Properly and safely handle food ____________________________________________
   Dispose of trash and garbage _____________________________________________
   Wash your gear ___________________________________________________________
# Fire Building and Camp Cookery, Chart #1

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<tr>
<th></th>
<th>Breakfast</th>
<th>Lunch</th>
<th>Supper</th>
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1. Explain and demonstrate the main points of good hiking practice:
   Pacing ____________________________________________________
   __________________________________________________________
   Speed _____________________________________________________
   __________________________________________________________
   Resting ____________________________________________________
   __________________________________________________________
   Etiquette ___________________________________________________
   __________________________________________________________

2. Explain the importance and method of proper foot care with regard to:
   Cleanliness _________________________________________________
   __________________________________________________________
   Care of nail ________________________________________________
   __________________________________________________________
   Socks _____________________________________________________
   __________________________________________________________
   Shoe selection ______________________________________________
   __________________________________________________________
   First aid of tender or blistered feet ____________________________
   __________________________________________________________

3. Make a list of proper clothing to be worn on a hike in both hot and cool weather.

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<th>Cold</th>
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Pathfinder’s Name
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<th>Hot</th>
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4. Make a list of needed gear for a long day hike in the wilderness and a short country hike.

Long day hike __________________________________________
________________________________________________________

Short country hike _______________________________________
________________________________________________________

5. List five safety and courtesy rules to be used in wilderness trail hiking and road hiking.

Wilderness
1. _____________________________________________________
2. _____________________________________________________
3. _____________________________________________________
4. _____________________________________________________
5. _____________________________________________________

Trail
1. _____________________________________________________
2. _____________________________________________________
3. _____________________________________________________
4. _____________________________________________________
5. _____________________________________________________
6. Explain the importance of drinking water and list three signs of contaminated water.

________________________________________________________________________

________________________________________________________________________

Signs of contaminated water
1. ______________________________________________________________________
2. ______________________________________________________________________
3. ______________________________________________________________________

7. Explain the importance of proper eating while hiking.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

8. Describe proper clothing and foot gear for cold and hot wet weather hiking.

Clothing

<table>
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<th>Cold/Wet Weather</th>
<th>Hot/Wet Weather</th>
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Foot Gear

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<th>Cold/Wet Weather</th>
<th>Hot/Wet Weather</th>
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9. Submit a written plan for a 10-mile (16.1 km) hike which includes: map route, clothing list, equipment list, and water and/or food. (Complete Chart #1)

10. Use a topographical map and/or a road map in planning and doing one of the hikes in Requirement 11.

11. Have the following hiking record:
   a. One five-mile (8 km) rural or town hike
      Date ______________________
      Location _____________________________________________
   b. One five-mile (8 km) hike on a wilderness trail
      Date ______________________
      Location _____________________________________________
   c. Two 10-mile (16.1 km) day hikes on different routes
      Date ______________________
      Location _____________________________________________
      Date ______________________
      Location _____________________________________________
   d. One 15-mile (24.2 km) hike on a wilderness trail
      Date ______________________
      Location _____________________________________________
   e. Within a month of each hike, write a short report, giving dates, routes covered, weather, and any interesting things you saw. (Complete Chart #2)
<table>
<thead>
<tr>
<th>Hiking, Chart #1</th>
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<tbody>
<tr>
<td><strong>Map route</strong></td>
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| **Clothing list** |
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| **Equipment list** |
| ___________________________  __________________________ |
| ___________________________  __________________________ |
| ___________________________  __________________________ |
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| **Water and/or food** |
| ___________________________  __________________________ |
| ___________________________  __________________________ |
| ___________________________  __________________________ |
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# Hiking, Chart #2

<table>
<thead>
<tr>
<th>Date of Hike</th>
<th>Routes covered:</th>
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**Weather:**

**Things of interest**
Horsemanship

1. Label on an outline drawing of a horse, or point out on a live horse a minimum of 15 different parts of a horse.

2. Label on an outline drawing or point out on a real saddle and bridle: Western—minimum of 10 parts of the saddle and 6 parts of the bridle; English—minimum of 9 parts of the saddle and 7 parts of the bridle.
3. Demonstrate and explain the purpose of safety equipment while riding and working around horses—riding helmet and boots (or hard soled shoes with a heel).

   Helmet ____________________________________________________
   __________________________________________________________
   __________________________________________________________

   Boots _____________________________________________________
   __________________________________________________________
   __________________________________________________________

4. Demonstrate and explain a minimum of 5 rules to safely approach and lead a horse.

   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. _________________________________________________________
   5. _________________________________________________________

5. Demonstrate and explain a minimum of 5 safety rules for working around horses.

   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. _________________________________________________________
   5. _________________________________________________________

6. Demonstrate and explain safe grooming of a horse using the 4 basic tools—mane and tail comb, curry comb, stiff brush, and soft brush.
7. Demonstrate a safe mount (including tack check) and dismount.

8. Demonstrate a balanced seat while riding at a walk, including circles and reverses.

9. Demonstrate and explain start, stop, circles and reverses using the 4 natural aids—legs, hands, voice, and weight.

10. Demonstrate and explain 5 trail safety rules, including the following:
    - Be attentive to leader and alert to danger
    - Use correct spacing
    - Do not let your horse eat along the trail
    - Never move faster than a walk on paved surfaces
    - Always walk your horse when approaching or leaving a group of riders

11. Ride on a trail for a minimum of 3 cumulative hours following all safety rules and using correct position.

Date of ride

Date completed          Instructor’s Signature
# Horsemanship Instructor’s Chart

<table>
<thead>
<tr>
<th>NAME</th>
<th>Demonstrate 3 rules to approach &amp; catch a horse</th>
<th>Demonstrate 3 rules to lead horses</th>
<th>Demonstrate</th>
<th>Area Setting</th>
<th>Obstacle Course</th>
<th>Demo 3 Safety Rules for Group Riders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tie Quick Rel Mang Knot</td>
<td>Tie Bowline Knot</td>
<td>Grooming a Horse</td>
<td>Saddle &amp; Bridle a Horse</td>
<td>Mount and Dismount</td>
<td>Safe, Well-balanced seat</td>
</tr>
<tr>
<td></td>
<td>Start, Stop &amp; Turn</td>
<td>Correct Leg-up Procedure</td>
<td>Ride 30 minutes at walk</td>
<td>Safety Consciousness</td>
<td>Correct Spacing</td>
<td>Reversing Direction</td>
</tr>
<tr>
<td></td>
<td>Correct Leg-up Procedure</td>
<td>Safety Consciousness</td>
<td>Correct Spacing</td>
<td>Reversing Direction</td>
<td>Step over log or pole</td>
<td>Pass Btwn 2 Barrels/Bales</td>
</tr>
<tr>
<td></td>
<td>Step over log or pole</td>
<td>Pass Btwn 2 Barrels/Bales</td>
<td>Trail Ride 4 Hours</td>
<td>Demo:</td>
<td>Rule:</td>
<td>Demonstrated</td>
</tr>
<tr>
<td></td>
<td>Pass Btwn 2 Barrels/Bales</td>
<td>Walk key-hole, Turn, Exit</td>
<td>Rule:</td>
<td>Demonstrated</td>
<td>Rule:</td>
<td>Demonstrated</td>
</tr>
<tr>
<td></td>
<td>Walk key-hole, Turn, Exit</td>
<td>Trail Ride 4 Hours</td>
<td>Rule:</td>
<td>Demonstrated</td>
<td>Rule:</td>
<td>Demonstrated</td>
</tr>
<tr>
<td></td>
<td>Trail Ride 4 Hours</td>
<td>Rule:</td>
<td>Demonstrated</td>
<td>Rule:</td>
<td>Demonstrated</td>
<td>Demonstrated</td>
</tr>
</tbody>
</table>
Horsemanship, Advanced

1. Have the Horsemanship Honor.

2. Label on an outline drawing of a horse, or point out on a live horse a minimum of 30 different parts of a horse.

3. Demonstrate and explain how to care for tack.

4. Demonstrate and explain how to catch and halter a horse safely.
5. Demonstrate and explain how to tie a horse safely with a manger knot and with a bowline knot using the correct length of rope and trying at the correct height from the ground.

Length of rope ________________________________
Height from ground ____________________________

6. Demonstrate and explain how to correctly saddle and bridle a horse and adjust stirrup length.

________________________________________________________
________________________________________________________
________________________________________________________

7. Demonstrate the 3 correct positions while riding at a trot/jog including circles and reverses:
   a. sitting
   b. standing
   c. posting.

8. Safely demonstrate an emergency dismount.

9. Ride on a trail for a total of 7 cumulative hours, following all safety rules and using correct position.

10. Demonstrate and explain how to use a hoof pick.

11. Demonstrate proper method to turn out a horse.

12. Identify a minimum of 8 common horse colors
   1. ________________________________
   2. ________________________________
   3. ________________________________
   4. ________________________________
   5. ________________________________
   6. ________________________________
   7. ________________________________
   8. ________________________________
5 common face markings
1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
4. __________________________________________________________
5. __________________________________________________________

5 common leg markings
1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
4. __________________________________________________________
5. __________________________________________________________

☐ 13. Demonstrate and explain correct spacing, reversing direction and passing other riders in an arena setting at the walk with at least one other rider, following all safety rules.

Spacing _____________________________________________________
__________________________________________________________
Reversing ____________________________________________________
__________________________________________________________
Passing ______________________________________________________

☐ 14. Negotiate a simple three element trail obstacle course set up on level ground riding at a walk. Choose from the following:
   a. Step over log or pole, maximum height of 16 inches (40.6 cm).
   b. Pass between 2 barrels or bales of hay spaced 45 inches (1.1 meters) apart.
   c. Zigzag between poles set at 12 foot (3.6 meters) intervals.
   d. Walk into a large hey-hole, 15 foot (4.6 meters) circle, turn and exit without stepping on or crossing any borderline.

☐ 15. Know how to cool down and care for a horse after a demanding ride.

__________________________________________________________
__________________________________________________________
__________________________________________________________

Date completed ____________ Instructor’s Signature ____________________
<table>
<thead>
<tr>
<th>Demonstrate 3 Safety Rules for Group Riders</th>
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<tbody>
<tr>
<td><strong>Name</strong></td>
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</tbody>
</table>

**Obstacle Course**
- Trail Ride 4 Hours
- Walk Key-hole, Turn, Exit
- Zig-Zag Pom Poses
- Pass Btwn 2 Barrels/Bales
- Step over log or pole

**Area Setting**
- Passing other riders
- Reversing direction
- Correct spacing
- Safety consciousness
- Ride 30-minutes at walk
- Correct leg-up procedure
- Start & Stop a Turn
- Seat, Well-balanced seat
- Mount and Dismount
- saddle & Bridle a Horse
- Grooming a Horse
- The Bowling Knot
- The Quick Rel Mgr Knot

<table>
<thead>
<tr>
<th>Demonstrate 3 rules to approach &amp; catch a horse</th>
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<tbody>
<tr>
<td><strong>NAME</strong></td>
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</table>
Kites

1. When were kites first made and flown?

________________________________________________________________________

Name at least three ways kites have helped in scientific research and tell how each has affected the world we live in.

<table>
<thead>
<tr>
<th>Ways Helped</th>
<th>Affect</th>
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<tbody>
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</table>

Tell the story of Benjamin Franklin and his kite.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. Name some of the ways that kites might be used today.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. Explain briefly how kites fly.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
4. Define the following terms:
   Spine _____________________________________________________
   Spar ______________________________________________________
   Vent ______________________________________________________
   Bowstring _________________________________________________
   Cover _____________________________________________________
   Frame _____________________________________________________
   Tail ______________________________________________________
   Keel ______________________________________________________
   Flying line _________________________________________________
   Bridle _____________________________________________________
   Reel ______________________________________________________

5. What is a common cause of kite failure? __________________________  
   _____________________________________________________________

6. What should be done when a kite loops during flight?  
   _____________________________________________________________

7. Why is a tail sometimes needed on a kite? _________________________  
   _____________________________________________________________

8. Know at least three safety rules for kite flying.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________

9. Do the following:
   a. Correctly wind line on a stick.
   b. Tie broken ends with the fisherman's knot.

10. Make and successfully fly two of the following kites:
    a. Sled kite
    b. Flat kite
    c. Two-stick diamond kite
    d. Delta wing kite
    e. Eddy or Malay kite
    f. Box kite
    g. Tetrahedral kite
Knot Tying

1. Define the following terms:
   a. Bight
   b. Running end
   c. Standing part
   d. Underhand loop
   e. Overhand loop
   f. Turn
   g. Bend
   h. Hitch
   i. Splice
   j. Whipping

2. Know how to care for rope.

3. Describe the difference between laid rope and braided rope and list three uses of each.

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<tr>
<th>Laid</th>
<th>Differences</th>
<th>Uses</th>
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</table>

4. Identify the following types of rope:
   a. Manila
   b. Sisal
   c. Nylon
   d. Polypropylene

5. What are some advantages and disadvantages of synthetic rope?
   Advantages
   Disadvantages
6. Do the following to rope:
   a. Splice
   b. Eye splice
   c. Back splice
   d. Finish the end of a rope with a double crown, whipping, or a Matthew Walker's knot.

7. Make a six-foot piece of three-strand twisted rope from native materials or twine.
   Materials Used ______________________________________________
   ____________________________________________________________

8. From memory tie at least 20 of the following knots and know their common uses and limitations. Demonstrate how they are used.
   ___ Anchor bend ___ Lark's head
   ___ Bowline ___ Man harness knot
   ___ Bowline on a bight ___ Miller's knot
   ___ Butterfly loop knot or Alpine ___ Packer's knot
   ___ Butterfly knot ___ Pipe hitch
   ___ Carrick bend ___ Prusik knot
   ___ Cat's paw ___ Sheepshank
   ___ Clove hitch ___ Sheet bend
   ___ Constrictor knot ___ Slip knot
   ___ Crown knot ___ Slipped half hitch
   ___ Double bow ___ Slipped sheet bend
   ___ Double sheet bend ___ Square knot
   ___ Figure eight ___ Stevedore's knot
   ___ Fisherman's bend ___ Strangle knot
   ___ Fisherman's loop ___ Surgeon's knot
   ___ Halter hitch ___ Tautline hitch
   ___ Hunter's bend ___ Timber hitch
   ___ Lariat or Bowstring knot ___ Two half hitches

Date completed ____________  Instructor’s Signature ____________________
### Navigation

1. Have the Weather Honor
2. Know at least 20 nautical terms used in navigation.

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
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</tbody>
</table>
3. Name at least three aids to navigation and their functions. By whom are these maintained?

<table>
<thead>
<tr>
<th>Aids</th>
<th>Function</th>
<th>Maintained by</th>
</tr>
</thead>
<tbody>
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</table>

4. Name six types of buoys. What do they mean and how are they used? Give the colors of the six you named. (Complete Chart #1)

How are buoys numbered?

How do they mark channels?

5. Box a compass with eight cardinal points.

Why is it so important in navigation?

Where is it mounted in the vessel, and why?

6. Name four of the most useful knots in seamanship. Know how to tie them and give their principal uses.

<table>
<thead>
<tr>
<th>Knots</th>
<th>Tie</th>
<th>Uses</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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</table>

7. Familiarize yourself with reading and interpreting a "chart."

Why is a chart so invaluable in unknown waters?
Give some of the things a chart shows.

__________________________  _______________________________
__________________________  _______________________________
__________________________  _______________________________
__________________________  _______________________________
__________________________  _______________________________
__________________________  _______________________________
__________________________  _______________________________

Give the symbols used on a chart, or two of the most used buoys.

Chart:

Buoys 1:  2:
8. When you are taking an active part in navigation, what are three of the best safety rules to follow?
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________

9. What does it mean to be properly equipped?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   Illustrate __________________________________________________
   __________________________________________________________
   __________________________________________________________

10. What is meant by "rules of the road" and by "proper water etiquette?"
    __________________________________________________________
    __________________________________________________________
    __________________________________________________________
    __________________________________________________________
    __________________________________________________________
<table>
<thead>
<tr>
<th>TYPES</th>
<th>MEANING</th>
<th>HOW USED</th>
<th>COLORS</th>
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</thead>
<tbody>
<tr>
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<td>6</td>
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</tbody>
</table>
Orienteering

1. Explain what a topographic map is, what you expect to find on it, and three uses for it.

   Explanation ________________________________________________
   __________________________________________________________
   Findings ____________________________________________________
   __________________________________________________________
   Uses 1. _____________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________

2. Identify at least 20 signs and symbols used on topographic maps.

   1. ___________________________ 11. ___________________________
   2. ___________________________ 12. ___________________________
   3. ___________________________ 13. ___________________________
   4. ___________________________ 14. ___________________________
   5. ___________________________ 15. ___________________________
   6. ___________________________ 16. ___________________________
   7. ___________________________ 17. ___________________________
   8. ___________________________ 18. ___________________________
   9. ___________________________ 19. ___________________________
   10. __________________________ 20. ___________________________

3. Give the nomenclature of an orienteering compass.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
4. Know the meaning of the following terms:
   - Elevation __________________________________________________
   - Contour interval _____________________________________________
   - Magnetic North _____________________________________________
   - Declination ________________________________________________
   - Scale _____________________________________________________
   - Measuring _________________________________________________
   - Back-azimuth _______________________________________________
   - True North __________________________________________________
   - Azimuth ___________________________________________________
   - Distance ___________________________________________________

5. Demonstrate how to shoot a magnetic azimuth.

6. Demonstrate how to march on a magnetic azimuth.

7. Know two methods to correct for declination
   1. __________________________________________________________
   2. __________________________________________________________

   When is correction necessary?
   ____________________________________________________________
   ____________________________________________________________

8. Be able to orient yourself and a map by inspection and by compass.

   ____________________________________________________________
   ____________________________________________________________

   Use _________________________________________________________
10. Prove your ability in the use of a map and/or a compass by following a one-mile (1.6 km) cross-country course with at least five given readings or control points.

Course location _____________________________________________

Date ______________________________________________________

Given Readings

1. _________________________________________________________

2. _________________________________________________________

3. _________________________________________________________

4. _________________________________________________________

5. _________________________________________________________

Date completed ____________ Instructor’s Signature ____________________
Outdoor Leadership

1. Have the following honors: Camp Craft and Camping Skills I-III

2. Earn four of the following honors. From the list below restudy any previously earned honor so you can give a knowledgeable answer to the requirements.
   a. Backpacking
   b. Camping Skills IV
   c. Fire Building and Camp Cookery
   d. Hiking
   e. Orienteering
   f. Pioneering
   g. Winter Camping

3. Have the First Aid Honor.

4. Know what to do to overcome fear when lost.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

Know at least four ways to signal for help if lost in the wilderness.

1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
4. __________________________________________________________

5. Know at least four secular activities and four Sabbath activities to use in an outdoor setting if you have a rainy day.

   Secular
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
Sabbath
1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
4. __________________________________________________________

6. Do the following in an outdoor setting:
   a. Plan, organize, and do the teaching of one nature honor to a group
      of youth.
      Nature honor: __________________________________________
   b. Assist in teaching camping skills required in any camping honor
      and/or AY Class requirements to a group of youth.
      Camping Skills: ________________________________________
      ______________________________________________________
   c. Determine where the nearest hospital is located.
      Location ______________________________________________
   d. Determine where the nearest assistance from the police or a park
      ranger can be obtained.
      Location ______________________________________________

7. Through the Bible and/or the writings of Ellen G. White study and learn
   how the outdoors influenced the following Bible characters:
   Moses ___________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________
   David _____________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________
   Elijah _____________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________
8. Know what considerations should be given in an outdoor setting with a group of youth in the following areas:

- Camping safety
- Fire safety
- Sanitation
- Swimming safety rules
- Rules for conduct
- Proper Sabbath observance
9. List at least six ways you can keep the out-of-doors beautiful for others to enjoy.
   1. ________________________________________________________
   2. ________________________________________________________
   3. ________________________________________________________
   4. ________________________________________________________
   5. ________________________________________________________
   6. ________________________________________________________

10. Know at least ten qualities of a good youth leader.
   1. ________________________________________________________
   2. ________________________________________________________
   3. ________________________________________________________
   4. ________________________________________________________
   5. ________________________________________________________
   6. ________________________________________________________
   7. ________________________________________________________
   8. ________________________________________________________
   9. ________________________________________________________
  10. ________________________________________________________
Outdoor Leadership, Advanced

1. Have the Outdoor Leadership Honor.

2. Earn three honors, not previously earned, from the Wilderness Master Award.
   1. ______________________________________________________________________
   2. ______________________________________________________________________
   3. ______________________________________________________________________

3. Have the First Aid and CPR Honors and a current certificate for them. In addition to these honors, know the prevention and symptoms of, and first aid treatment for the following: (Complete Chart #1)
   a. Hypothermia
   b. Venomous snake bite
   c. Heat and sun stroke
   d. Heat exhaustion
   e. Poison ivy & poison oak reaction
   f. Open wound infection
   g. Altitude sickness
   h. Dehydration

4. Prepare outlines and present seven different worships to be shared during a camping experience. Utilize scriptural texts and principles, and illustrate these with examples available during the camping experience.
   1. ______________________________________________________________________
   2. ______________________________________________________________________
   3. ______________________________________________________________________
   4. ______________________________________________________________________
   5. ______________________________________________________________________
   6. ______________________________________________________________________
   7. ______________________________________________________________________
5. Outline a personal testimony that could be used to start a friendship between a person and Christ. The testimony could include how Jesus became your personal Savior, a miracle that has happened in your life, etc. Present this testimony to a group of youth in an outdoor setting.

Date ______________________________________________________
Setting ____________________________________________________
Topic _____________________________________________________

6. Know how to control the panic of someone who is lost.

__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________

7. Develop a search and rescue plan for a specific location, 50 acres (hectors) or more, in your area. This plan should utilize at least ten individuals, and you should coordinate each one's activity and search zone. List specific equipment that might be needed for communication, first aid, and victim transport appropriate for the chosen location. (Complete worksheet #1)

8. Outline your philosophy for wilderness etiquette. Participate in one to three hours of a wilderness conservation project.

__________________________________________________________
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Date of participation _________________________________________
Hours spent in participation ___________________________________
9. Teach at least one honor found in the Wilderness Master group.
   Honor(s) ___________________________________________________

10. Know at least four objectives for outdoor leadership in each of the following categories:
    Physical
    1. _______________________________________________________
    2. _______________________________________________________
    3. _______________________________________________________
    4. _______________________________________________________

    Social
    1. _______________________________________________________
    2. _______________________________________________________
    3. _______________________________________________________
    4. _______________________________________________________

    Personal
    1. _______________________________________________________
    2. _______________________________________________________
    3. _______________________________________________________
    4. _______________________________________________________

    Spiritual
    1. _______________________________________________________
    2. _______________________________________________________
    3. _______________________________________________________
    4. _______________________________________________________

Outdoor Leadership, Advanced
2002 Edition
11. Know the difference between juniors (10-12 years old) and teens (13-15 years old) in the following areas:

<table>
<thead>
<tr>
<th></th>
<th>Juniors</th>
<th>Teens</th>
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<tbody>
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<td>Physical</td>
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<td>Spiritual</td>
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</table>
12. Have seven of the following honors. Any of the honors earned more than two years ago should be restudied so that you can answer any of the knowledge questions included in the honor.
   a. Animal Tracking
   b. Birds
   c. Ecology
   d. Edible Wild Plants
   e. Ferns
   f. Flowers
   g. Fungi
   h. Geology
   i. Grasses
   j. Insects
   k. Mammals
   l. Marine Invertebrates
   m. Reptiles
   n. Rocks and Minerals
   o. Shells
   p. Spiders
   q. Stars
   r. Trees
   s. Weather

13. Plan, organize, and carry out one of the following for one weekend with a group of not less than five:
   a. Outdoor spiritual retreat
   b. Canoe trip
   c. Bicycle trip
   d. Horseback trip
   e. Backpack trip

   Date of activity ________________________________
   Location of Activity ________________________________
   Group Members
   1. __________________________________________
   2. __________________________________________
   3. __________________________________________
   4. __________________________________________
   5. __________________________________________
Outdoor Leadership, Advanced Chart #1

Know the prevention, symptoms of and the first aid for:

<table>
<thead>
<tr>
<th>Prevention</th>
<th>Symptoms of</th>
<th>First Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothermia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Venomous snake bite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat &amp; Sun stroke</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat exhaustion</td>
<td></td>
<td></td>
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<tr>
<td>Poison Ivy &amp; Poison Oak reaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Wound Infection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altitude sickness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dehydration</td>
<td></td>
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</tbody>
</table>
### Outdoor Leadership, Advanced Worksheet #1

<table>
<thead>
<tr>
<th>Location</th>
<th>Individuals</th>
<th>Activities</th>
<th>Search Zone</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>
1. List ten benefits of being physically fit.
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. _________________________________________________________
   5. _________________________________________________________
   6. _________________________________________________________
   7. _________________________________________________________
   8. _________________________________________________________
   9. _________________________________________________________
  10. _________________________________________________________

2. Know how the following help to achieve a balance for your body:
   Exercise ____________________________________________________
   Proper eating _________________________________________________
   Emotional stability ____________________________________________

3. Define the following exercises:
   Isometric ____________________________________________________
   Isotonic _____________________________________________________
   Isokinetic ___________________________________________________
4. Know the meaning of the principles involved in the following exercise program:
   - Warm up
   - Aerobic exercises
   - Cool down
   - Calisthenics

5. Know how to determine your heart rate at rest and after exercise.
   - At rest
   - After exercise

6. Know how to determine the minimum rate at which your heart should be beating to obtain the best aerobic conditioning effect.

7. Using the four steps given in requirement 4, do a regular exercise program at least four times a week for three months. Keep a chart of the following: (Complete Chart #1)
   a. Type of warm-up exercises performed
   b. Type of aerobic exercises performed
   c. How long aerobic exercises were performed
   d. Type of calisthenics performed

For each exercise period, maintain the minimum heart rate determined in requirement 7 for a period of at least 20 minutes.

Date completed ____________  Instructor’s Signature ____________________

Physical Fitness
2002 Edition
Physical Fitness, Chart #1

Month: ____________________

Record a regular exercise program for at least 4 times a week for 3 months

<table>
<thead>
<tr>
<th></th>
<th>1st Week</th>
<th>2nd Week</th>
<th>3rd Week</th>
<th>4th Week</th>
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</thead>
<tbody>
<tr>
<td>Type of warm up exercises</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Type of aerobic exercises</td>
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<td></td>
</tr>
<tr>
<td>How long aerobic exercises performed?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Heart Rate</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Type of calisthenics exercises</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
1. Describe in writing, orally, or with pictures how the early pioneers met the following basic living needs:

Housing and furnishings ________________________________________________

____________________________________________________________________

Clothing _____________________________________________________________

____________________________________________________________________

Food _________________________________________________________________

____________________________________________________________________

Cooking ______________________________________________________________

____________________________________________________________________

Warmth and light ______________________________________________________

____________________________________________________________________

Tools and handiwork _________________________________________________

____________________________________________________________________

Sanitation _____________________________________________________________

____________________________________________________________________

Transportation _________________________________________________________

____________________________________________________________________
2. Construct a piece of useful furniture by lashing. Learn the following lashings:
   - Square
   - Diagonal
   - Sheer
   - Continuous

   Furniture made: _____________________________________________

3. Do one of the following:
   a. Weave a basket using natural materials.
   b. Make a pair of leather moccasins.
   c. Make a lady's bonnet by hand sewing.
   d. Make a simple toy used by the pioneers.

4. Know how to make flour from at least one wild plant for use in baking.
   Plant(s) used _______________________________________________
   How made _________________________________________________
   __________________________________________________________
   __________________________________________________________

5. Build a fire without matches. Use natural fire building materials. Keep the fire going for five minutes. You may use the following to start your fire:
   a. Flint and steel
   b. Friction
   c. Electric spark
   d. Curved glass
   e. Metal match
   f. Compressed air

   Method used _______________________________________________
   Materials used _____________________________________________
   __________________________________________________________
   __________________________________________________________

6. Show axmanship knowledge in the following:
   a. Describe the best types of axes ____________________________
      ______________________________________________________
      ______________________________________________________
   b. Show how to sharpen an ax properly
c. Know and practice safety rules in the use of an ax.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

d. Know the proper way to use an ax.

________________________________________________________________________

________________________________________________________________________

e. Properly cut in two a log at least eight inches (20.3 cm) thick.

f. Properly split wood that is at least eight inches (20.3 cm) in diameter and one foot (30.5 cm) long.

7. Do two of the following:
   a. Make a ten-foot (3.0 meters) rope from natural material or twine.
   b. Tie ten knots useful to the pioneer and tell how they were used.

<table>
<thead>
<tr>
<th>Knots</th>
<th>How Used</th>
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<tbody>
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</table>

c. Using rope and natural materials, make one device for moving heavy objects.

Material Used ____________________________________________________________
________________________________________________________________________

d. Construct an adequate and comfortable latrine.

Material Used ____________________________________________________________
________________________________________________________________________
8. Explain the need for proper sanitation relating to solid and human waste and the washing of body, clothes and dishes.

Solid and human waste

Washing of body, clothes and dishes

9. Assist in the construction of a ten-foot (3.0 meters) long log or rope bridge, using lashings.

10. Know four ways to keep the wilderness beautiful.

   1. 
   2. 
   3. 
   4. 

11. Do two of the following:

   a. Make a wax candle or other form of pioneer light source.
   b. Make a batch of soap.
   c. Milk a cow.
   d. Churn butter.
   e. Make a quill pen and write with it.
   f. Make a corn husk doll.
   g. Assist in making a quilt.

12. Know five home remedies from wild plants and explain their uses.

<table>
<thead>
<tr>
<th>Remedy</th>
<th>Wild Plants</th>
<th>Uses</th>
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<tbody>
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</table>
13. Do one of the following:

a. Assist in constructing a raft, using lashings. Take a five-mile (8.3 km) trip on a river with this raft.

b. With an experienced wrangler, participate in a two-day, 15-mile (25 km) horseback trip, carrying all needed supplies on a pack horse you have learned to pack.

c. With an experienced leader, participate in a two-day, 15-mile (25 km) canoe trip, carrying all needed supplies properly. A short portage should be done.

d. With an experienced leader, participate in a two-day, 15-mile (25 km) backpack trip, carrying all needed supplies.

Type of trip: __________________________________________

Date of trip: __________________________________________

Location of trip: ______________________________________

Leader/wrangler: ______________________________________
Rock Climbing

1. Know and practice the safety precautions that should be followed while rock climbing.

2. Be familiar with and demonstrate the use of the following equipment:
   - carabiners
   - pitons (various types)
   - jam nuts (various types)
   - runners
   - nylon climbing rope

3. Show how to care for and coil the climbing rope. Know how to tie and use the following knots: bowline on a coil, bowline on a bight, figure eight, ring bend, double fisherman's, and prussik.

<table>
<thead>
<tr>
<th>Tied</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowline on a coil</td>
<td></td>
</tr>
<tr>
<td>Bowline on a bight</td>
<td></td>
</tr>
<tr>
<td>Figure Eight</td>
<td></td>
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<tr>
<td>Ring Bend</td>
<td></td>
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</tbody>
</table>
Double fisherman’s ___________________ ___________________
Prussik ___________________ ___________________

4. Know when to rope up into a rope team and type of rope team movement for class three, four, and five climbing.

Know when to rope up ______________________________________
________________________________________________________
________________________________________________________

Type of movement for:
Class three _________________________________________________ 
________________________________________________________
Class four __________________________________________________
________________________________________________________
Class five __________________________________________________
________________________________________________________

5. Describe the six different classes of climbing and methods of rating climbs.

   Classes of climbing
   1. _________________________________________________
   2. _________________________________________________
   3. _________________________________________________
   4. _________________________________________________
   5. _________________________________________________
   6. _________________________________________________

   Methods of rating

________________________________________________________
________________________________________________________
________________________________________________________
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6. Show how to static belay by belaying two climbers up in actual climbing. Show knowledge of proper body positions, braking surfaces, bracing and anchoring, and taking in the rope during the use of static belaying.

7. Know and use the following climbing signals
   - belay on ________________________________
   - climbing ______________________________
   - climb ________________________________
   - up rope _______________________________
   - slack _________________________________
   - tension ______________________________
   - falling ______________________________
   - rock ________________________________
   - off belay ______________________________
   - belay off ______________________________
   - belay to point _________________________

8. Using prussik knots and slings, ascend 25 feet (7.62 meters) of vertical rope. Show how to use mechanical ascending devices such as jumars, Gibbs ascenders, etc.

9. Properly free climb up to 5.3 (F3) difficulty on two different pitches a distance of at least 50 feet (15.24 meters) with an upper belay. Understand and practice the following free climbing concepts: rhythm, looking ahead, weight over the feet, balance climbing, counterforce climbing, and jamming.

10. Show how to set up a rappel. Rappel using figure eights or other mechanical brake methods. Do at least two 50-foot (15.24 meters) rappels.
# Rock Climbing, Chart #1

<table>
<thead>
<tr>
<th>NAME</th>
<th>Demonstrate</th>
<th>Tie and use knots</th>
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<tbody>
<tr>
<td></td>
<td>Practices safety precautions</td>
<td>SB with proper body position</td>
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<tr>
<td></td>
<td>Carabiners</td>
<td>SB knowledge during SB</td>
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<tr>
<td></td>
<td>Pitons (Various types)</td>
<td>SB knowledge brace/anchor</td>
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<tr>
<td></td>
<td>Jam nuts (Various types)</td>
<td>Taking in rope during SB</td>
</tr>
<tr>
<td></td>
<td>Runners</td>
<td>Ascend 25' of vertical rope</td>
</tr>
<tr>
<td></td>
<td>Nylon Climbing Rope</td>
<td>Two 50' rappels</td>
</tr>
<tr>
<td></td>
<td>Care for and Coil Climbing Rope</td>
<td>Ascend 25' of vertical rope</td>
</tr>
<tr>
<td></td>
<td>Bowline on a coil</td>
<td>Ascend 25' of vertical rope</td>
</tr>
<tr>
<td></td>
<td>Bowline on a bight</td>
<td>Ascend 25' of vertical rope</td>
</tr>
<tr>
<td></td>
<td>Figure eight</td>
<td>Ascend 25' of vertical rope</td>
</tr>
<tr>
<td></td>
<td>Ring Bend</td>
<td>Ascend 25' of vertical rope</td>
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<tr>
<td></td>
<td>Double Fisherman's</td>
<td>Ascend 25' of vertical rope</td>
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<tr>
<td></td>
<td>Prusik</td>
<td>Ascend 25' of vertical rope</td>
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<tr>
<td></td>
<td>Static Belay (SB)</td>
<td>Ascend 25' of vertical rope</td>
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<tr>
<td></td>
<td>SB with proper body position</td>
<td>Ascend 25' of vertical rope</td>
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<tr>
<td></td>
<td>SB knowledge during SB</td>
<td>Ascend 25' of vertical rope</td>
</tr>
<tr>
<td></td>
<td>SB knowledge brace/anchor</td>
<td>Ascend 25' of vertical rope</td>
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<tr>
<td></td>
<td>Taking in rope during SB</td>
<td>Ascend 25' of vertical rope</td>
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<td>Ascend 25' of vertical rope</td>
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<td>Ascend 25' of vertical rope</td>
<td>Ascend 25' of vertical rope</td>
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</table>

### Knots
- **Bowline on a coil**
- **Bowline on a bight**
- **Figure eight**
- **Ring Bend**
- **Double Fisherman's**
- **Prusik**
- **Static Belay (SB)**
- **SB with proper body position**
- **SB knowledge during SB**
- **SB knowledge brace/anchor**
- **Taking in rope during SB**
- **Ascend 25’ of vertical rope**
- **Two 50’ rappels**
1. Have the Rock Climbing Honor.

2. Know and demonstrate the use of all special rock climbing equipment, such as bongs, RURP's, knifeblades, bolt equipment, hero loops, runners, etriers, and mechanical ascenders.

   - Bongs
   - RURP's
   - Knifeblades
   - Bolt equipment
   - Hero loops
   - Runners
   - Etriers
   - Mechanical ascenders

3. Show how to use all free climbing moves, including: foot edging; finger-tip clings; lay backs; hand, arm, foot, and leg jamming; and stimming while climbing at 5.6 (F6) difficulty on practice cliffs using an upper belay.

4. Show how to belay properly and safely a lead climber. Show that you can catch a falling lead climber during a practice fall.

5. Show how to lead and follow (by jumaring) a continuous Class 5 point 6 direct aid pitch of A2 difficulty of at least 20 feet (6.1 meters).

6. Show how to raise and lower, using only normal climbing equipment, an injured climber safely and relatively comfortably. Construct a rope litter and demonstrate its proper use.

7. Participate in at least two multi-pitch climbs of 5.5 (F5) difficulty or above, involving at least 120 feet (36.6 meters) of climbing each and leading at least two of the pitches.

   Dates of climbs
   1. 
   2. 
8. Select a minimum of bivouac equipment, including food for a supper and breakfast, and spend one night bivouacked on a rock ledge at least 30 feet (9.1 meters) high and reached by moderate climbing, hauling equipment up by proper rope hauling methods.

   Equipment selected __________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

   Date completed _____________________________________________

9. Demonstrate basic map and compass use. Explain how the map can be useful to the rock climber and how to determine compass bearing from the map.

   Explanation of usefulness _____________________________________
   ___________________________________________________________
   ___________________________________________________________

   How to determine compass bearing ______________________________
   ___________________________________________________________
   ___________________________________________________________
Pathfinder’s Name

Rowing

1. Have the Intermediate Swimming Honor.

2. With your instructor or counselor in stern, and without assistance, row properly the following:
   a. A quarter of a mile on a straight course, stop, make a pivot turn, and return to the starting point.
   b. Back water in a straight line 200 yards (182.9 meters). Make a turn under way, still backing water, and return to the starting point. (Feather after each stroke. Pin rowlocks must not be used.)

3. Demonstrate the following:
   a. Properly launch and land a rowboat from and to shore.
   b. Safely assist a person to and from a rowboat alongside a pier.
   c. Tie a rowboat to a pier using each of the following:
      (1) Clove hitch
      (2) Round turn
      (3) Two half hitches
      (4) Bowline
      (5) Hitching tie or mooring hitch

4. Alone, or with the assistance of a person who is a swimmer, swamp rowboat, turn it right side up, get in, and with your hands or an oar, paddle it for 30 feet (9.1 meters). Tell why you should hang onto or get into a swamped rowboat.

5. Shove off from shore or pier alone in a rowboat, approach a swimmer, and maneuver so that the swimmer can be safely towed ashore.

6. Identify and describe:
   Dory ______________________________________________________
   ________________________________
   ________________________________
   ________________________________
   Dory skiff __________________________________________________
   ________________________________
   ________________________________
7. Identify and describe:
   Tholepin rowlock
   Box rowlock
   Ring rowlock
   Open top rowlock

Tell why pin-type rowlocks are not recommended.

8. What is the advantage of feathering oars while rowing?

9. How would you handle a rowboat in a sudden storm or high wind?

10. How would you calculate the weight that can be safely carried under normal conditions in any given boat under oars?
11. What lights are required on a rowboat at night, both with and without outboard motor?

With outboard motor
________________________________________________________

Without outboard motor
________________________________________________________

12. Know how to properly fit out a rowboat, and maintain and care for it during the boating season. Know how to prepare and store the rowboat when not in use.

Fit out a rowboat
________________________________________________________

Store a rowboat
________________________________________________________

Date completed ____________    Instructor’s Signature ________________
<table>
<thead>
<tr>
<th>Demonstrated</th>
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<tbody>
<tr>
<td>Low swimmer ashore</td>
<td></td>
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<tr>
<td>Swamp romboat, get in, paddle 60'</td>
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<tr>
<td>Hitching lee or mooring hitch</td>
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<tr>
<td>Bowline</td>
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<tr>
<td>Two half hitches</td>
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<tr>
<td>Round turn</td>
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<tr>
<td>Clove hitch</td>
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<tr>
<td>Assist person to &amp; from rowboat</td>
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<tr>
<td>Launch and land romboat</td>
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<tr>
<td>Back water straight line 200 yards</td>
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<tr>
<td>Row 1/4 mile, stop, pivot, return</td>
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</table>
Pathfinder’s Name

Sailing

1. Have the Intermediate Swimming Honor.
2. Know the "rules of the road" for boating.

3. Know how weather conditions and high wave conditions can affect safety and sailing performance.

4. What safety precautions should be followed when sailing?

5. With the help of a friend, do the following:
   a. Get a sailboat underway from a dock, mooring, or beach.
   b. Properly adjust sails for the following conditions:
      (1) Beating the wind
      (2) Beam reach
      (3) Broad reach
      (4) Close reach
      (5) Downwind
   c. Change tack by coming about and by jibing.
   d. Return the sailboat to a dock, mooring, or beach, and prepare it for being unattended.
6. Know how to tie and use the following knots in sailing:
   - Square ____________________________________________________________________
   - Bowline ____________________________________________________________________
   - Clove hitch __________________________________________________________________
   - Figure-eight __________________________________________________________________
   - Two half-hitches __________________________________________________________________
   - Mooring hitch __________________________________________________________________

7. List ways to care for your sailing equipment throughout the year.
   _____________________________________________________________________________
   _____________________________________________________________________________
   _____________________________________________________________________________
   _____________________________________________________________________________
   _____________________________________________________________________________

8. Have a knowledge of at least 20 terms used in sailing and their meanings.

<table>
<thead>
<tr>
<th>Terms</th>
<th>Meaning</th>
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<td>11.</td>
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<td>12.</td>
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<td>14.</td>
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Sailing
2002 Edition
9. Identify at least 15 parts of a sailboat.

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3. ____________________________
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12. __________________________________________________________________
13. __________________________________________________________________
14. __________________________________________________________________
15. __________________________________________________________________

10. Demonstrate the rescue of a person overboard.*

11. Demonstrate what to do when a sailboat capsizes.*

Note: * These requirements should be done under the supervision of an adult, with a rescue boat, to give assistance if needed.
## Sailing Instructor’s Chart

<table>
<thead>
<tr>
<th>NAME</th>
<th>With the help of a friend</th>
<th>Demonstrate</th>
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<tbody>
<tr>
<td></td>
<td>Adjust sails for</td>
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<tr>
<td>Get sailboat underway</td>
<td>Return boat &amp; prepare it for being unattended</td>
<td></td>
</tr>
<tr>
<td>Beating the wind</td>
<td>Square knot</td>
<td>Bowline</td>
</tr>
<tr>
<td>Beam reach</td>
<td>Clove hitch</td>
<td>Figure-eight</td>
</tr>
<tr>
<td>Broad reach</td>
<td>Two half-hitches</td>
<td>Mooring hitch</td>
</tr>
<tr>
<td>Close reach</td>
<td>Rescue a person overboard</td>
<td>What to do when sailboat capsizes</td>
</tr>
<tr>
<td>Downwind</td>
<td>Change tack</td>
<td></td>
</tr>
</tbody>
</table>
Scuba Diving

(Instructor Required)

Satisfactorily pass a standard SCUBA diving course taught by a certified SCUBA diving instructor.
Scuba Diving, Advanced

(Instructor Required)

1. Have the Scuba Diving Honor.

2. Satisfactorily pass an advanced SCUBA diving course taught by a certified SCUBA diving instructor.

Date completed ____________ Instructor’s Signature ____________________
Skiing, Downhill

1. Know the advantages and disadvantages of metal and fiberglass skis.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>Metal</td>
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<tr>
<td>Fiberglass</td>
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</table>

2. How does the sidecut of the skis help the skier turn?

_________________________________________________________
_________________________________________________________
_________________________________________________________

3. What general rules would you use in selecting the proper length of skis and poles for yourself?

Skies _____________________________________________________
_________________________________________________________
_________________________________________________________

Poles _____________________________________________________
_________________________________________________________

4. Know boot designs and how these features can affect your skiing.

_________________________________________________________
_________________________________________________________
5. Why is proper binding adjustment so important?

What determines proper adjustment?

6. Know what a safety strap or ski break is and explain its purpose.

Purpose

7. What should you do if you come upon an injured skier who has not yet received any help?

8. Discuss and practice good sportsmanship at ski areas.

9. What care should be given ski equipment after its use?

What should be done with ski equipment before its use each season?
10. Ski intermediate slopes under control and execute turns in good form.

11. Know how to get on and off a chairlift, T bar, or J bar correctly and demonstrate through experience, without endangering yourself or others, your ability to ride this equipment.
   a. Chairlift
   b. T bar
   c. J bar

Date completed ____________  Instructor’s Signature ____________________

Skiiing, Downhill
2002 Edition
Skin Diving

1. Have the Intermediate Swimming Honor.

2. Name three prerequisites for a person who wishes to engage in skin diving.
   1. __________________________________________
   2. __________________________________________
   3. __________________________________________

3. What equipment is essential for skin diving?
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

4. Know the effect of the following factors on skin diving:
   Types of beaches ____________________________
   ____________________________
   Surfs and currents __________________________
   ____________________________
   Marine life ____________________________

5. What are the rules of good sportsmanship in skin diving?
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
6. What safety precautions should be followed while skin diving?

_________________________________________________________

_________________________________________________________

_________________________________________________________

_________________________________________________________

7. Describe the skills involved in
   Communications _________________________________________

   Hyperventilation prevention ________________________________

   Mask clearing ____________________________________________

8. Demonstrate a practical test in waist-deep water and a qualifying dive in open water.
Springboard Diving

1. Have the Advanced Beginners Swimming Honor.

2. Demonstrate properly the following dives:* 
   a. Swan 
   b. Front somersault (tuck) 
   c. Half twist

3. Demonstrate properly two of the following dives:* 
   a. Half twist 
   b. Cutaway 
   c. Somersault front one and one-half 
   d. Back dive 
   e. Back jackknife 
   f. Half gainer (tuck, pike, or layout)

4. State the safety depths of water under:
   One-meter board ________________________________
   Three-meter board ______________________________
   Tower ________________________________
   How far should the board project over the pool?

   ________________________________

   What boards are recommended?

   ________________________________

Note: * Basis of Judging: Attention position for running dives; attention position on end of board for standing dives based on the following:
   a. Approach 
   b. Spring 
   c. Way body is carried through the air (layout, tuck, or pike) 
   d. Entry into water
<table>
<thead>
<tr>
<th>NAME</th>
<th>Attn Position</th>
<th>Approach</th>
<th>Spring</th>
<th>Entry into water</th>
<th>Attn Position</th>
<th>Approach</th>
<th>Spring</th>
<th>Entry into water</th>
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<tbody>
<tr>
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<td>Springboard Diving, Chart #1</td>
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<td>FRONT SOMERSAULT</td>
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Swimming—Beginner’s

Receive the American Red Cross Level III Stroke Readiness or YMCA certificate or equivalent in Swimming—Beginner’s OR pass the following requirements:

1. Breath Holding. Face fully submerged, breath to be held at least ten seconds.

2. Rhythmic Breathing. Alternately inhale through the mouth above the surface and exhale through the mouth and nose, with head completely submerged, ten times rhythmically and continuously.

3. Prone Float. In waist-deep water lie face down on the water and return to standing position without assistance or support.

4. Prone Glide. Push off face down in waist-deep water, take a prone position, glide a distance of at least two body lengths, and recover to a standing position.

5. Supine Float. Assume a supine floating position face up in waist-deep water, hold the position with the face above water for at least ten seconds, and return to a standing position unaided.

6. Supine Glide. From a position in waist-deep water, with arms at sides, sit back, push off, glide a distance of at least one body length, and resume standing position in a confident and easy manner.

7. Kick Glide on the Front. In waist-deep water push off in prone gliding position, pick up the beginner's leg stroke in a smooth and unhurried manner, and kick a distance of three body lengths before resuming standing position.

8. Kick Glide on the Back. In waist-deep water take a supine gliding position, using the beginner's leg stroke while supine for a distance of three body lengths, and recover to standing position with ease.

9. Arm Stroke. (Human Stroke or Dog Paddle) In waist-deep water assume a prone position with face buried and, with legs trailing or kicking gently, do the arm stroke in series, pull and recover the arms, and make progress thereby.

10. Arm Stroke Supine. In waist-deep water start back glide, then propel self using "fin" method.

11. Combine Stroke on the Front. In water of standing depth swim a coordinated beginner's stroke continuously for a distance of 20 to 25 yards (18.3 to 22.9 meters).
12. Combine Stroke on the Back. In water of standing depth swim a minimum distance of ten yards comfortably and somewhat easily using finning and the beginner's flutter kick in combination.

13. Change of Direction. In water of standing depth start swimming the beginner's stroke prone and, in stroke, make an abrupt right angle turn. Repeat the test, making a turn to the left. Finally, demonstrate ability to make a complete turn.

14. Turning Over. Start swimming prone in water chest deep. From the front swimming position, roll onto the back and remain there floating motionless or resting in a floating position, then resume swimming position and continue swimming.

15. Leveling Off. Wade to position in neck-deep water, then turn and face the shallow water. With a minimum of push-off from the bottom, swim to waist-deep water before standing.

16. Survival Float. Start in deep water over the head; assume the resting position with the body vertical in the water and the face also in the water; by motion of the arms and legs, raise the head out of the water; exhale and inhale and resume resting position.

17. Feet Foremost Jump Into Waist-deep Water. This test should finish with a glide, a kick glide, or the combined beginner's stroke prone.


19. Plain Front Header. This test should be done from a solid deck at a low elevation over water neck deep. Finish by emerging and swimming a little way along the surface.

20. Jump into deep water, level off, and swim 15 yards (13.7 meters). Without stopping or touching, turn about and swim back to the starting point.

21. Do a plain front header from a deck or dock, level off, and swim 15 yards (13.7 meters), turn about, and start swimming back. Halfway back, turn to the supine position and rest either motionless or with gentle paddling movements for 15 seconds. Turn back again to front swimming position and swim to starting point.

22. On land, demonstrate the proper way to put on a personal flotation device.

23. Show how to release a cramp from a survival float position in neck-deep water and progress to deep water.

24. From a deck or dock do an arm and leg extension rescue. Do an extension rescue using a pole, towel, or shirt.
25. Demonstrate artificial respiration.

26. Know the causes of and methods for the prevention of accidents that can occur in or near the water.

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<th>Causes</th>
<th>Prevention</th>
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Date completed ___________  Instructor’s Signature ____________________
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<tr>
<th>Artifical Respiration</th>
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<tbody>
<tr>
<td>Extension rescue</td>
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<tr>
<td>Release a cramp</td>
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<tr>
<td>Pull on float device</td>
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<tr>
<td>Supine swim</td>
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<tr>
<td>Swim, swim back</td>
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<tr>
<td>Jump, swim, swim</td>
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<tr>
<td>Plain front header</td>
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<tr>
<td>Jump, level swim</td>
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<tr>
<td>Feet foremost jump</td>
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<tr>
<td>Survival float</td>
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<tr>
<td>Leveling off</td>
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<tr>
<td>Turning over</td>
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<tr>
<td>Change of direction</td>
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<tr>
<td>Combine stroke – back</td>
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<tr>
<td>Combine stroke – front</td>
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<tr>
<td>Arm stroke supine</td>
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<tr>
<td>Arm stroke</td>
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<tr>
<td>Kick glide – back</td>
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<tr>
<td>Kick glide – front</td>
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<tr>
<td>Supine glide</td>
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<tr>
<td>Supine float</td>
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<td>Prone glide</td>
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<tr>
<td>Prone float</td>
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<tr>
<td>Artificial Breathing</td>
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<tr>
<td>Breath holding</td>
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</table>
Swimming—Beginner’s Advanced

Receive the American Red Cross Level IV Stroke Development or YMCA certificate or equivalent in Swimming – Beginner’s Advanced OR pass the following requirements:

☐ 1. Bobbing. Practice bobbing in neck-deep water prior to going into deep water. Demonstrate bobbing in deep water with a definite rhythm, inhaling when the mouth clears the water and exhaling as the head goes below the water.

☐ 2. Breath Control. Stand in chest-deep water and demonstrate rhythmic breathing at the rate of 24 to 26 times in two minutes.

☐ 3. Swimming in Place. Remain afloat in a confined area (within an eight-foot circle) by using a modified human stroke for a period of one minute.

☐ 4. Changing Positions. Change from a prone swimming position to a vertical position and then to a supine position. Change from a supine to a vertical position, and then to a prone position.

☐ 5. Elementary Backstroke. Swim 25 yards (22.9 meters) using the elementary back stroke.


☐ 7. Survival Stroke. Swim 25 yards (22.9 meters) using the survival stroke.

☐ 8. Use of Personal Flotation Device. Jump into water from a deck or dock while wearing a personal flotation device. Show how to be comfortable while in the prone, vertical, and supine positions. Each position should be held for at least one minute. Use a seat cushion to support the body correctly in the water.*

☐ 9. Survival Float. In deep water over the head, do a survival float for two minutes.

☐ 10. Know how to release a cramp while in deep water.

☐ 11. Rescue Technique. Demonstrate a rescue involving the use of a reaching pole and one involving the use of an article of clothing.

_________________________________________________________
_________________________________________________________
12. Combined Test. Dive into deep water from a deck or dock, swim a minimum of three body lengths below the surface, come to the surface, and stay afloat in a confined 20 yards (18.3 meters) using either the elementary backstroke or crawl stroke.

13. Know the causes of and methods for the prevention of accidents that can occur in or near the water.

<table>
<thead>
<tr>
<th>Accidents</th>
<th>Causes</th>
<th>Prevention</th>
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14. Demonstrate artificial respiration.

* Note: Any Coast Guard-approved personal flotation device may be used.

Note: All participants must wear life jackets.
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<tr>
<td>Artificial Respiration</td>
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<tr>
<td>Prevent accidents</td>
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<tr>
<td>Combined test</td>
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<tr>
<td>Rescue technique</td>
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<tr>
<td>Release a cramp</td>
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<tr>
<td>Survival Stroke</td>
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<tr>
<td>Personal float device</td>
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<tr>
<td>Survival Stroke</td>
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<tr>
<td>Crawl stroke</td>
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<tr>
<td>Elementary backstroke</td>
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<tr>
<td>Changing positions</td>
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<tr>
<td>Swimming in place</td>
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<tr>
<td>Breath Control</td>
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<tr>
<td>Bobbing</td>
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**NAME**
Swimming, Intermediate

Receive the American Red Cross - Level V Stroke Refinement or YMCA certificate or equivalent in Intermediate Swimming OR pass the following requirements:

- 1. Using a kick board for arm support, swim 20 yards (18.3 meters) employing a scissors stroke of the legs, 20 yards (18.3 meters) using a flutter kick, and 20 yards (18.3 meters) using the breaststroke kick. The three leg strokes do not have to be performed consecutively.

- 2. Using some form of leg support or trailing the legs with minimum motion, swim ten yards employing the side stroke of the arms, ten yards using the crawl stroke, and ten yards using the breaststroke arm pull. The arm strokes do not have to be performed consecutively.

- 3. Swim 50 yards (45.7 meters) continuously using the elementary back stroke.

- 4. Swim 100 yards (91.4 meters) continuously on the front or the side using a fully-coordinated style of swimming.

- 5. Demonstrate correctly a simple turn for swimming on front or side in a closed course.

- 6. Float motionless or rest in a supine-floating position with minimum hand and foot movement in deep water for at least three minutes.

- 7. By sculling with the hands only, move backward through the water on the back for a minimum distance of ten yards.

- 8. Tread water using auxiliary arm movements continuously for one minute.

- 9. Duck beneath the surface of the water and swim at least two body lengths under the water.

- 10. Do a fully-coordinated standing front dive into deep water in reasonably good form.

- 11. Do a running jump from a low elevation into deep water, level off, and swim.

- 12. Put on a personal flotation device in deep water.
13. Demonstrate the following rescue techniques:
   a. Wading rescue using extensions
   b. Use of heaving line
   c. Swimming rescue using swim board or ring buoy
   d. One method of artificial respiration

14. Swim continuously for five minutes. All styles mastered on the front, the side, and the back may be used.

15. Know the causes and prevention of accidents that can occur in or near the water.

<table>
<thead>
<tr>
<th>Causes</th>
<th>Prevention</th>
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Date completed _____________  Instructor’s Signature ____________________
<table>
<thead>
<tr>
<th>Rescue Techniques</th>
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<tbody>
<tr>
<td>Kick gills,外贸</td>
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<tr>
<td>Kick: Scissors, Filler</td>
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<tr>
<td>Breaststroke</td>
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<tr>
<td>Elementary back stroke</td>
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<tr>
<td>100 yards, Con. Crawl</td>
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<td>In deep water</td>
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<tr>
<td>Personal float device on back</td>
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<tr>
<td>Jump, level off' swim</td>
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<tr>
<td>Standing front dive</td>
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<tr>
<td>Swim under water</td>
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<td>Tread water—1 minute</td>
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<tr>
<td>Backward thru water on back</td>
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<td>Float motionless—3 minutes</td>
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<td>Swim 5 minutes</td>
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<td>Swim, 5 minutes</td>
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<td>Artistic respiration</td>
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<td>Swimming rescue</td>
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<td>Heaving line</td>
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<td>Wading rescue</td>
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**NAME**
Swimming

Receive the American Red Cross Level VI Skill Proficiency or YMCA certificate or equivalent in Swimming OR pass the following requirements:

1. Swim continuously in a coordinated and effective manner the following strokes and distances:
   a. Breaststroke for 50 yards (45.7 meters)
   b. Sidestroke for 100 yards (91.4 meters)
   c. Back crawl for 50 yards (45.7 meters)
   d. Crawl for 100 yards (91.4 meters)

2. Swim 25 yards (22.9 meters) continuously on the back, legs alone, using either the inverted breaststroke kick or the inverted scissors kick.

3. Demonstrate an effective turn in a closed course on the following:
   a. Front
   b. Side
   c. Back

4. Surface dive in good form to a depth of 8 feet (2.4 meters) and swim a minimum distance of 20 feet (6.1 meters) under water.

5. In good form, do a pike and tuck surface dive.

6. In good form, do a shallow plunge dive (racing start) and continue in stroke.

7. In good form, do a running front dive off both feet from a deck and from a springboard.

8. Demonstrate sidestroke turn.


10. Demonstrate flip turn for front crawl.

11. Demonstrate pike surface dive.

12. Demonstrate tuck surface dive.

13. Tread water for three minutes (one minute with no hands.)

14. Demonstrate throwing rescue.

15. Demonstrate rolling spinal injury victim to face up.

Date completed ____________  Instructor’s Signature ____________________

Recreation
General Conference
2002 Edition
<table>
<thead>
<tr>
<th>Demonstrate</th>
<th>Name</th>
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<td>Swimming Reentry</td>
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</table>
Swimming, Advanced

Receive the American Red Cross Level VII Advanced Skills or YMCA certificate or equivalent in Advanced Swimming OR pass the following requirements:

☐ 1. Swim a coordinated and effective stroke continuously for the following strokes and distances:
   a. Elementary backstroke for 50 yards (45.7 meters)
   b. Breaststroke for 100 yards (91.4 meters)
   c. Inverted breaststroke for 50 yards (45.7 meters)
   d. Sidestroke for 100 yards (91.4 meters)
   e. Overarm sidestroke for 100 yards (91.4 meters)
   f. Tudgen stroke for 50 yards (45.7 meters)
   g. Back crawl for 100 yards (91.4 meters)
   h. Crawl for 100 yards (91.4 meters)

☐ 2. Do the following dives in good form:
   a. Standing front dive
   b. Running front dive
   c. Pike surface dive
   d. Tuck surface dive

☐ 3. Do a survival float for ten minutes while fully clothed.

☐ 4. Do a survival stroke for ten minutes while fully clothed.

☐ 5. Do a surface dive and swim underwater for ten yards.

☐ 6. Swim continuously for 30 minutes using one or more styles of swimming. Hanging onto the sides (resting) or touching the bottom with the feet is not permitted.

☐ 7. Know the causes and prevention of accidents that can occur in or near the water.

Date completed ____________  Instructor’s Signature ____________________

Recreation
General Conference
2002 Edition
### Swimming, Advanced Instructor’s Chart

<table>
<thead>
<tr>
<th>NAME</th>
<th>Elem Backstroke—50 yards</th>
<th>Breaststroke—100 yards</th>
<th>Inv Breaststroke—50 yards</th>
<th>Sidestroke—100 yards</th>
<th>Overarm sidestroke—100 yards</th>
<th>Tudgen Stroke—50 yards</th>
<th>Back crawl—100 yards</th>
<th>Crawl—100 yards</th>
<th>Standing front dive</th>
<th>Running front dive</th>
<th>Pike surface dive</th>
<th>Tuck surface dive</th>
<th>Survival Stroke—Clothed</th>
<th>Survival dive—swm under water</th>
<th>Swim cont. for 30 minutes</th>
</tr>
</thead>
</table>
1. Know the basic rules, safety considerations, and warm-up exercises for the six track and field events listed below.

Rules _____________________________________________________
_________________________________________________________
_________________________________________________________

Safety considerations ________________________________________
_________________________________________________________
_________________________________________________________

Warm-up exercises ___________________________________________
_________________________________________________________
_________________________________________________________

2. Run the 50-yard (45.7 meters) dash in the time (seconds) for your sex and age as follows:

<table>
<thead>
<tr>
<th>Age</th>
<th>Sec.</th>
<th>Age</th>
<th>Sec.</th>
<th>Age</th>
<th>Sec.</th>
<th>Age</th>
<th>Sec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>8.2</td>
<td>14</td>
<td>7.1</td>
<td>10</td>
<td>8.5</td>
<td>14</td>
<td>8.0</td>
</tr>
<tr>
<td>11</td>
<td>8.0</td>
<td>15</td>
<td>6.9</td>
<td>11</td>
<td>8.4</td>
<td>15</td>
<td>8.1</td>
</tr>
<tr>
<td>12</td>
<td>7.8</td>
<td>16</td>
<td>6.7</td>
<td>12</td>
<td>8.2</td>
<td>16</td>
<td>8.3</td>
</tr>
<tr>
<td>13</td>
<td>7.5</td>
<td></td>
<td></td>
<td>13</td>
<td>8.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Your Time _________________________________________________

3. In sprinting, which part of the foot should touch first during the stride?

What are the proper arm and head positions?

_________________________________________________________
_________________________________________________________
4. Run the 600-yard (548.6 meters) run-walk in the time (minutes/seconds) for your sex and age as follows:

<table>
<thead>
<tr>
<th>Age</th>
<th>BOYS Min/Sec</th>
<th>GIRLS Min/Sec</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>2' 33&quot;</td>
<td>2' 48&quot;</td>
</tr>
<tr>
<td>11</td>
<td>2' 27&quot;</td>
<td>1' 54&quot;</td>
</tr>
<tr>
<td>12</td>
<td>2' 21&quot;</td>
<td>1' 51&quot;</td>
</tr>
<tr>
<td>13</td>
<td>2' 10&quot;</td>
<td>1' 52&quot;</td>
</tr>
</tbody>
</table>

Your Time ________________________________

5. Answer the following questions about distance running:

Find two Bible stories that mention distance runners?

1. __________________________________________
2. __________________________________________

What are the proper clothes, including shoes, for distance running in your area?

________________________________________
________________________________________

How long is the average track? __________________________

How far is a marathon race? ____________________________

Which part of the foot should touch first during the stride?

________________________________________

What are the proper arm and head positions while distance running?

________________________________________

What is the proper way to breathe?

________________________________________

How does cross-country running differ from running on a track?

________________________________________

Track and Field
2002 Edition
6. Run one of the following events at least twice and record the best time:
   a. 50-yard (45.7 meters) dash with four hurdles.
      Your best time ____________________________
   b. 70-yard (64.0 meters) dash with six hurdles.
      Your best time ____________________________
7. Do the high jump with good form at least five times and record the highest jump.
      Your highest jump ____________________________
8. Do a running broad jump three times and record the best length.
      Your best length ____________________________
9. Run the following relays:
   a. Visual pass relay
   b. Blind pass relay
<table>
<thead>
<tr>
<th>Record Time</th>
<th>Visual pass relay</th>
<th>Blind pass relay</th>
<th>50-yard or 70-yard dash</th>
<th>Boy/Girl</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run 50-yard dash</td>
<td>Record best length</td>
<td>Record highest jump</td>
<td>Best time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Run 600-yard run-walk</td>
<td></td>
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</tr>
</tbody>
</table>
Tumbling and Balancing

(Instructor Required)

1. List safety precautions each performer and spotter should follow.

   __________________________________________________________

   __________________________________________________________

   __________________________________________________________

   __________________________________________________________

2. Describe the basic positions:

   Tuck ______________________________________________________

   Pike ______________________________________________________

   Lay-out ____________________________________________________

   Hyper-extension (arch) _____________________________________

   Squat _____________________________________________________

   Straddle ___________________________________________________

   Standing position (extension) ________________________________

3. Perform the following individual stunts with form and poise:

   a. Tuck forward roll from squat
   b. Pike forward roll from standing position
   c. Dive roll (length equal to one's height)
   d. Tuck backward roll from squat
   e. Backward roll from standing position
   f. Straddle legged backward roll from extension
   g. Swedish fall
   h. Frogstand (knee-elbow stand)
   i. Headstand from frogstand
   j. Headstand
   k. Handstand
   l. Cartwheel
4. Perform with form and poise any six of the following stunts with a partner:
   a. Chest stand
   b. Thigh stand
   c. Knee-shoulder balance
   d. Front angel balance
   e. Shoulder stand
   f. Low knee support
   g. Thigh balance
   h. Front angel straddling waist
<table>
<thead>
<tr>
<th>Name</th>
<th>Straddle legged backward roll</th>
<th>Swedish fall</th>
<th>Frogstand</th>
<th>Handstand</th>
<th>Headstand</th>
<th>Headstand from frogstand</th>
<th>Frogstand</th>
<th>Swedish fall</th>
<th>Stretched legged backward roll</th>
<th>Backward roll</th>
<th>Tuck backward roll</th>
<th>Dive roll</th>
<th>Pike forward roll</th>
<th>Pike forward roll</th>
<th>Roll b from squat</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERFORM WITH PARTNER</td>
<td>T Tigh balance</td>
<td>Low knee support</td>
<td>Shoulder stand</td>
<td>Front angle balance</td>
<td>Knee-shoulder balance</td>
<td>T Tigh stand</td>
<td>T Tigh stand</td>
<td>Chest stand</td>
<td>Cartwheel</td>
<td>Handstand</td>
<td>Headstand</td>
<td>Frogstand</td>
<td>Swedish fall</td>
<td>Stretched legged backward roll</td>
<td>Backward roll</td>
</tr>
</tbody>
</table>
Tumbling and Balancing, Advanced

(Instructor Required)

1. Have the Tumbling and Balancing honor.

2. Perform the following individual tumbling stunts with form and poise:
   a. Kip
   b. One-handed Cartwheel (both ways)
   c. Front handspring
   d. Back handspring
   e. Round off (must execute step in the approach)

3. Perform any four of the following individual tumbling stunts with form and poise:
   a. Front somersault (sometimes called air spring or front flip)
   b. Headspring
   c. One-handed handspring
   d. Aerial cartwheel
   e. Tinserca
   f. Front walkover
   g. Back walkover
   h. Aerial walkover
   i. Baroni
   j. Neckspring
   k. Butterfly

4. Perform any three of the following balances with form and poise:
   a. Press to handstand from headstand or frogstand.
   b. One-handed handstand; alternate for girls: back walkover to headstand
   c. Pirouette
   d. Straight-armed planche (two arm); alternate for girls: control straddle down from handstand.
   e. Bent arm planche (one arm); alternate for girls: three-second handstand and controlled roll out.
   f. Yogi handstand
   g. Straight arm-straight leg press to handstand; alternate for girls: straight arm-straddle leg press to handstand.
5. Perform any three of the following partner stunts and balances with form and poise:
   a. Toe pitch (back flip)
   b. Low arm to arm
   c. High arm to arm
   d. Low hand to hand
   e. High hand to hand
   f. Front angel balance on hands

6. Perform any one of the following combination stunts with form and poise:
   a. Round off/back handspring/backward somersault
   b. Round off/two back handsprings
   c. Borani/back handspring
   d. Round off/backward somersault/back handspring
   e. Tinserca/front somersault
   f. Backward somersault/back handspring

Date completed ____________ Instructor’s Signature ____________________
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<tr>
<th>NAME</th>
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Tumbling and Balancing, Advanced Instructor’s Chart

<table>
<thead>
<tr>
<th>Perform</th>
<th>Identify by Letter</th>
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<thead>
<tr>
<th>COMPLETED</th>
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<tbody>
<tr>
<td>Perform</td>
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<tr>
<td>Combo</td>
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<tr>
<td>Name</td>
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<table>
<thead>
<tr>
<th>COMPLETED</th>
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<tbody>
<tr>
<td>Perform</td>
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<tr>
<td>Front</td>
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<td>Back</td>
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<td>Cartwheel</td>
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<thead>
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<th>COMPLETED</th>
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<tbody>
<tr>
<td>Perform</td>
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<tr>
<td>3 Balanced</td>
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<tbody>
<tr>
<td>Perform</td>
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<tr>
<td>4 Individual Tumbling Stunts</td>
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</thead>
<tbody>
<tr>
<td>Perform</td>
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<tr>
<td>Round Off</td>
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<thead>
<tr>
<th>COMPLETED</th>
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<tbody>
<tr>
<td>Perform</td>
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Pathfinder’s Name

Water Skiing

1. Have the Intermediate Swimming Honor.

2. Know and practice the following safety rules:
   a. Never ski at night.
   b. Never ski during an electrical storm.
   c. Always wear a ski vest while skiing.
   d. Check to be sure the vest buckle is securely locked.
   e. Make sure the ski rope is in good condition.
   f. Make sure the ski bindings are in good condition.
   g. Have a spotter or a mirror in the ski boat.
   h. Stay clear of objects, such as other skiers, swimmers, docks, or floating objects.
   i. If a fall occurs, let go of the rope.
   j. After a fall, raise a hand to indicate you are all right.
   k. Do not stand in the ski boat while it is moving.

3. Know the following hand signals:
   a. Slower
   b. Speed okay
   c. Faster
   d. Back to dock
   e. Stop
   f. Turn

4. Put on skis in deep water. Execute a deep water start on two skis with a full-line rope.

5. Successfully cross both wakes.

6. Identify the following:
   a. Double ski
   b. Slalom ski
   c. Trick ski
   d. Kneeboard
<table>
<thead>
<tr>
<th>KNOW AND PRACTICE</th>
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</thead>
<tbody>
<tr>
<td>Cross both wakes</td>
<td></td>
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<tr>
<td>Put on skis in deep water</td>
<td></td>
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<tr>
<td>Identifies skis</td>
<td></td>
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<tr>
<td>Knows hand signals</td>
<td></td>
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<tr>
<td>No standing in moving boat</td>
<td></td>
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<tr>
<td>After fall—Raised hand</td>
<td></td>
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<tr>
<td>Fall—Let go of rope</td>
<td></td>
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<tr>
<td>Stay clear of objects</td>
<td></td>
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<tr>
<td>Spotter or mirror</td>
<td></td>
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<tr>
<td>Ski bindings good condition</td>
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<tr>
<td>Ski rope good condition</td>
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<tr>
<td>Vest buckle locked</td>
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<tr>
<td>Wear ski vest</td>
<td></td>
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<tr>
<td>Never ski when electric storm</td>
<td></td>
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<tr>
<td>Never ski at night</td>
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<tr>
<td>Wears life jacket</td>
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<thead>
<tr>
<th>NAME</th>
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</table>
Water Skiing, Advanced

1. Have the Water Skiing Honor.
2. Always wear a ski vest while skiing.
3. Successfully slalom ski, starting from deep water on a full line rope.
4. Cross both wakes on a slalom ski.
5. Make a full 360-degree turn around on one of the following:
   a. Kneeboard
   b. Trick skis
   c. Wakeboard

Date completed ____________  Instructor’s Signature ____________________
# Water Skiing, Advanced Instructor’s Chart

<table>
<thead>
<tr>
<th>NAME</th>
<th>DEMONSTRATE</th>
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<tbody>
<tr>
<td></td>
<td>Wears life jacket</td>
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</tbody>
</table>
1. Have the following honors:
   a. Backpacking
   b. Camping Skills I-IV
   c. Fire Building and Camp Cookery
   d. First Aid
   e. Hiking
   f. Orienteering

2. Know and practice the principles of health, safety, and rules of conduct to be used when in the wilderness with a youth group.

   Principles of health
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   Safety
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   Rules of conduct
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

3. Know and demonstrate the principles of signaling and rescue.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

4. Assist in planning and participate with a group in a mock demonstration of what to do if lost, stranded, or injured in the wilderness.

   Date completed
   __________________________________________________________

   Assist in planning and participate as a leader in a search and rescue operation involving a hidden "injured" person.

   Date completed
   __________________________________________________________

5. Demonstrate some skills necessary for wilderness leadership in one of
the following areas:

a. Tropical  
b. Desert  
c. Swamp  
d. Mountain (rocks, ice, high altitude)  
e. Temperate forest  
f. Plain and tundra

Area chosen ________________________________________________

Skills demonstrated ___________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

6. Understand and demonstrate wilderness and camping etiquette regarding the preservation of the outdoors.

__________________________________________________________

__________________________________________________________

__________________________________________________________

7. Identify in the wild, prepare, and eat ten varieties of wild plants.

1. _________________________________________________________

2. _________________________________________________________

3. _________________________________________________________

4. _________________________________________________________

5. _________________________________________________________

6. _________________________________________________________

7. _________________________________________________________

8. _________________________________________________________

9. _________________________________________________________

10. _______________________________________________________
8. Learn some of the wilderness leadership qualities of two of the following:
   a. Moses
   b. David
   c. Elijah
   d. Joshua
   e. John the Baptist

   1. __________________________________________________________
      Qualities ____________________________________________________
      __________________________________________________________

   2. __________________________________________________________
      Qualities ____________________________________________________
      __________________________________________________________

9. Lead a group in a weekend wilderness camping experience, applying the
   principles and skills learned in this honor.

   Date completed _______________________________________________
Wilderness Leadership, Advanced

1. Have the following honors:
   a. Edible Wild Plants
   b. Outdoor Leadership
   c. Wilderness Leadership
   d. Wilderness Living

2. Know and practice the principles of camouflage and tracking.

3. What physical and mental preparations are necessary before a wilderness experience?
   Physical
   
   
   
   
   
   Mental
   
   
   
   

4. Demonstrate some skills necessary for wilderness leadership in two of the following areas not completed for the Wilderness Leadership Honor:
   a. Desert
   b. Mountain (rocks, ice, high altitude)
   c. Plain and tundra
   d. Swamp
   e. Temperate forest
   f. Tropical

   Areas chosen
   1. 
   2. 

Pathfinder’s Name
5. Demonstrate the construction and operation of two types of snares or traps.

1. __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. __________________________________________________________
   __________________________________________________________
   __________________________________________________________

6. Know the points of consideration in the following types of travel:
   Glacial ___________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   Mountain __________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   Snow _____________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   Water _____________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

7. Understand the principles of developing a faith in divine leadership as outlined in Psalms 91.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

8. Understand what steps should be taken for the survival of the wilderness.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

9. Assist in instructing one honor listed in requirement 1 of the Wilderness Leadership Honor.

   Date completed ____________________________________________
10. Build a shelter from non-living but natural materials (such as a debris hut).

Materials used ______________________________________________

11. Plan and participate in a week's wilderness camping experience, applying the principles and skills learned in this honor.

Date completed ______________________________________________
Wilderness Living

☐ 1. Go on at least two weekend campouts during which you learn the skills called for in this honor.

Campout dates 1. ____________________________________________
2. ____________________________________________

☐ 2. Tell five things to do if lost in the wilderness. Know three methods of determining directions without a compass.

Things to do if lost
1. ____________________________________________
2. ____________________________________________
3. ____________________________________________
4. ____________________________________________
5. ____________________________________________

Methods of determining direction
1. ____________________________________________
2. ____________________________________________
3. ____________________________________________

☐ 3. Demonstrate three ways to purify drinking water.

1. ____________________________________________
2. ____________________________________________
3. ____________________________________________

☐ 4. Know three ways to collect drinking water in the wilderness and demonstrate two of these methods.

1. ____________________________________________
2. ____________________________________________
3. ____________________________________________
5. Demonstrate two methods of judging the height of a tree and the width of a stream.

Tree height 1. ____________________________________________
2. ____________________________________________

Stream width 1. ____________________________________________
2. ____________________________________________

6. Identify four wild animal or bird tracks.

1. _________________________________________________________
2. _________________________________________________________
3. _________________________________________________________
4. _________________________________________________________

7. Using a compass, follow a course for more than 100 yards (91.4 meters) with three different headings and less than 5% error.

8. Identify in the wild, prepare, and eat ten varieties of wild plants.

1. _________________________________________________________
2. _________________________________________________________
3. _________________________________________________________
4. _________________________________________________________
5. _________________________________________________________
6. _________________________________________________________
7. _________________________________________________________
8. _________________________________________________________
9. _________________________________________________________
10. _______________________________________________________ 

9. Have a personal survival kit of 15 items and know how to use each item.

<table>
<thead>
<tr>
<th>Item</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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<tr>
<td>4.</td>
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</tbody>
</table>
5. __________________________ ___________________________
6. __________________________ ___________________________
7. __________________________ ___________________________
8. __________________________ ___________________________
9. __________________________ ___________________________
10. __________________________ ___________________________
11. __________________________ ___________________________
12. __________________________ ___________________________
13. __________________________ ___________________________
14. __________________________ ___________________________
15. __________________________ ___________________________

10. Explain the necessity in wilderness living of adequate sleep, proper diet, personal hygiene, and proper exercise.

Adequate sleep ________________________________________________
_______________________________________________________________

Proper diet _________________________________________________
_______________________________________________________________

Personal Hygiene ____________________________________________
_______________________________________________________________

Proper exercise _____________________________________________
_______________________________________________________________

11. Have the First Aid honor. In addition to the First Aid honor, know the prevention, symptoms, and the first aid treatment for the following:

(Complete Chart #1)

a. Hypothermia  
   e. Poison ivy and poison oak
b. Venomous snake bite  
   f. Open wound infection
c. Heat and sunstroke  
   g. Altitude sickness
d. Heat exhaustion  
   h. Dehydration

12. Demonstrate two ways to signal for help.

1. _________________________________________________________
2. _________________________________________________________
13. Demonstrate the principles of stalking and concealment.

_________________________________________________________
_________________________________________________________
_________________________________________________________

14. Explain how to prepare and provide shelter on the following:
Snow slopes ________________________________________________
_________________________________________________________
Rocky areas ________________________________________________
_________________________________________________________
Swamps and marshes ________________________________________
_________________________________________________________
Forests and tundra ___________________________________________
_________________________________________________________

15. Prepare a balanced menu for two people for a weekend. Prepare these meals while on a campout over an open fire or a camp stove. (Complete Chart #2)

16. Know ways to observe wilderness etiquette and how you can contribute to wilderness conservation.

_________________________________________________________
_________________________________________________________
_________________________________________________________

17. Demonstrate how to tie the following knots and know their uses:
Bowline ___________________________________________________
Bowline on a bight ___________________________________________
Clove hitch _________________________________________________
Double fisherman's __________________________________________
Figure eight ________________________________________________
Prusik _____________________________________________________
Taut-line hitch ______________________________________________
Two half hitches _____________________________________________
Square ____________________________________________________
Wilderness Living, Chart #1

Know the prevention, symptoms of and the first aid for:

<table>
<thead>
<tr>
<th>Prevention</th>
<th>Symptoms of</th>
<th>First Aid</th>
</tr>
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<tbody>
<tr>
<td>Hypothermia</td>
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<tr>
<td>Venomous snake bite</td>
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<td>Heat and Sun stroke</td>
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<td>Heat exhaustion</td>
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<td>Poison Ivy and Poison Oak</td>
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<td>Open wound infection</td>
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<td>Altitude sickness</td>
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<tr>
<td>Dehydration</td>
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<tr>
<td></td>
<td>Breakfast</td>
<td>Lunch</td>
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<tr>
<td><strong>Day 1</strong></td>
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<tr>
<td><strong>Day 2</strong></td>
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</table>
Windsurfing

1. Have the Intermediate Swimming Honor.

2. Learn the meaning of the following terms:
   - Across the wind ________________________________
   - Backhand ________________________________
   - Basic starting position ________________________________
   - Beginner's checklist ________________________________
   - Board control ________________________________
   - Centerboard ________________________________
   - Center line ________________________________
   - Center plane ________________________________
   - Clew ________________________________
   - Forward ________________________________
   - Forward hand ________________________________
   - In ________________________________
   - Jibe ________________________________
   - Mast position ________________________________
   - Out ________________________________
   - Points of the clock ________________________________
   - Sail trim ________________________________
   - Self rescue ________________________________
   - Scissor technique ________________________________
   - Tack ________________________________
   - Uphaul ________________________________
   - Visual reference point ________________________________
3. Know the names of the board parts and demonstrate how to rig your own sail.

________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

4. Explain the basics of sailing theory.

________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

5. Define and demonstrate the basic starting position.

________________________________________________________

6. Define and demonstrate the four steps to tacking.
   1. ____________________________________________________
   2. ____________________________________________________
   3. ____________________________________________________
   4. ____________________________________________________

7. Define and demonstrate the four steps to jibing.
   1. ____________________________________________________
   2. ____________________________________________________
   3. ____________________________________________________
   4. ____________________________________________________

8. List the seven starting sequence steps used to start a sailboard moving through the water.
   1. ____________________________________________________
   2. ____________________________________________________
   3. ____________________________________________________
   4. ____________________________________________________
9. Answer the following questions about safety:

What safety equipment should be worn while wind surfing?

Why is it important to know the local weather forecast before going out on the water?

When first learning to windsurf, why is it important to be in an enclosed or protected area?

What are the hand signals for "Everything is okay" and "I need help"?

10. How should the sail and sailboard be cared for to keep them in good working order?

11. Successfully sail a sailboard to a visual point of reference and return to the starting position.
Winter Camping

1. Earn the Camp Craft Honor.

2. Make up a complete list of necessary camping equipment for winter conditions, such as possible sub-zero (-18° c) temperatures, storms, and snow. (Complete Chart #1)

3. Explain the principles of maintaining body warmth and dryness through the proper use of clothing and sleeping gear under all temperatures down to zero while traveling, resting, and sleeping.

   Traveling __________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   Resting ____________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   Sleeping ___________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

4. List and explain the characteristics of winter campsite selection.

   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

5. Describe, or show where possible, the preparation of a level tent site in snow and pitch a tent in winter conditions.

   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

6. Prepare a balanced three-day menu to be used in your winter camping experience. (Complete Chart #2)
7. Know how to get water from snow.

8. Know five safety rules of winter camping.
   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________
   4. _______________________________________________________
   5. _______________________________________________________

9. Explain the proper steps to take if stranded without equipment in winter conditions.
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

10. Show knowledge of and ability to prevent, recognize, and care for mild frostbite, hypothermia, mild snow blindness, and dehydration. 
     (Complete Chart #3)

11. Spend a total of six days and nights in cold weather camping.
    a. All nights should have temperature lows in the 40's (5⁰C).
    b. Two nights should have temperature lows below freezing (0⁰C).
    c. All nights should be spent in tents, tarps, or the open.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Temperatures</th>
<th>Night spent in</th>
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<tbody>
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</table>
### Winter Camping, Chart #1

List necessary camping equipment for winter conditions, such as possible subzero temperatures, storms and snow

<table>
<thead>
<tr>
<th>Subzero Temperatures</th>
<th>Storms</th>
<th>Snow</th>
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</table>
Winter Camping, Chart #2

Balanced three-day menu for winter camping

<table>
<thead>
<tr>
<th></th>
<th>Breakfast</th>
<th>Lunch</th>
<th>Supper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
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<td>Day 2</td>
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<td>Day 3</td>
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</table>
# Winter Camping, Chart #3

Know how to prevent, recognize and care for:

<table>
<thead>
<tr>
<th>Prevention</th>
<th>Recognition</th>
<th>Care for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild frostbite</td>
<td></td>
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<tr>
<td>Hypothermia</td>
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<td></td>
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<tr>
<td>Mild snow blindness</td>
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<tr>
<td>Dehydration</td>
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</tbody>
</table>
Vocational Index

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Bible Evangelism
Bookbinding
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Carpentry
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Communications, Advanced
Computer
Computer, Advanced
Electricity
House Painting - Exterior
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Masonry
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Plumbing
Printing
Radio
Radio, Advanced
Radio Electronics
Shoe Repair
Shorthand
Small Engines
Teaching
Typewriting
Upholstery
Video
Welding
Woodworking

North American Division
North American Division
South Pacific Div/Island Ed.

South Pacific Division
South Pacific Division
Complete a high school or college course in accounting or the following requirements:

1. Show transactions necessary for acquisition or deposit of assets, and acquisition and disposal of liability.
   Completion date ____________________________
   Show transactions necessary to close income and expense accounts at year end.
   Completion date ____________________________

2. Be able to correctly classify balance sheet items with short term asset, long term asset, contra asset, short term liability, long term liability, and equity.
   Completion date ____________________________

3. Be able to write an income statement from a trial balance.
   Completion date ____________________________

4. Be able to reconcile bank balance to book balance in checking accounts, including deposit in transit, service charge, returned NSF, interest on account, and checks in transit.
   Completion date ____________________________

Date completed ___________ Instructor’s Signature ____________________
Automobile Mechanics

1. Properly start an automobile or light truck engine with an automatic transmission and one with a standard transmission.

   Explain why it is necessary for the engine to have the proper oil, water, fuel, and battery pressures and levels for proper engine operation.

   Oil ____________________________
   Water __________________________
   Fuel ____________________________
   Battery Pressure __________________

2. Explain the principles of:

   Four-cycle engines ____________________________
   ____________________________
   ____________________________

   Two-cycle engines ____________________________
   ____________________________
   ____________________________

   Explain the difference between:

   Gasoline engines ____________________________
   ____________________________
   ____________________________

   Diesel engines ____________________________
   ____________________________
   ____________________________

   Explain the major differences between:

   Carburetor fuel systems ____________________________
   ____________________________
   ____________________________
3. Describe the construction of a typical gasoline engine

Explain briefly the function of these units:

- **Engine:**
  - Crankshaft
  - Connecting rods
  - Pistons
  - Camshaft
  - Valves
  - Oil pump
  - Carburetor
Fuel injectors

Ignition distributor

Fuel distributor

Electrical system including alternator

Battery

Regulator

Difference between:
Standard transmission

Automatic transmission

How the engine torque is transmitted to both kinds of transmissions:
Standard

Automatic

The purpose of overdrive
Difference between:
Rear wheel drive ____________________________________________
__________________________________________________________
__________________________________________________________
Front wheel drive ____________________________________________
__________________________________________________________
__________________________________________________________
Difference between:
Drum brakes ________________________________________________
__________________________________________________________
__________________________________________________________
Disk brakes _________________________________________________
__________________________________________________________
__________________________________________________________
Standard brakes _____________________________________________
__________________________________________________________
__________________________________________________________
Power brakes _______________________________________________
__________________________________________________________
__________________________________________________________
Parking brake _______________________________________________
__________________________________________________________

4. Perform typical automotive maintenance as listed below:
   a. Check engine and transmission oil levels.
   b. Check water/anti-freeze level. Change and flush the cooling system.
   c. Change engine oil and filter.
   d. Change a tire/wheel assembly, following proper safety procedure.
   e. Lubricate the chassis according to the vehicle service manual.

5. How often should the engine oil, transmission oil, and cooling fluid be changed?
   Engine Oil _________________________________________________
   Transmission Oil __________________________________________
   Cooling Fluid _____________________________________________
6. Give some pointers on proper care of the vehicle and its finish, both interior and exterior.

Interior

Exterior
Automobile Mechanics, Advanced

1. Have the Automobile Mechanics Honor

2. Disassemble, inspect, and reassemble an automobile or light truck engine. Replace any defective or worn parts. Rebuild, start, and operate the vehicle. Keep a complete log of events during the overhaul.

3. Remove and replace a standard or automatic transmission assembly.

4. Rebuild the brake assembly on an automobile or light truck, following proper safety procedures. Demonstrate proper brake bleeding and adjustment. Properly repack a wheel bearing.

5. Perform a minor tune-up, including the replacement of spark plugs and visually checking the electrical system.
Barbering/Hairstyling

1. Spend a minimum of five hours observing a licensed master barber/hair stylist while at work.

2. Name three essentials in the care of hair.
   1. __________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________

3. Demonstrate the ability to give a shampoo correctly.

4. Be able to explain and demonstrate at least two methods of cutting hair.
   1. __________________________________________________________
   2. _________________________________________________________

5. Explain and demonstrate the purpose of at least two different kinds of combs used in cutting hair.
   1. _________________________________________________________
   2. _________________________________________________________

6. Explain and demonstrate the purpose of two different kinds of scissors.
   1. _________________________________________________________
   2. _________________________________________________________

7. Explain and demonstrate at least two purposes for the use of a clipper.
   1. _________________________________________________________
   2. _________________________________________________________

8. Write 500 words on what you learned during your apprenticeship.
1. Be in at least the eighth grade.

2. Go on a visit with your pastor to a Bible study, a hospital visit, and a visit to a church member.
   Person(s) studies with ______________________________________
   Person(s) visited in hospital _________________________________
   Church member(s) visited ___________________________________

3. Arrange with your pastor to attend a church board meeting and a church business meeting. Make a written report of your visits to both meetings.
   Board Meeting date _________________________________
   Business Meeting date _________________________________

4. List the steps in church organization from the member to the General Conference and know their relationship to each other.

   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

5. Find out what your church spends money on and what percentage of the budget goes to what expenses.
   Total annual budget _________________________________
   Expense Report _______________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
6. Write a report of an interview with your pastor in which you asked him the following questions:
   a. What is your daily routine like?
   b. What is your weekly routine like?
   c. What education is required to become a minister?
   d. What education outside of theology would complement a minister?
   e. From what source is the pastor paid?
   f. What is the most rewarding part of your ministry?
   g. What is the hardest part of your ministry?
   h. What are beneficial vocations for a pastor's wife to have?
   i. How did you know that God called you to the ministry?
   j. How would I know if God were calling me to the ministry?
   k. How do you do soul winning?
   l. How does evangelism enter into your soul winning?
   m. What advice would you give to someone who was thinking about becoming a minister?

7. Do two of the following:
   a. Participate in the presentation of a youth evangelistic series.
      Date of meetings ________________________________
   b. Give two Bible studies.
      1. _______________________________________________
      2. _______________________________________________
   c. Make four hospital visits, presenting a devotional thought and prayer at each one.
      Persons visited and dates
      1. _______________________________________________
      2. _______________________________________________
      3. _______________________________________________
      4. _______________________________________________
   d. Give a sermon of at least 20 minutes in length.
      Subject ___________________________________________
      Date presented _____________________________________
e. Give two evening and two morning devotionals for a camp out.
   Camp out date ____________________________
   Subjects presented
   1. _______________________________________
   2. _______________________________________
   3. _______________________________________
   4. _______________________________________

f. Give devotional worships for five days at a school.
   School ____________________________
   Classroom ____________________________
   Date completed ____________________________

g. Earn the Pathfinder Evangelism Award.
   Date completed ____________________________

For your choice of the above, a thorough preparation is needed. Where applicable, outlines or memorized material should be used. A reading of the presentation is not permitted.

8. Through Bible and the writings of Ellen G. White study and learn how Jesus treated crowds of people in ministering to them.

   _______________________________________
   _______________________________________
   _______________________________________
   _______________________________________
   _______________________________________
   _______________________________________
   Sources _______________________________________
   _______________________________________
   _______________________________________
   _______________________________________

9. Show that you have a personal daily devotional life for at least six months.
   Date completed ____________________________
1. Be able to identify the following terms:

- Foredge
- Gutter
- Endsheet
- Flysheet
- Signature
- Mull
- Backbone
- Head
- Foot
- Deckle edge
- Guarding sheets
- Casing-in
2. Describe the difference between the following binding methods:
   Perfect binding ______________________________________________
   Hard bound ________________________________________________
   Single signature _____________________________________________
   Spiral (metal and plastic) ____________________________________
   Saddle stitch ______________________________________________

3. Perform the following:
   a. Bind a single signature hand binding "manuscript".
   b. Bind a blank book using at least four signatures and a permanent cloth hard board binding, using a "case" method.
   c. The proper way to "break in" a new binding.
   d. Make a "slip case" for your blank book of at least four signatures.

4. Identify and describe the uses for the following binder's tools:
   Bone folder _________________________________________________
   Kick press ________________________________________________
   Folding needle _____________________________________________
   Awls _____________________________________________________
   Sewing frame ______________________________________________
   Squared card ______________________________________________
5. Define the difference of paper weight in relationship to a ream of paper.

6. Describe the color and properties of three types of adhesives used in the binding process and where they are used:
   - Hot melt animal glue
   - Casing-in paste
   - Resin Glues

7. Know and list the five principal stages of hand binding
   - Preparing the signatures
   - Sewing up the signatures
   - Gluing up the back
   - Attaching the boards (covers)
   - Finishing
1. What is the difference between bookkeeping and accounting?
   Bookkeeping ________________________________________________
   __________________________________________________________
   Accounting ________________________________________________
   __________________________________________________________

2. Define the following terms:
   Asset _____________________________________________________
   __________________________________________________________
   Liability _________________________________________________
   __________________________________________________________
   Credit ____________________________________________________
   __________________________________________________________
   Debit _____________________________________________________
   __________________________________________________________
   Posting __________________________________________________
   __________________________________________________________
   Trial balance _____________________________________________
   __________________________________________________________
   Voucher __________________________________________________
   __________________________________________________________
   Invoice __________________________________________________
   __________________________________________________________
   Interest __________________________________________________
3. What is the difference between double-entry bookkeeping and single-entry bookkeeping?
   Double Entry ______________________________________________________________
   ______________________________________________________________
   Single Entry ______________________________________________________________
   ______________________________________________________________

4. What education is necessary to be a bookkeeper?
   ______________________________________________________________
   What other education is helpful to a bookkeeping career?
   ______________________________________________________________

5. What are some career fields that are related to bookkeeping?
   ______________________________________________________________
   ______________________________________________________________

6. Conduct an interview with your church treasurer, asking the following questions:
   a. How much time do you spend each week at your job as church treasurer?
   ______________________________________________________________
   ______________________________________________________________
   b. What do you do with the money collected in the offering plates?
   ______________________________________________________________
   ______________________________________________________________
   c. How do you keep track of who contributed how much money?
   ______________________________________________________________
   ______________________________________________________________
   d. What money is sent to the conference?
   ______________________________________________________________
   ______________________________________________________________
   e. What money is kept in our local church?
   ______________________________________________________________
f. Are your records ever reviewed by an accountant?

________________________________________________________________________

________________________________________________________________________

How often?

________________________________________________________________________

g. How do you report the church finances to the church board?

________________________________________________________________________

h. How do you report the church finances to the conference?

________________________________________________________________________
Carpentry

1. Describe the function of the following tools:
   a. Band saw __________________________________________________
   b. Belt sander _________________________________________________
   c. Jig saw ____________________________________________________
   d. Miter saw __________________________________________________
   e. Radial arm saw _____________________________________________
   f. Router ____________________________________________________
   g. Shaper ____________________________________________________
   h. Wood lathe _________________________________________________

2. Demonstrate how to use the following tools:
   a. Block plane
   b. Circular saw (cut a straight line)
   c. Framing square
   d. Hammer
   e. Hand saw (cut a straight line)
   f. Level
   g. Measuring Tape
   h. Nail set
   i. Plumb bob
   j. Wood chisel
3. Describe the use of and distinguish between the following types of nails:
   - 20 penny
   - 16 penny
   - 12 penny
   - 8 penny
   - 6 penny
   - Finish
   - Brad
   - Roofing
   - Screw nail
   - Sinker
   - Common
e
   - Galvanized

4. Assist in erecting a frame building not less than 6 x 8 feet (1.8 meters x 2.4 meters) in ground dimensions, with a gable roof, and with at least one door and one window, demonstrating ability to measure and use of tools from requirement 2.
   Completion date

5. When building the above project, use all of these features:
   - Floor joist
   - Sub floor
   - Shoe plate
   - Top plate
   - Double plate
   - Conventional roof or trusses
   - Felt roof
   - Shingles
   - Window with weight-bearing header
   - Door with weight-bearing header
   - Fascia on eaves
   - Siding

Note: Participants must be 16 years and older to use power tools.
Christian Sales Principles

1. Explain the responsibilities of a Christian salesperson as related to how they treat their customers and boss.

2. List the points in the steps of a sale.

3. Give a statement on how to meet objections.

4. How are the following points valuable to a salesperson?
   - Researching the market to see how an item or service will sell
   - Proper training and knowledge about the item or service to be sold
   - A visit to the plant or home office that produces the item or service
Follow-up visits with first-time customers

5. Using actual or hypothetical education and experience, write a resume which could be used in applying for a job.

6. Find out what education is most beneficial for a career in sales.

What aspects of sales are available to a Christian salesperson?

7. Do one of the following:
   a. Help raise funds through sales of either services, merchandise, or tickets to a Pathfinder, AY Society, or school activity accounting for more than your proportionate share of the sales.
   b. Earn money for yourself through the selling of merchandise or a service.

8. Make a practice sales presentation to your counselor, teacher, or parent on the above item that you are selling.
   Item being sold ________________________________
   Person solicited ________________________________

9. Interview a Christian salesperson and a Christian retailer regarding the following points:
   For the Salesperson:
   Is a lot of traveling involved in the profession of selling?
   What other ways does the job of a salesperson affect family life?
   How are sales people paid?
What opportunities for advancement are there in sales?

What does the future hold for a career in sales?

How do you get customers?

What do you like the most about your job?

The least?

Does being a Christian make a difference in the way you do your job?

For the Retailer:
What type of education and training is helpful for a retail sales career?

What advancement opportunities are available in retail sales?

When you place an order, which do you rely on most, service of the sales person, price, market characteristics, or the quality of the product?
What do you do when a customer complains about an error he thinks your store has made when he is actually the one at fault?

____________________________________________________________________

____________________________________________________________________

Does being a Christian make a difference in the way you run your store?

____________________________________________________________________

____________________________________________________________________

What do you like the most about your job?

____________________________________________________________________

____________________________________________________________________

The least?

____________________________________________________________________

____________________________________________________________________
1. Do one of the following:
   a. Send and receive by International Morse Code at the rate of three words per minute using flashlight, whistle, mirror, buzzer, or key. (Five-letter words, minimum of 20 words.)
   b. Send and receive by semaphore code at the rate of seven words per minute using semaphore flags. (Five-letter words, minimum of 20 words.)
   c. Send and receive by International Morse Code at the rate of three words per minute using wigwag flags. (Five-letter words, minimum of 20 words.)

   Message sent _______________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

   Message received ____________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

Date completed ____________ Instructor’s Signature ____________________
1. Have the Communications Honor

2. Do one of the following:
   a. Send and receive by International Morse Code at the rate of eight words per minute using flashlight, whistle, mirror, buzzer, or key. (Five-letter words, minimum of 20 words.)
   b. Send and receive by semaphore code at the rate of 12 words per minute using semaphore flags. (Five-letter words, minimum of 20 words.)
   c. Send and receive by International Morse Code at the rate of eight words per minute using wigwag flags. (Five-letter words, minimum of 20 words.)

Message sent

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Message received

________________________________________________________________________
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________________________________________________________________________

Date completed ____________  Instructor’s Signature ____________________

Vocational General Conference 2002 Edition
1. Write 200 words or give a three-minute oral report about the history of computers.

2. What is the definition of the following terms:
   - Hardware
   - Software
   - Floppy Disk
   - Hard Drive
   - Mainframe
   - Desktop Computer
   - Laptop Computer
   - ROM
   - RAM
   - Alphanumeric
   - CPU
3. What are the proper handling and storage techniques of disks?

4. Describe the function of and point out the following components of a personal computer:
   - Keyboard
   - Monitor
   - System Unit or Central Processing Unit
   - Printer
   - Disk drive

5. Know the difference between and the uses for the following printers:

<table>
<thead>
<tr>
<th>Differences</th>
<th>Uses</th>
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</thead>
<tbody>
<tr>
<td>Letter Quality</td>
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<tr>
<td>Dot Matrix</td>
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<td>Laser</td>
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<td>Plotter</td>
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<td>Ink Jet</td>
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<tr>
<td>Thermal</td>
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</tbody>
</table>
6. Show or describe how to protect a computer system from:
   - dust ______________________________________________________
   - dirt _____________________________________________________
   - static electricity ___________________________________________
   - power surges and outages ________________________________
   Other potentially dangerous factors that could hamper or hurt a computer system.

7. Name at least four input devices for computers.
   1. ________________________________________________________
   2. ________________________________________________________
   3. ________________________________________________________
   4. ________________________________________________________

8. What does it mean to back up a disk or a file?

   Why is it important?

9. What is computer preventive maintenance?

   Why is it important?

10. Successfully boot, load (install), and use a prepared software program for use in a computer system. (No computer games.)

11. Tell several ways an individual or family could use a personal computer other than for games.

Date completed ____________  Instructor’s Signature ________________________
Computer, Advanced

1. Have the Computer Honor.

2. What is the definition of the following terms:
   - Baud rate _________________________________
   - Dip switch ________________________________
   - Data base ________________________________
   - Word processing ___________________________
   - Nanosecond ______________________________
   - DOS ______________________________________
   - Internal modem __________________________
   - External modem __________________________
   - Peripheral _______________________________
   - Default disk drive _________________________
   - A “K” of memory __________________________
   - Screen saver _____________________________
   - Byte _____________________________________
   - Scanner __________________________________
   - E-mail ___________________________________
   - Font _____________________________________

3. What is the work of the following people associated with computers:
   - Operator __________________________________
   - Data-entry _________________________________
   - Programmer _______________________________
4. How can it be determined when the computer is reading or writing on a disk?

What precautions should be taken while the computer is performing this function?

5. What is the difference between serial and parallel communications?
   Serial ________________________________
   Parallel ________________________________

6. What does it mean for a computer to be compatible?

7. What legal responsibility applies to software with the following designation:
   Public domain ________________________________
   Shareware ________________________________
   Copyright ________________________________
8. Successfully using the operating system of a personal computer, do the following:
   a. Clear the screen of the computer without turning the power off.
   b. Show the contents of a diskette on the computer screen.
   c. Prepare a diskette for use in disk drive giving it the label name of "Pathfinders."
   d. Do the same as above again, but this time place the system files on the disk automatically when preparing (formatting) the diskette.
   e. Show how to check for bad sectors on a diskette or hard drive.
   f. Rename a file on the disk to a different name.
   g. Copy the entire contents of one disk to another in a perfect "mirror image."
   h. Show that you have successfully completed the previous by having the computer "compare" the two disks and show no difference between them.
   i. Show how to copy a file onto a disk.
   j. Show how to delete a file from a disk.

9. Research at least four different computer languages (such as BASIC, VISUAL BASIC, PASCAL, C-C++) to find out why they were developed and for what type of application they are used. Type a 200-word report on your findings or give a three-minute oral report.

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<thead>
<tr>
<th>Languages</th>
<th>Why developed</th>
<th>Uses</th>
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Report: ____________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
10. Show proficiency in the use and operation of three of the following:
   a. A Word Processing program by doing the following: Type and print a letter to at least five different people using the same text, but personalizing each letter with the addressee's name appearing at least three times and using the following functions of the Word Processing program.
      (1) Right justify
      (2) Center title
      (3) Change margins and page length
      (4) Move paragraph
      (5) Save
      (6) Copy and paste
   b. A data base program by making a list of at least 15 people, their addresses, phone number, birth date, and age. Perform a sort function which will list the people alphabetically by last name, list by zip code, list by age, and list by birth date. Make a printout of each list.
   c. An accounting program by doing one of the following:
      (1) Perform invoice entry and bill printing of accounts receivable.
      (2) Perform invoicing and check printing of accounts payable.
      (3) Perform journal entry and financial reports of the general ledger.
   d. A newsletter program by preparing three pages of double column text with at least four different computer-generated graphics (such as graphs or clip art), two different fonts, and one headline.
   e. A spreadsheet program by showing how to add columns, move columns, put a calculation in the field, save, reload, and print. Also perform the function of adding column A and B, dividing the sum by column C, and placing the answer in column D.
   f. An educational program by teaching any student in grades 1 to 4 how to successfully do a solo operation of a program designed for their age level.

11. Visit the computer department of any business or have someone from a business computer department visit your classroom or club. At a minimum, gather the following information:
    What type of computers are used?
For what applications are the computers used in the business?

Do the computers communicate with each other and how?

How does the business service, maintain, change, and upgrade their hardware and software?

What percentage or amount is budgeted for the computer purchases and maintenance?

What kind of backup procedures and other precautionary measures are used?

What kind of education is needed and/or useful for a career with computers?

Date completed ____________  Instructor’s Signature ____________________
Electricity

(Instructor Required)

1. Explain and illustrate an experiment by which the laws of electrical attraction and repulsion are shown.
   Experiment ________________________________________________
   Explanation ________________________________________________

2. Explain the difference between direct and alternating current, and demonstrate the uses to which each is adapted. Give a method of determining which kind flows in a given circuit.
   Direct _____________________________________________________
   Alternating _________________________________________________
   Method of determining kind of flow _____________________________

3. Connect a buzzer, bell, or light with a battery using a switch in line.

4. Make and run a simple electric motor from a kit or take apart a motor and identify the parts, and explain how it works.

5. Make a simple battery cell.

6. Demonstrate ability to replace fuses or reset breakers and demonstrate a National Electric Code (NEC) approved splice using insulated wires.

7. Show how you would rescue a person in contact with a live electric wire, and have a knowledge of the method of reviving a person insensible from shock.

8. Make a simple diagram of a lighting system of an automobile.

9. Make a diagram that properly shows the lights, switches, and convenience outlets controlled by each breaker in a house.
10. Read an electric meter correctly, and compute a residence bill at the rate charged in your community.

Meter reading = ________________________________
Community rate = ________________________________
Bill = ________________________________

Date completed ____________ Instructor’s Signature ____________________
Housepainting—Exterior

1. Know and explain the difference in composition of exterior paints versus interior paints.

2. Tell how to prepare the outside of a house for painting by doing such items as preparation for new and old work, paint removal, priming, puttying, finishing, etc.

3. List ten proper color schemes for house painting (if possible, use color charts from a paint shop in making the display).

   1.
   2.
   3.
   4.
   5.
   6.
   7.
   8.
   9.
   10.
4. Tell how to prepare and paint metal properly.

5. Name at least three paint thinners and give their specific uses.

<table>
<thead>
<tr>
<th>Paint Thinners</th>
<th>Uses</th>
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</table>

6. Show ability to properly use brush, roller, and spray equipment in outside work.

7. Paint the outside of a house with at least four rooms (if possible, make this a group project for a special-needs person in the church or community).

Project ____________________________________________________

Date completed ____________  Instructor’s Signature ____________________
Housepainting—Interior

1. Explain and demonstrate how to prepare and finish new or old woodwork in the following ways:
   - Staining ______________________________________________________
   - Varnishing __________________________________________________
   - Painting _____________________________________________________

2. Give two methods of stippling.
   1. ____________________________________________________________
   2. ____________________________________________________________

3. When should a paint spray gun be used?
   _____________________________________________________________

4. Describe the proper methods for cleaning and care of paint and varnish brushes.
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________

5. Show how to use putty properly.

6. Explain the difference between exterior and interior paints.
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
7. Make a list of ten proper color schemes for interior house painting using color swatches from a paint shop.

1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
4. __________________________________________________________
5. __________________________________________________________
6. __________________________________________________________
7. __________________________________________________________
8. __________________________________________________________
9. __________________________________________________________
10. _________________________________________________________

Why are bright/loud colors not preferred?

__________________________________________________________
__________________________________________________________

8. Explain the composition of and when you use the following paints:

Oil based __________________________________________________
__________________________________________________________

Water based ________________________________________________
__________________________________________________________

9. Paint the woodwork of at least four rooms.

10. Paint at least one room, showing skill in keeping paint where it belongs.

11. Tell and show how to properly store unused paint.

__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
1. Describe the elements of a good lead paragraph and the use and importance of headlines.

Elements __________________________________________________

__________________________________________________________

__________________________________________________________

Use _______________________________________________________

__________________________________________________________

Importance _________________________________________________

__________________________________________________________

2. Write a news article of at least three paragraphs, using a good lead paragraph about something interesting that has happened in your church, school, home, or Pathfinder Club.

Title of article _____________________________________________

3. What are the essentials for writing a good story?

__________________________________________________________

__________________________________________________________

__________________________________________________________

4. Know the difference between passive and active verbs, and give three comparative examples.

Passive ____________________________________________________

Active ____________________________________________________

Examples: 1. ______________________________________________

2. ______________________________________________

3. ______________________________________________

5. Write to a publisher, requesting story-writing guidelines.**

Publisher written to ________________________________
6. Write a story on one of the following:
   a. How your family first accepted Christ, whether it was you, your parents, your grandparents, etc.
   b. Personal experiences of answered prayer or divine guidance.
   c. An interesting pet that you have had.
   d. An experience you have had while at summer camp or on a camping trip.
   e. When God first became real to you as a friend and personal Savior.
   f. The most difficult thing about being a Christian today.

   Title of story ________________________________

7. Submit a story or article to a Seventh-day Adventist publication.**

   Title of story/article ________________________________
   Date submitted ________________________________
   Publication submitted to ________________________________

8. Know how to write a cover letter to the editor for submitting your story or article and write a cover letter to the editor to include with your story or article.

9. What education is helpful for getting into the career of journalism?

10. What types of jobs are available for anyone who is interested in journalism?

   __________________________________________________
   __________________________________________________
   __________________________________________________

Note: ** Story-writing guidelines are available free from the Review and Herald Publishing Assn., 55 West Oak Ridge Drive, Hagerstown, Maryland 21740

Note: Good foundation work in grammar is a fundamental must for this honor.
Masonry

1. Name at least six materials commonly used by masons in the erection of walls or buildings.

   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________
   6. __________________________________________________________

2. Demonstrate ability to use properly a plumb line, line stretcher (chicken legs), level, trowel, s-tool, and mason hammer.

3. Demonstrate a knowledge of building cement characteristics (know how to prevent sweating, cracking, shrinking, crumbling, and loss of strength).

4. Make useable mortar and state proper proportions of ingredients (lime, sand, etc.).

5. Lay a straight stone, brick, or block masonry wall at least four feet (1.2 meters) high and ten feet (3.0 meters) long, including an inside or outside corner (surface must be struck and broomed).

6. Pour a level footing, using hand mixed cement and proper reinforcement.

7. Make the forms and lay a piece of concrete walk or floor, using commercially mixed cement. Finish it and rule it.

8. Write a paragraph describing the behavior of cement; that is, its reaction to water, its adhesive qualities, how long it takes to set, etc.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

Note: Working with a master mason will help tremendously in fulfilling the requirements of this honor.
Paperhanging

1. State how to properly choose designs and combinations of wallpaper for the following:
   - Living room
   - Dining room
   - Bedroom
   - Bathroom
   - Kitchen
   - Children's play room
   - Church

2. Record in a notebook the answers to the above questions and on #3 include your design, color and material chosen for each room.


4. Explain how to hang wallpaper.
   
   Describe at least two methods.
   
   1. 
   
   2. 

   Use one method to paper at least two walls of a home, such as in bedrooms, living rooms, etc. Show proper pattern matching.
Plumbing

1. Make a diagram showing the plumbing system of a four-room house which includes fixtures for the kitchen, bathroom, and laundry.

2. Submit two pieces of iron pipe that you have threaded and connected with proper fitting.
   1. 
   2. 

3. Submit a repaired plastic (PVC), iron, or copper pipe, and tell how to repair all three.
   1. 
   2. 
   3. 

4. Demonstrate ability to repair a leaky sink faucet and replace or repair toilet flush mechanisms.

5. Describe the proper drainage system of the house in #1 and explain the use of traps and vents.

6. Have a knowledge of the ordinary hot and cold water system of a house and explain how to make the system safe from freezing if the house has to be left without heat during the winter.

7. Diagram at least one type of passive water heating system, such as the use of solar energy.
Printing

1. Know how the following printing devices work:
   - Web press __________________________________________________
   - ___________________________________________________________
   - ___________________________________________________________
   - Offset press ________________________________________________
   - ___________________________________________________________
   - ___________________________________________________________
   - Photocopy machine __________________________________________
   - ___________________________________________________________
   - ___________________________________________________________
   - Letterpress _________________________________________________
   - ___________________________________________________________
   - ___________________________________________________________

2. Know what the reference of pound means in determining the weight of paper.
   ____________________________________________________________
   Know what the following paper types are used for:
   - Offset _____________________________________________________
   - Bond _____________________________________________________
   - Coverweight ______________________________________________
   - Index _____________________________________________________

3. Tour a print shop or newspaper company.
   Shop/company toured _________________________________________

Write a 300-word report or give a three-minute oral report on the steps taken in the printing process that you observed.
4. Do some research to learn about the history of printing. Trace the development of printing by learning how printing presses have progressed to the present.

5. Know the different inks available for printing and their characteristics.

<table>
<thead>
<tr>
<th>Inks</th>
<th>Characteristics</th>
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</table>

6. Know the meaning of the following terms:

- Backing up
- Blanket
- Bleed
- Boldface
- Camera ready art
- Caption
- Clip art
- Collate
7. Know the difference between half-tones, duo-tones, and the four-color process.

Half-tones

Duo-tones

Four-color process

8. Interview a printer to find out the following:

What education is needed to get into the printing field?

What advancement opportunities are available in printing?

What does the future hold for the printing industry?

What do you do in your business to keep customers happy?

What career opportunities related to printing are available?
Radio

1. Pass a test and receive your license for the Technical Class Amateur Radio License

OR

Technician Class Amateur Radio License.
Radio, Advanced

1. Have the Radio Honor
2. Pass a test and receive your license for the General Class Amateur Radio License.
Radio Electronics

1. Identify at least 20 symbols used in electronics.
   1. ____________________________
   2. ____________________________
   3. ____________________________
   4. ____________________________
   5. ____________________________
   6. ____________________________
   7. ____________________________
   8. ____________________________
   9. ____________________________
  10. ____________________________
  11. ____________________________
  12. ____________________________
  13. ____________________________
  14. ____________________________
  15. ____________________________
  16. ____________________________
  17. ____________________________
  18. ____________________________
  19. ____________________________
  20. ____________________________

2. Identify the value of resistors by the color code.

3. Demonstrate proper soldering techniques.

4. Explain use and operation of various important components in electronics such as
   Resistors __________________________________________________
   ____________________________________________________________
   Variable capacitors __________________________________________
   ____________________________________________________________
   Fixed capacitors _____________________________________________
   ____________________________________________________________
   Coils ______________________________________________________
   ____________________________________________________________
   Transistors _________________________________________________
   ____________________________________________________________
   Integrated circuits __________________________________________
5. Know and understand Ohm's law.

6. Determine how to correctly place or pin integrated circuits, transistors, diodes, and capacitors in a circuit board.

7. What is meant by a parallel and a series circuit?

8. From a kit or from scratch make two of the following:
   a. Photocell guard or counter
   b. Siren
   c. Simple voltmeter
   d. Pressure sensor
   e. Simple DC power supply
   f. Simple transistor radio

9. Draw from memory, using proper symbols, the complete wiring diagram of the devices constructed in requirement 8.
10. List ten ways electronics are used in everyday life.

1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
4. __________________________________________________________
5. __________________________________________________________
6. __________________________________________________________
7. __________________________________________________________
8. __________________________________________________________
9. __________________________________________________________
10. _________________________________________________________
Shoe Repair

1. Name at least five essential parts of a shoe and explain their uses.

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<th>Parts</th>
<th>Uses</th>
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</table>

2. What is the difference:

   Hand-turned soles

   Goodyear welt soles

   McKay sewed soles?

Which is the easiest to repair?

3. Properly wax the thread, and with two needles or waxed ends, mend a pair of shoes that have rips in them. Use the double-stitch method of sewing.

4. Satisfactorily half-sole a pair of shoes by nailing the soles on. Make sure the nails are of the proper length.

5. Fit and attach a pair of rubber heels.

6. What kind of leather should be used in repairing the soles of shoes?

   How is such leather generally tanned?
7. Specify at least three factors that should be taken into account in the selection of shoes.
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________

8. Spend a minimum of five hours observing shoe repair specialists at their workshop.
   Date completed ______________________________________________

9. Write or tell the examiners the proper methods of cleaning and caring for shoes.
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
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Date completed ____________ Instructor’s Signature ____________________
Shorthand

1. Be able to take dictation on new material at 80 words per minute for three consecutive minutes and transcribe accurately the notes taken.

2. Have available a shorthand dictionary (usually provided by course publishers).
1. Describe the design and operation of the two-cycle engine and the four-cycle engine.

Two-cycle engine ____________________________________________

________________________________________________________________________

________________________________________________________________________

Four-cycle engine ____________________________________________

________________________________________________________________________

________________________________________________________________________

2. Name the parts of the two-cycle engine and tell what each part does.

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<th>Parts</th>
<th>Usage</th>
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3. List four basic fuels used in small engines, and explain their use.

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<th>Fuels</th>
<th>Uses</th>
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4. Show care and safety in fuel handling and storage.

5. Describe three types of ignition systems.

1. __________________________

2. __________________________

3. __________________________

6. Explain why gasoline is an improper cleaning fluid.

7. List two acceptable cleaning fluids for small engines.

1. __________________________

2. __________________________

8. List and tell how three basic lubrication systems operate.

1. __________________________

2. __________________________
9. List in order the steps of a general trouble-shooting procedure.
   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________
   4. _______________________________________________________
   5. _______________________________________________________
   6. _______________________________________________________
   7. _______________________________________________________
   8. _______________________________________________________

10. Demonstrate that you can overhaul, inspect, and properly tune any small engine.

11. Demonstrate that you know how to test and clean spark plugs and glow plugs.
### Teaching

1. What education is needed for teaching the following:
   - Elementary school ___________________________________________
   - Secondary school ____________________________________________
   - College ____________________________________________________

2. What is re-certification?

3. Interview at least two teachers with the following questions:
   (Complete Chart #1 at least twice)
   a. Why did you choose to become a teacher?
   b. What part of teaching do you like the best?
   c. What part of teaching do you like the least?
   d. What do you do to get ready for a school year?
   e. What do you do to get ready for a school day?
   f. What teacher-related activities do you do after school is out each day?
   g. What are some qualities of a good teacher?
   h. What are the responsibilities and duties of a teacher?


5. If you are 16 years old or younger, do the following for a minimum of 40 minutes per week for three weeks:
   a. Assist a teacher in designing and preparing a bulletin board.
   b. Assist a teacher in preparing learning aids.
   c. With the supervision of a teacher, teach a child or class at least one concept.

Teacher assisted _____________________________________________
How you helped _____________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

☐ 6. If you are older than 16 years, do three of the following:

a. Teach an adult's or children's Sabbath School class for a minimum of six weeks.

b. Teach in one day in each department of Vacation Bible School.

c. Teach two Honors from the Honors Handbook.

d. Assist in teaching requirements for one of the AY classes, culminating in investiture.

e. Teach at least one year in an elementary or secondary school or in a college.

Date completed ____________ Instructor’s Signature ____________________

Teaching 2002 Edition
# Teaching Chart #1

Interview at least two teachers with the following questions:

**Teacher interviewed**

**Teacher’s specialty or level**

**Why did you choose to become a teacher?**

**What part of teaching do you like the best?**

**What part of teaching do you like the least?**

**What do you do to get ready for a school year?**

**What do you do to get ready for a school day?**

**What teacher-related activities do you do after school is out each day?**

**What are some qualities of a good teacher?**

**What are the responsibilities and duties of a teacher?**
Typewriting

1. Show how to clean, type properly and change ribbon on a typewriter.

2. Know the difference between a fabric and a carbon ribbon.

   Fabric _____________________________________________________
   Carbon ____________________________________________________

3. Identify the following parts of the typewriter and know their function:

   Frame _____________________________________________________
   Keyboard __________________________________________________
   Space bar __________________________________________________
   Backspace key ______________________________________________
   Shift keys and lock __________________________________________
   Platen _____________________________________________________
   Impression control __________________________________________
   Margin stops _______________________________________________
   Paper release _______________________________________________
   Leverline-space lever _________________________________________
   Line-finder control __________________________________________
   Paper centering scale _________________________________________
   Cardholder ________________________________________________
   Paper bail lever ______________________________________________
   Pitch selection lever _________________________________________
   Margin release ______________________________________________

4. Know how to set tabs for tabulation. Properly type a tabulated page with at least four columns.

5. Show how to center information horizontally and vertically on paper.
6. Show how to construct block and indented style letters.

7. Operate a typewriter at a speed of forty words a minute on new material for five minutes with no more than five errors.

   Speed _____________________________________________________
   Number of errors ____________________________________________
1. Identify all parts of the following:
   a. Welding and cutting torches
   b. Oxygen and acetylene gauges and their differences
   c. Oxygen and acetylene hoses and their differences
   d. Oxygen and acetylene tanks and their differences

2. Explain the safe working pressures of oxygen and acetylene, as per your instructor's directions, for various procedures.

3. While blindfolded, demonstrate ability to hook up an entire oxyacetylene kit, including tanks, gauges, hoses, and torches, and light the same.**

4. As per your instructor's directions, weld two mild steel test plates (1/8 inch x 1 inch x 8 inches) (0.3 cm x 2.5 cm x 20.3 cm) in horizontal, and vertical positions.

5. Use a cutting torch and demonstrate your skill by making one 12 inches (30.5 cm) straight-line cut, one circle cut of at least 3 inches (7.6 cm) in diameter and one 3 inch (7.6 cm) star cut. The cuts are to be made on mild steel plate at least 1/4 inch (0.6 cm) thick.

6. Demonstrate your ability to braze a cast-iron object with at least 1/4 inch (0.6 cm) double bevel butt weld 2 inches (5 cm) long.

7. Explain the safety precautions and safety equipment normally used in electric welding in relation to eyes, hands, and exposed skin areas.
Why should the tank valves never be oiled?

8. Explain the difference between oxyacetylene and electric arc welding.
   Oxyacetylene ______________________________________________
   __________________________________________________________
   Electric arc _______________________________________________
   __________________________________________________________

9. Demonstrate ability to select from an electrode guide the proper amperage and electrode for various types and thicknesses of metal.

10. Demonstrate ability to weld flat, vertical, horizontal, and overhead on (1/8 inch x 1 inch x 8 inches) (0.3 cm x 2.5 cm x 20.3 cm) mild steel test plates.

   Note: An instructor is a must. Welding is a very critical and serious skill to learn and is not a home-type course. Welding essentially takes the place of bolts and rivets, and if not properly done, is most dangerous. Example: A trailer hitch not properly bonded, or machinery exposed to the strain of pull or weight, is an invitation to disaster.

   Note: ** This requirement demonstrates one's skill in working in darkness, such as in an emergency. All acetylene connection threads are left-handed, while all oxygen connection threads are right-handed.

   Date completed ____________   Instructor’s Signature ____________________
Woodworking

1. Tell how the following processes are related to lumber and how each process is done:

   Growing trees __________________________________________________________

   Harvesting of trees ____________________________________________________

   Milling ________________________________________________________________

   Curing ________________________________________________________________

   Seasoning _____________________________________________________________

   Grading ______________________________________________________________

   Sizing ________________________________________________________________

2. Collect and label five different kinds of wood used in woodworking. Tell the advantages and disadvantages of each.

   Wood | Advantages | Disadvantages

   1. __________________ | __________________ | __________________

   2. __________________ | __________________ | __________________
3. List the basic hand and power tools necessary to do woodworking. Know how to safely use each tool and how to keep it in proper working order, including sharpening, if applicable.

4. Explain the following joints:
   Butt ______________________________________________________
   Dado and groove ____________________________________________
   Dovetail ___________________________________________________
   Dowel _____________________________________________________
   Lap _______________________________________________________
   Miter _____________________________________________________
   Morist and tenon __________________________________________
   Rabbet ____________________________________________________

5. Know the characteristics of and how to work with the following:
   Hardboard __________________________________________________________________________
   Particleboard ________________________________________________________________________
6. Know at least two ways to finish the edges of plywood.
   1. ____________________________________________________________
   2. ____________________________________________________________

7. Demonstrate the proper technique of gluing and clamping wood.

8. Choose a plan for and complete an article of household furniture, such as a small table, footstool, writing desk, or bookcase. List the materials needed for your project.
   Article completed ____________________________________________________________
   Materials needed
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

9. Know and use the proper steps in finishing a wood project with either natural finish or a stain.
   Steps ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

10. Do two of the following:
    a. Make a project with a door or lid with inset hinges.
    b. Make a scale model of a house or building with a cutaway view showing the interior detail.
    c. Assist in making and/or repairing wooden toys for needy children.
    d. Make a project using dowel, miter, or mortise and tenon joints.
    e. Make a project using curved cuts, or beveled or rounded edges.
   Projects Completed
   1. ____________________________________________________________
   2. ____________________________________________________________

Date completed ____________ Instructor’s Signature ____________________
East Africa Division Honors

Africa Lore
Antelopes
Antelopes, Advanced
Paper Maché
Thatching
African Lore

1. Be able to name and locate at least ten different African tribes of the present day and name several outstanding features of each.

<table>
<thead>
<tr>
<th>Tribes</th>
<th>Outstanding features</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<td>7.</td>
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<tr>
<td>8.</td>
<td></td>
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</tbody>
</table>
2. a. Select for study an African Tribe. (If you belong to an African Tribe, select one other than your own.)

Tribe Selected _____________________________________________

b. Find out detailed information on the tribe selected, in the following areas.

Eating Habits _______________________________________________
__________________________________________________________
__________________________________________________________

Initiation ceremonies _________________________________________
__________________________________________________________
__________________________________________________________

Witch doctors _______________________________________________
__________________________________________________________
__________________________________________________________

Living and worship conditions __________________________________
__________________________________________________________
__________________________________________________________

Education __________________________________________________
__________________________________________________________
__________________________________________________________

Burials ____________________________________________________
__________________________________________________________
__________________________________________________________
3. Tell an African folk story bringing out its moral.
   Date presented ____________________________

4. Make a collection of at least 15 objects manufactured by African tribes (other than your own)
   1. _______________________________________
   2. _______________________________________
   3. _______________________________________
   4. _______________________________________
   5. _______________________________________
   6. _______________________________________
   7. _______________________________________
   8. _______________________________________
   9. _______________________________________
  10. _______________________________________
  11. _______________________________________
  12. _______________________________________
  13. _______________________________________
  14. _______________________________________
  15. _______________________________________
1. Give the general characteristics of antelopes.

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

2. Give three size-groups of these animals, with two examples of each

<table>
<thead>
<tr>
<th>Groups</th>
<th>Examples</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<tr>
<td>3.</td>
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</tbody>
</table>

3. Be able to identify at least 15 different antelopes.

1. __________________________________________

2. __________________________________________

3. __________________________________________

4. __________________________________________

5. __________________________________________

6. __________________________________________

7. __________________________________________

8. __________________________________________

9. __________________________________________
4. What do they eat?

__________________________________________________________
__________________________________________________________
How do they digest their food?

__________________________________________________________

5. Name three ways in which one benefits from having these animals in the country where one lives.

1. _______________________________________________________
2. _______________________________________________________
3. _______________________________________________________

6. What are “false hoofs?” _________________________________

________________________________________________________
Which members of this family do not have them?

________________________________________________________

7. Which antelopes are classed as rare South African animals now?

________________________________________________________
Where can they be seen, outside of the zoo and the museum?

________________________________________________________

8. What natural enemies do the antelopes have?

________________________________________________________
________________________________________________________
How do antelopes protect themselves and their young?

________________________________________________________
9. Which is:
   The largest antelope? ________________________________
   The swiftest runner? ________________________________
   A good fighter? ________________________________
   A good jumper? ________________________________
   Chiefly nocturnal? ________________________________
   Called “the African Chamois”? ________________________________
   The national animal of the Union of South Africa? ________________________________

10. Say which antelope you like to watch most. Tell five of its habits.

   Antelope    Habits
   1. ___________________ ________________________________
      ________________________________
      ________________________________
      ________________________________
      ________________________________
      ________________________________
Antelopes, Advanced

1. Give the order, and the scientific name of the family, to which the antelope belong.

__________________________________________________________________________

2. Give the distinguishing characteristics of the different sub-families, with examples of each.

<table>
<thead>
<tr>
<th>Sub families</th>
<th>Characteristics</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

3. Which large antelope differs from most of the others in appearance?

__________________________________________________________________________

What are some of its peculiar habits?

__________________________________________________________________________

4. What is the function of musk glands in the antelopes?

__________________________________________________________________________

Where are these glands situated on the gregarious types?

__________________________________________________________________________

On the solitary types?
5. Which species could you expect to find in:
   Bush, or reed beds, near water ________________________________
   ________________________________
   Arid regions? ________________________________
   ________________________________
   Open plains? ________________________________
   ________________________________
   Scrub and forest areas? ________________________________
   ________________________________
   The vicinity of rocky kopjes, or on hillsides? ________________________________

6. Describe the horns, in both sexes of each species, of 15 different antelopes.

<table>
<thead>
<tr>
<th>Antelope</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>15.</td>
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</tbody>
</table>
What is the structure of these horns?

__________________________

Are there any deer in South Africa?

__________________________

What is the structure of their horns?

__________________________

☐ 7. Name at least 20 species of antelope that you have observed and can identify out-of-doors, not more than 5 of which are in captivity.

1. ______________________

2. ______________________

3. ______________________

4. ______________________

5. ______________________

6. ______________________

7. ______________________

8. ______________________

9. ______________________

10. ______________________

11. ______________________

12. ______________________

13. ______________________

14. ______________________

15. ______________________

16. ______________________

17. ______________________

18. ______________________

19. ______________________

20. ______________________
8. What is a gazelle?

Where would you find this animal?

9. Name some diseases associated with wild bovies.

How are they transmitted?

Of what economic importance are they to man?

10. Know the game laws of your province.
Paper Maché

1. Name at least three kinds of bases upon which paper models may be shaped.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________

2. There are two main types of paper maché:
   a. Know how to prepare successful pulp
   b. Know how to prepare the glue

3. Be familiar with all ingredients and know why they are used.
   Ingredients Used
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

4. Make, paint and varnish at least two articles from pulp.
   Articles made
   1. __________________________________________________________
   2. __________________________________________________________

5. Make, paint and varnish at least two articles from paste and paper strips.
   Articles made
   1. __________________________________________________________
   2. __________________________________________________________

6. Submit articles to examiner and have workmanship approved.
   Signature of Examiner _______________________________________

Date completed ___________________ Instructor’s Signature ___________________
1. Make a list of the various tools needed for thatching, stating their uses, and show a “dekspaun” and a “needle” you have made.

<table>
<thead>
<tr>
<th>Tools</th>
<th>Uses</th>
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</thead>
<tbody>
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</tbody>
</table>

2. State what materials are needed in erecting the framework of a roof ready for thatching.

Tell briefly how you go about erecting the framework of a rondavel.

3. Name the various materials required for thatching, including several kinds of thatching “grasses” and thatching “threads.” Show samples of these.

__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
4. Answer the following questions on the preparation of thatching material:

When is the grass cut and how is it stacked for storing?

__________________________________________________________

__________________________________________________________

How is the grass “combed” and made ready for thatching?

__________________________________________________________

__________________________________________________________

How is thatching rope made?

__________________________________________________________

__________________________________________________________

What raw materials are used in your locality?

__________________________________________________________

__________________________________________________________

5. Can any shape of roof be thatched?

__________________________________________________________

__________________________________________________________

Which is the easiest roof to thatch?

__________________________________________________________

__________________________________________________________

What are some of the advantages of a thatched roof?

__________________________________________________________

__________________________________________________________

What are some of the things that damage thatch?

__________________________________________________________

__________________________________________________________

How would you protect a thatched roof against such?

__________________________________________________________

__________________________________________________________

6. Have some practical knowledge on how to thatch and demonstrate ability in laying a few short rows of thatch.
7. How many workers are needed in thatching a rondavel?

__________________________________________________________

Describe how you would start thatching a rondavel?

__________________________________________________________

Tell, if possible demonstrate, how you would finish off:
(1) a round roof

__________________________________________________________

__________________________________________________________

(2) a gabled roof

__________________________________________________________

__________________________________________________________
Child Care (Babysitting)

1. Be able to look after a baby during several hours in the absence of its mother.

2. List all the precautions to be taken when preparing the baby’s bottle; prepare it and give it to the baby.

3. Prepare, bath, change and dress the baby.

4. Prepare the baby’s bed and put it to bed for the night.

5. Know how to weigh a baby and to fill in the weigh schedule form.

6. Explain why breast-feeding is superior to bottle-feeding.

7. What is weaning?

8. What is the fontanel (soft spot)?

At about what age does it disappear?

9. Interview staff at a local day care center regarding their organization and the help they offer to mothers.

Interviewed

Date

Date completed

Instructor’s Signature
Basketball
Bats
Bats, Advanced
Braiding
Braiding, Advanced
Camp Safety
Camp Safety, Advanced
Christian Drama
Community Assessment
Community Service
Copper Enameling
Copper Enameling, Advanced
Crisis Intervention
Digital Photography
Disaster Response
Drumming and Percussion
Drumming and Percussion, Advanced
Dutch Oven Cooking
Endangered Species
Genealogy
Genealogy, Advanced
Geocaching
Geocaching, Advanced
Glass Etching
Gold Prospecting
Gold Prospecting, Advanced
Heart and Circulation
Heredity
Hot Air Balloon
Hunger Relief
Indian Lore
Indian Lore, Advanced
Internet
Internet, Advanced
Lapidary
Letter Boxing
Letter Boxing, Advanced
Lighthouses
Lighthouses, Advanced
Mountain Biking
Paper Quilling
Paper Quilling, Advanced
Parade Float
Parade Float, Advanced
Peace Maker
Peace Maker, Advanced
Pinewood Derby
Pinewood Derby, Advanced
Plastic Canvas
Power Boating
Preach It
Preach It, Advanced
Refugee Resettlement
Rural Development
Sanctuary
Scrapbooking
Scrapbooking, Advanced
Skiing, Cross Country
Slow-Pitch Softball
Soccer
Soils
Tie Dye
Travel
Travel, Advanced
Tutoring
Unicycle
Urban Development
Wakeboading
Whistles
Whistles, Advanced
Worms
Worms, Advanced
Basketball

1. Know the basic rules of basketball.

2. What is the meaning of “Good Sportsmanship?”

3. Define the following terms:
   - Air ball
   - Backboard
   - Back court
   - Front court
   - Baseline
   - Block
   - Bounce pass
   - Double dribble
   - Dribbling
   - Fake
   - Fast break
   - Field Goal
   - Fouled out
   - Give and go
   - Inbound
   - Intentional Foul
   - Jump ball
   - The Key
   - Loose ball foul
   - Man to man
   - One and one
Three point shot

☐ 4. Demonstrate an understanding of the different skills required at each position.

☐ 5. Demonstrate reasonable skill in the following areas:
   a. Shooting from the free throw line.
   b. Shooting from different positions around the basket
   c. Dribbling
   d. Passing

☐ 6. Spend at least 4 hours helping a less skilled or younger player improve their skills.
   Date ________________________________

☐ 7. Play at least 5 games with family or friends. Show good sportsmanship during your practice and games.
   Date of games ________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

☐ 8. Write a one page report on a famous basketball player. Discuss why they are or are not a good Christian role model.

☐ 9. Discuss with your Pathfinder leader, pastor or teacher the problems facing a Seventh-day Adventist youth considering sports in Jr. High, High School and college. What alternatives are there that allows for continued activity in sports.
   Discussion date ________________________________
   Person ________________________________

☐ 10. Make a scale drawing of a basketball court properly laid out.

Date completed ____________ 
Instructor’s Signature ____________________

Basketball
2002 Edition
<table>
<thead>
<tr>
<th>Position</th>
<th>Point Guard</th>
<th>Shooting Guard</th>
<th>Center</th>
<th>Forward</th>
<th>Power Forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate</td>
<td>Passsing</td>
<td>dribbling</td>
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<tr>
<td></td>
<td>Shooting from free throw line</td>
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<tr>
<td></td>
<td>Shooting from different positions</td>
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</tbody>
</table>

**Basketball Instructor's Chart**

Basketball
2002 Edition
1. Why are bats classified as mammals and not birds?

2. What is the main characteristic that separates bats from all other mammals?

3. What is the name of the order that bats belong to and what does it mean?

4. What are the largest and smallest bats and where do they live?
   Largest
   Live?
   Smallest
   Live?

5. How many different types of bats are there worldwide?

6. Bats are divided into 2 suborders. What are their names?
   a. 
   b. 
7. Which suborder of bats uses echolocation and which suborder use eyesight to find their food?

8. What is the diet of the Megabats?

9. What is the diet of the Microbats?

10. How many babies does a bat have each year and what are the babies called?

11. Find three Bible texts that mentions bats.

   Which text uses bats in an end time prophecy?

12. Do bats hibernate or migrate for the winter?
13. Name the parts of a bat.

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

14. How many insects can a microbat eat in an hour?

____________________________________________________________________

15. What are the 2 main benefits bats provide for man?

____________________________________________________________________

16. Build or purchase a bat box, know the best place to put it and install it at a home, church, or your school. Record for 3 months what kind and how many bats have made it their home.
Record for 3 months what kind and how many bats have made it their home.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 8</th>
<th>Day 15</th>
<th>Day 22</th>
<th>Day 29</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Day 2</td>
<td>Day 9</td>
<td>Day 16</td>
<td>Day 23</td>
<td>Day 30</td>
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<tr>
<td>Day 3</td>
<td>Day 10</td>
<td>Day 17</td>
<td>Day 24</td>
<td>Additional Notes:</td>
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<td>Day 4</td>
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<td>Day 18</td>
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<td>Day 7</td>
<td>Day 14</td>
<td>Day 21</td>
<td>Day 28</td>
<td></td>
</tr>
</tbody>
</table>
1. Earn the bat honor.

2. What are caves, attics, bridges, or tunnels where bats hibernate called?

3. Give 3 examples of colonizing bats.

4. Give 3 examples of solitary roosting bats.

5. What is meant by delayed implantation?

6. How long is the gestation period for bats?

7. What is bat guano and why was it important during the war of 1812 and the Civil War?

8. What disease can be contracted from large quantities of guano?
9. What is the life-span of a bat?

10. Do all bats have rabies?

11. How good is the vision of microbats and megabats?

12. What North American bat is pictured on the honor?
Braiding

1. Make a three-strand braid, using hair, rope, or cord.
   Date completed ____________________________

2. Make a zipper pull or a key chain using the four-strand round or square braid.
   Date completed ____________________________

3. Make a four-strand hanger cover.
   Date completed ____________________________

4. Make a four-strand round braid lanyard.
   Date completed ____________________________

5. Know how to start and end all projects.

Pathfinder’s Name

Date completed ____________ Instructor’s Signature ____________________

North American Division
2002 Edition
Braiding, Advanced

1. Have the Braiding Honor.

2. Make a six- or eight-strand zipper pull or key chain.
   Date completed ____________________________

3. Make a six- or eight-strand zipper pull or key chain showing zigzag technique by reversing direction of braid, or make a project showing the three-part inside or trick braid.
   Date completed ____________________________

4. Do one of the following:
   a. Six-strand lanyard
   b. Bookmark using at least six strands
   c. Four-strand dog leash using twine or wire for a core to braid around
   Project ____________________________
   Date completed ____________________________

5. Know how to start and end all projects.

Date completed ______________  Instructor’s Signature ____________________

North American Division
2002 Edition
Camp Safety

1. Why is it important to find out what the local laws are before starting a camp fire?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Where should you get that information?

________________________________________________________________________
________________________________________________________________________

2. Identify 3 reasons why a camp fire should never be left unattended.
   1. ______________________________________________________________________
   2. ______________________________________________________________________
   3. ______________________________________________________________________

3. List 10 rules for fire safety to consider when camping.
   1. ______________________________________________________________________
   2. ______________________________________________________________________
   3. ______________________________________________________________________
   4. ______________________________________________________________________
   5. ______________________________________________________________________
   6. ______________________________________________________________________
   7. ______________________________________________________________________
   8. ______________________________________________________________________
   9. ______________________________________________________________________
  10. ______________________________________________________________________
4. Identify the temperature the following foods should be kept at, and explain why this is important when camping:

Hot foods __________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

Cold foods____________________________________________________
__________________________________________________________________________________________

5. List 5 things you can do to prevent animals from coming into your campsite.

1. _____________________________________________________________
2. _____________________________________________________________
3. _____________________________________________________________
4. _____________________________________________________________
5. _____________________________________________________________

6. What safety precautions should you consider when building a latrine?
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

7. Make a list of items that should be in a “First Aid Kit” and inspect your Pathfinder Club's camping first aid kit and make recommendations of any missing items as applicable.
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

8. List 5 things to consider when practicing good hygiene at a campsite where there is no running water (ie showers, flush toilets, sinks, or faucets).

1. ____________________________________________________________
2. ____________________________________________________________
3. ____________________________________________________________
4. ____________________________________________________________
5. ____________________________________________________________

9. Demonstrate 3 ways you can purify water when camping.

1. ____________________________________________________________
2. ____________________________________________________________
3. ____________________________________________________________

10. Identify 2 types of fuel used for camp cooking and explain what precautions should be used when using each type of fuel.

1. ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

2. ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

Discuss 5 guidelines for safely handling the following camping items:

knives _______________________________________________________
   ____________________________________________________________
   ____________________________________________________________

axes _________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

saws _________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

hatchets _____________________________________________________
   ____________________________________________________________
   ____________________________________________________________

machetes ____________________________________________________
   ____________________________________________________________
   ____________________________________________________________
11. Assist your club or conference leadership in a campsite safety inspection using the current Adventist Risk Management Pathfinder Camp Safety Inspection Form or its equivalent. (available for download from adventistrisk.com) http://www.adventistrisk.org/pdfs/camp_inspectionform.pdf. Be able to briefly explain the score/report given concerning the safety of the campsite.
Camp Safety, Advanced

1. Earn the following honors if not already earned:
   a. Camping Skills I-IV
   b. Camp Safety

2. What is meant by “Pathfinders are a sacred trust” and how does camp safety support that aspect of ministry in the church?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

3. Train a Pathfinder Unit or its equivalent in the Camping Safety Honor

4. Conduct 5 camp site inspections (on at least two camping experiences) using the current Adventist Risk Management Pathfinder Camp Safety Inspection Form or its equivalent. (available for download from adventistrisk.com)
   http://www.adventistrisk.org/pdfs/camp_inspectionform.pdf
Christian Drama


2. Describe each of the following categories of Drama.
   - Human Videos
   - Worship Skits/Drama Sketches
   - Pantomime
   - Dramatic Reading/monologue, duet, or group
   - Musical/Drama

3. Describe how each of these areas of Drama listed above can be used to reach people for God.
   - Human Videos
   - Worship Skits/Drama Sketches
Pantomime

Dramatic Reading/monologue, duet, or group

Musical/Drama

4. Know the following rules for acting.
   a. Never turn your back to the audience.
   b. Speak slow during a line and fast between the line (no dead space between characters speaking)
   c. Enunciate and pronounce words clearly (unless it states differently in the stage directions)
   d. No dairy products or sweets (chocolate, soda pop) before speaking lines or singing.
   e. Keep in character (don't laugh or smile unless stated in stage directions)
   f. Stay in your space (unless stated to move in stage directions)
   g. Do not block other characters from the audience.
   h. Use your hands and eyes.
   i. There is no such thing as over acting.
   j. Nothing blocking your mouth (gum, etc. Unless otherwise directed)

5. Know and understand why the following rules for pantomiming are important. Practice these rules to a simple Bible story.
   a. Pantomiming used as an outreach ministry should never be a guessing game. It should clearly state the theme.
   b. It is important to remember that in dramatic work, the thought comes first. Let your eyes respond first, then the rest of your face and head, and finally, the rest of your body. This is called motivated sequence.
   c. Your actions should always be simple and clear cut.
   d. Every movement and expression should always be visible.
   e. There should be a reason to every gesture or movement.
   f. Only one gesture or movement should be made at a time.
   g. Rehearse until you have created a clear-cut characterization.
6. Know the following acting terminology.

Ad-lib

backstage

cross

cue

downstage

upstaging

Exit

holding it

left and right

set

tempo

Christian Drama
2002 Edition
Updated 2007
upstage

getting up in a part

Left center and right center

☐ 7. From the categories listed in #2, plan and perform two from the categories of Drama in a worship setting, church, or youth group.

☐ 8. As a group create one drama presentation and perform it.
Community Assessment

1. Select an urban or suburban neighborhood, a small town or a rural region to focus on in the completion of the requirements for this honor.
   Community selected ____________________________________________

2. Compile a file folder of information on the selected community, including:
   a. A map of the area
   b. A demographic profile
   c. Public health statistics
   d. Economic indicators
   e. Housing information
   f. Environment and transportation

3. With a friend or assigned partner take an awareness walk of at least 45 minutes through a specific part of the selected community with the goal in mind of seeing human needs. List all of the needs you see such as yards and public areas that could be cleaned up, litter that could be picked up, lonely or aged people that could be helped, low-income families with children that could be assisted, etc.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
4. Interview at least one civic leader or community professional in the selected community. Ask this person about the needs in the community, the various organizations that provide services in the community, and how a Christian youth group might make a contribution to the community. Take notes during the interview.

5. Prepare a report of at least 10 pages on the selected community based on the information that you have collected and suggesting specific projects that ADRA or the local Adventist Community Services organization, or Youth Emergency Service (YES) Corps unit might provide which are needed in the community.

6. Make a presentation of at least 15 minutes based on the report to a local church committee, Adventist Community Services unit, or similar group.
1. Read the following Bible texts and explain what they teach about the role God expects each Christian to play in meeting the needs of the poor and suffering in the community:

   Isaiah 58:3-12
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   Luke 10:25-37
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   Matthew 25:31-46
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. Read Chapter 54 (entitled "The Good Samaritan) from The Desire of Ages by Ellen White and write a list of five key points in the chapter.

   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________

3. Explain to your instructor the following:

   The name of the local Adventist organization that serves the poor and suffering in your town or metropolitan area. What kinds of services does it provide?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
What the letters ADRA stand for. Give a brief explanation of each word represented, and explain the difference between "development" and "relief"

4. Pack an ADRA box, using the proper procedures for contents, method of packing, and labeling of the box.

5. Meet with the Adventist Community Services leader in your area and ask about projects that your Pathfinder unit or class might be able to accomplish that would help meet needs in your community.

6. Plan a community service project with your Pathfinder unit or class and complete it.

   Service Project ________________________________

7. Complete at least 10 hours of volunteer service, including both time invested in the project mentioned in requirement number six and time donated to other community service activities.

Date completed ____________ Instructor’s Signature ____________________

Community Service
2002 Edition
Update 2009
Copper Enameling

1. Know the difference between low-temp and high-temp enameling.
   Low-temp ____________________________________________________________
   ________________________________________________________________
   High-temp _________________________________________________________
   ________________________________________________________________

2. Name the materials on which the low-temp process can be used.
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

3. What is the proper method of cleaning items to be enameled?
   ________________________________________________________________
   ________________________________________________________________
   Why is it important to clean items to be enameled?
   ________________________________________________________________
   ________________________________________________________________

4. How is copper finished to prevent tarnishing?
   ________________________________________________________________
   ________________________________________________________________

5. Name the tools used in enameling.
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

6. What heat sources can be used for low-temp enameling?
   ________________________________________________________________
What safety precautions should be followed?

7. How are pin backs and magnets attached to the back of metal pieces?
   Pin backs _________________________________
   Magnets _________________________________

8. Make at least five items using the following techniques:
   a. Swirling
d. Mosaic
   b. Stencil
e. Scraffito
c. Threads

Items made
   1. _________________________________
   2. _________________________________
   3. _________________________________
   4. _________________________________
   5. _________________________________

NOTE: The high-fire firing for this honor need not be done by the candidate.
      This honor may be earned using either the high-fire or the low-fire enameling.
1. Have the Copper Enameling Honor.

2. Explain the use of a trivet.

3. What materials can be used to decorate enameled pieces for the applique technique?

4. Use four of the following techniques in completing requirement 5:
   - Counter enameling
   - Applique
   - Cloisonne
   - Dry painting
   - Scraffito

5. Make four of the following projects:
   - Holiday decoration
   - Kitchen decoration
   - Foil flower
   - Pin or stick pin
   - Metal bookends
   - Metal switch plate
   - Three-dimensional item
   - Similar item of your choice

Projects made:
1. 
2. 
3. 
4. 

Date completed ____________  Instructor’s Signature ____________________

North American Division
2002 Edition
1. Be at least in the 10th grade.

2. Explain how Christ encouraged people in crisis in at least two of the following Bible stories. Identify the nature of the crisis or human needs in each story that you explain.

- John 8:1-11
- Matthew 18:1-6
- John 4:1-26
- John 1:35-42
- Mark 2:13-17
- Acts 9
3. Describe for your instructor some of the human needs and crisis situations that teenagers in your community face today. Describe some of the crisis situations that families face. This may be done in a group discussion setting.

4. Discuss your own motives for wanting to help your friends when they face personal or family crisis.

What about strangers? This may be done in a group discussion setting.

5. Describe the types of human needs and give a real-life example of each.
6. Explain the steps in crisis intervention process and apply each step to a case study supplied by your instructor.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

7. Demonstrate a grasp of basic listening skills by conducting an interview of at least 30 minutes duration. This interview must either be observed by an observer who can recognize listening skills, or taped for review by your instructor. The interview does not have to be with a person who is in crisis, but it must be a real conversation not pretend or role-playing.

8. Explain how to make a referral to a professional counselor or pastor.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Digital Photography

Explain the following:

What are the principles of digital camera construction and how a digital camera works?

What are the effect of light on an image sensor?

How color images are created from the BW image the sensor captures?

What the camera lens does; what focal length means?

How are lens aperture and depth of field related?

Describe pixels, image resolution, and image size?
What are the two types of image compression?

____________________________________________________________
____________________________________________________________
____________________________________________________________

2. Name and describe three types of image formats.
   1. ________________________________________________________
      ________________________________________________________

   2. ________________________________________________________
      ________________________________________________________

   3. ________________________________________________________
      ________________________________________________________

3. Give the principle uses of photography:

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

4. Take pictures illustrating at least eight of the following techniques. Use comparison pictures for illustration.
   a. Framing
   b. Camera Steadiness
   c. Direction of lighting - front, side, or backlighting
   d. Quality of light - shade, sunlight, and time of day
   e. Rule of thirds
   f. Angle - eye level, high and low level
   g. Level horizon
   h. Distance from subject - fill the frame
   i. Use of leading lines
   j. Correct exposure - underexposed, overexposed, and correctly exposed
   k. Use of flash - proper distance and reflective objects
5. Learn how to place photos in PowerPoint. Create a PowerPoint presentation showing the pictures you took using the above techniques.

6. Using a photo editing program on a computer, show ability to crop, color correct, sharpen, and adjust brightness/contrast to photos.

7. Complete at least three creative photographic projects in a photo editing program; such as a CD cover, a photo scrapbook page, a collage, etc.

8. Have a basic understanding of file organization techniques.
1. Explain the type of damage most likely to occur to homes and individuals for each of the following major types of disaster, and indicate for each in which parts of the world does it occur most frequently:

   **Hurricane/Typhoon** ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

   **Tornado** ____________________________________________________________________________________
   ____________________________________________________________________________________
   ____________________________________________________________________________________

   **Floods** ____________________________________________________________________________________
   ____________________________________________________________________________________
   ____________________________________________________________________________________

   **Earthquake** _________________________________________________________________________________
   ____________________________________________________________________________________
   ____________________________________________________________________________________

   **Wildfire** __________________________________________________________________________________
   ____________________________________________________________________________________
   ____________________________________________________________________________________

   **Chemical spill** ______________________________________________________________________________
   ____________________________________________________________________________________
   ____________________________________________________________________________________

   **Nuclear accident** ____________________________________________________________________________
   ____________________________________________________________________________________
   ____________________________________________________________________________________
2. Describe briefly the types of services provided to survivors of disasters in your nation by ADRA or Adventist Community Services (ACS).

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. View a video report from ADRA or ACS concerning a recent disaster response project and discuss with your instructor, Pathfinder Club counselor, teacher or group the key roles that would be necessary in the disaster response team in order to accomplish the work described in the video.

4. Complete the official ADRA introductory training unit provided by your national ADRA office or ACS organization.

5. Describe at least one of these other major disaster response organizations and the kind of relationship that ADRA or ACS has with it:
   Red Cross __________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   UNHCR __________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   Food banks _______________________________________________________
   ________________________________________________________________
   ________________________________________________________________
6. Explain the role of government officials when a disaster occurs, identify the key government agency in your nation that manages emergency response, and describe the nature of the relationship that your ADRA or ACS country office has with this government agency.

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

7. Find a Bible text that you might use to comfort and encourage an individual of your same age and gender who has just experienced the total loss of their home, and tell why you chose that text.

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
**Drumming & Percussion**

1. Write a one page paper demonstrating your knowledge of how a drum corps can be used to minister within your:  
   a. local church  
   b. community

2. What are the four families of rudiments?
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________

3. Be able to name five rudiments from each of the four families of rudiments.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________

4. Demonstrate ability to keep in step with the drum corps by taking part in at least one outreach program. (ex. Pathfinder Day, Conference or Local church sponsored event)
5. What is the difference between drum carriers and drum straps?

Demonstrate with drum equipment in a formation.

6. What are the seven essential rudiments? Why are they essential?
   1. ______________________________________
   2. ______________________________________
   3. ______________________________________
   4. ______________________________________
   5. ______________________________________
   6. ______________________________________
   7. ______________________________________

7. What is the difference between playing open vs. closed?
   Open ______________________________________
   Closed ______________________________________
8. Using the open/closed method, demonstrate your knowledge of the seven essential rudiments. Execute: Open to Closed to Open

9. What is the difference between traditional style and matched style stick holding?
   Traditional __________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   Matched _________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   Demonstrate each style by playing a sequence consisting of no less than three rudiments.

10. What is the difference between drumsticks used for a drum corps and those used for a percussion drum set?

11. What are the sections that make up a drum corps?

12. Based on the previous question, what purpose does each section serve?
13. Show the various types of protective devices used to secure drum corps equipment.

14. What are the various types and sizes of drumsticks used for a drum corps?

________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

15. Know what tools and equipment used for drum practice sessions.
Drumming & Percussion, Advanced

1. Have the Drumming & Percussion Honor.

2. Demonstrate ability to keep in step with the drum corps by taking part in at least three outreach programs. (ex. Pathfinder Day, Conference or Local church sponsored event), in which one must be a parade no less than? of a mile.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

4. Demonstrate knowledge of the rudiment families by free styling for at least 60 seconds. Your routine must contain at least 3 rudiments from each rudiment family.

5. Discuss the proper steps in tuning a drum. Demonstrate by tuning a drum from any section of your drum corps.

6. Demonstrate ability to maintain drum equipment by replacing and retuning a drumhead from any section of your drum corps.

7. What types of fluids or solvents are used to clean drum equipment?
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
8. Demonstrate ability to secure drum equipment in storage or when traveling.

9. Know the area of the drumhead to strike from each section of your drum corps.

10. Demonstrate ability to keep in step with the drum corps (with equipment) by executing the following commands:

   Forward March
   Right Flank March
   Left Flank March
   Eyes Right
   Attention
   Right Face
   Left Face
   Parade Rest
   At Ease
   About Face
   To the Rear March
   Present/Order Arms

11. Demonstrate some useful exercises used by drum corps. Be able to explain their purpose.

12. Using rudiments, create a drum cadence not previously performed. Each section of the drum corps must execute a part of the cadence.

13. Demonstrate the difference between full-step marching vs. half-step marching with regard to playing cadences.
1. Earn the Cooking honor and the Camping Skills 3 honor.

2. Give a brief history of Dutch ovens and their role in American history.

__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________

3. Know the difference between a bread oven, a stew/meat oven, pot/stove top oven and a camp oven.
   Bread oven _____________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   Stew/meat oven ________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   Pot/stove top oven ______________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   Camp oven ____________________________________________
   _______________________________________________________
   _______________________________________________________
4. In what way are ovens sized?

5. Know and demonstrate fire and Dutch oven handling safety and the proper use of equipment.

6. What types of fuels are used to cook with an oven?

7. What are the advantages of charcoal over wood as fuel?

8. How do you control temperature?

9. What do ashes do to the efficiency of the coals?

10. If using wood, what types are best for cooking?

11. Demonstrate how to properly season a new Dutch oven.

12. Demonstrate how to properly clean a Dutch oven after each use.

13. Demonstrate how to properly transport Dutch ovens.

14. Demonstrate how to properly store a Dutch oven for a short term and long term.
15. Cook one of each category using Dutch ovens:
   Soup/Stew
   Casserole
   Vegetable
   Bread
   Dessert

16. Cook with the lid only as a griddle.

17. Name the six different ways to cook in a Dutch oven.
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. _________________________________________________________
   5. _________________________________________________________
   6. _________________________________________________________

18. What is meant by stack cooking?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
Endangered Species

1. Define the following terms.
   - Endangered ____________________________________________________
   - Extinct ______________________________________________________
   - Habitat _____________________________________________________
   - Biomes ______________________________________________________
   - Food chain _________________________________________________
   - Poacher ___________________________________________________

2. Write Genesis 1:28 in your own words.

3. List four factors that have caused animals to become endangered.

4. Name four animals that are now extinct.
5. List four things that are being done to save endangered animals.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

6. List four activities you can do to help wild animals.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

7. List ten endangered animals. Tell where they live and why they have become endangered.
   1. ________________________________________________________________
      ________________________________________________________________
   2. ________________________________________________________________
      ________________________________________________________________
   3. ________________________________________________________________
      ________________________________________________________________
   4. ________________________________________________________________
      ________________________________________________________________
   5. ________________________________________________________________
      ________________________________________________________________
   6. ________________________________________________________________
      ________________________________________________________________
   7. ________________________________________________________________
      ________________________________________________________________
   8. ________________________________________________________________
      ________________________________________________________________
   9. ________________________________________________________________
      ________________________________________________________________
  10. ________________________________________________________________
      ________________________________________________________________
8. Do two of the following activities:
   a. Visit a zoo or animal preserve that has one or more endangered animals in residence. List what animal(s) you saw, where they normally live, and why they have become endangered.
   b. Watch a video about an endangered animal. List what animal(s) you saw, where they normally live, and why they have become endangered.
   c. Choose an endangered animal and write or give orally a short report about it. Tell where it normally lives, why it has become endangered, what is being done to save it, and any other special details about this particular animal that you have learned.
   d. Make a scrapbook about endangered animals. This may include newspaper articles, stories, pictures, stamps, or drawings. This may be a group project.
   e. Do an environment circle. With a group of 10-20 persons, form a loose circle with people evenly spaced within. Have each person represent something in the environment such as animals, grasslands, forests, etc. Then take a spool of heavy thread or string and connect each person to others in the circle. Have the leader start cutting the connections and start taking individuals out of the circle and see how the remaining persons are affected by the loss. Help the group to see that each thing in nature is very necessary to the survival of everything else in nature.

Date completed ____________  Instructor’s Signature ____________________

Endangered Species
2002 Edition
Updated 2004
1. Define the following words:
   - genealogy
   - ancestor
   - descendant
   - spouse
   - sibling

2. Read the genealogy of Christ
   - Be able to tell where it is found in the New Testament
   - Write out the genealogy of Christ – beginning with Adam

3. List five ways to obtain family genealogy information
   1. 
   2. 
   3. 
   4. 
   5. 

Pathfinder’s Name
4. Know at least three societies that help with genealogy research
   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________

5. Learn four steps important to genealogy research
   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________
   4. _______________________________________________________

6. What is the purpose of documentation?
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

7. Define a primary source versus a secondary source for documentation.
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

8. Prepare a four-generation family chart – beginning with your self

9. List ways to record your genealogy information.
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
10. Research your family history by talking/writing to your oldest living relative

Ask the following:
- first memory
- When and where you were born?
- First church you remember attending?
- Names of schools, and location, you attended
- Where you lived at age ten and age fourteen
- From what country did our ancestors emigrate?
- Where and when were you married
- If you had children please give their names, place and date of birth
- Write a thank you to your relative for their time and include a photo of yourself and ask them if they would be willing to share a copy of an older family photo with you.

11. Make a historical record of your life including:
   a. genealogical chart
   b. Records that pertain to your life
   c. Pictures
   d. Stories
   e. Share this with your group/club/school

12. Visit a City/County Library – Genealogy Section (or other Genealogy Research Center) and write a paragraph on your visit including:
   a. Types of information available
   b. Any New information you discovered about your family

13. Visit a cemetery and learn by copying the headstones:
   a. The names of three different families
   b. The dates of birth and death for these family members
   c. The average length of life for these family members

14. Check with your local cemetery officials to learn how upkeep is done and ask them how you can help with clean-up in a cemetery in your area. Then do it!
Genealogy, Advanced

1. Have the Genealogy Honor

2. Define a primary source versus a secondary source for documentation.

3. What is the purpose of documentation?

4. Demonstrate a census extraction for one branch of your family from six of the following census: (for NAD find year of immigration and list the country from where they immigrated)
   a. 1840
   b. 1850
   c. 1860
   d. 1870
   e. 1880
   f. 1900
   g. 1910
   h. 1920

5. Show a pedigree chart you have filled out for 7 generations. List the information you have been unable to learn and what efforts you have made to locate this information.
6. Show 42 family group records you have filed out and the documentation notes to go with the family group record.

7. Find military records/pension records on one of your family members. If your family has none, then show military/pension records on any person.

8. Show vital records you have obtained for one person from item # 5 including:
   a. birth
   b. marriage
   c. death

9. Show a copy of 3 obituaries on relatives with documentation where you found them.

10. List four web sites/or libraries where you have been able to locate information for your family research.
    1. _______________________________________________________
    2. _______________________________________________________
    3. _______________________________________________________
    4. _______________________________________________________

11. Where in the Bible does it say not to spend time on fables and endless genealogies?

    _______________________________________________________

What does the Seventh-day Adventist Commentary list as the reason for this advice?
1. Define Geocaching.

________________________________________________________________________
________________________________________________________________________

2. What is a GPS receiver?

________________________________________________________________________

3. Demonstrate 2 ways of finding the location of a Geocache in your area on a Geocache website.

4. Demonstrate entering the latitude and longitude coordinates into the GPS to find a Geocache in your area.

5. Define the following terms
   Traditional cache ____________________________________________
   ____________________________________________________________
   Micro-cache _______________________________________________
   ____________________________________________________________
   Virtual-cache _______________________________________________
   ____________________________________________________________
   Multi-level cache ___________________________________________
   ____________________________________________________________
   Travel Bug _________________________________________________
   ____________________________________________________________
   Geomuggle/muggle __________________________________________
   ____________________________________________________________

Pathfinder’s Name

North American Division
2002 Edition
Update 2005
6. What items may be left in a geo-cashe? Which items may not? What is usually in a cache?

_____________________________________________________________

_____________________________________________________________

7. Know and practice good Travel Bug Etiquette

8. What is meant by Cache In, Trash Out?

_____________________________________________________________

9. Find 3 Geocaches in your area, at least one of which must be a regular (traditional) cache.
   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________

10. Write about your geocache find in your logbook on a geocache website.

11. Discuss Matthew 6:19-21 and Jeremiah 29:13 and compare them to geocaching.

12. Discuss safety concerns you should consider when geocaching.

_____________________________________________________________

_____________________________________________________________

_____________________________________________________________

_____________________________________________________________

_____________________________________________________________

_____________________________________________________________

_____________________________________________________________
1. Have the Basic Geocaching Honor

2. Briefly describe the origin of the global positioning satellites? What is their history—when and how did they get there? By whom?

3. Define latitude, longitude. What is meant by degrees, minutes, seconds?

4. Complete two or more of the following:
   a. Establish and maintain a new geocache in your area for at least 6-months.
   b. Send out and follow a TB (travel bug) for 6 months.
   c. Find 2 travel bags and follow for 6 months.
   d. Participate in a geocache meeting or event in your area (attend).

5. What are the laws/rules/guidelines for placing caches in the following locations?
   State Parks National Park Service
6. Find and record at least 18 geocaches; include:

   Traditional cache with 3-star difficulty.
   One Multi-level.
   One virtual.
   One micro.

1. ____________________________________________________________

2. ____________________________________________________________

3. ____________________________________________________________

4. ____________________________________________________________

5. ____________________________________________________________

6. ____________________________________________________________

7. ____________________________________________________________
1. Name the tools and items needed for Glass Etching.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. Name the eleven steps of Glass Etching.

1. __________________________

2. __________________________

3. __________________________

4. __________________________

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10. __________________________

11. __________________________

3. What is the technique of applying velvet etch?

________________________________________________________________________

4. Make a project on clear glass.
   a. Lettering or verses
   b. Flowers, animals, or people.

   Project made __________________________

5. Make a project on a mirror. Include the following:
   a. Lettering, verses, flowers, animals, or people.
   b. Finish by framing around mirror with colored tape.

6. Make a project on a glass, jar, or oval object.

   Project made __________________________
1. Create a list of equipment used for gold panning. Describe each item and tell what it is used for. The list should include at least the following.

Gold Pan

Classifier

Snuffer Bottle

Shovel

Pick

Bucket

Trowel

Pry bar
2. Define the following:

Pay Dirt

Quartz

Pyrite

Blond Sand

Black Sand

Placer
Lode _____________________________________________________

__________________________________________________________

__________________________________________________________

Nugget ____________________________________________________

__________________________________________________________

__________________________________________________________

 Flake _____________________________________________________

__________________________________________________________

__________________________________________________________

Mercury (historical use) DO NOT USE TODAY ______________________

__________________________________________________________

__________________________________________________________

 Dust _____________________________________________________

__________________________________________________________

__________________________________________________________

Specific Gravity _____________________________________________

__________________________________________________________

__________________________________________________________

Wet and Dry Panning ________________________________________

__________________________________________________________

__________________________________________________________

Gold Fever ________________________________________________

__________________________________________________________

__________________________________________________________

Troy Pound ________________________________________________

__________________________________________________________

__________________________________________________________

Troy Ounce ________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

Gold Prospecting
2002 Edition
Update 2008
Penny weight (dwt) __________________________________________
________________________________________________________________________
________________________________________________________________________
Grain _____________________________________________________
________________________________________________________________________
________________________________________________________________________

☐ 3. What are the following identifying characteristics of Gold.
   Specific Gravity _____________________________________________
   __________________________________________________________________
   __________________________________________________________________
   Color of streak ______________________________________________
   __________________________________________________________________
   __________________________________________________________________
   Color _____________________________________________________
   __________________________________________________________________
   __________________________________________________________________

☐ 4. Where are some good places on a river or stream to look for gold?
   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________

☐ 5. Make a timeline containing at least 15 items about the history of gold
   prospecting from 1600 until the present day, including the following
   rushes: California Gold Rush, Klondike/Yukon Gold Rush, Witwatersrand
   Gold Rush and the Victorian Gold Rush.

☐ 6. Learn about gold panning by doing one of the following:
   a. Do some gold panning. (preferred).
   b. Practice panning using flattened lead or tungsten shot mixed with
      sand (preferably from a river bank).
7. Look up the following verses in the Bible and discuss them in relation to prospecting for gold.

Matthew 13:44-46 ______________________________________________
_____________________________________________________________
_____________________________________________________________

Matthew 6:19-21 _______________________________________________
_____________________________________________________________
_____________________________________________________________
Gold Prospecting, Advanced

1. Have the Gold Prospecting Honor.

2. Describe the following types of prospecting equipment.
   Sluice box
   ________________________________
   ________________________________
   ________________________________

   Rocker box
   ________________________________
   ________________________________
   ________________________________

   High banker
   ________________________________
   ________________________________
   ________________________________

   Bucket dredge
   ________________________________
   ________________________________
   ________________________________

   Suction dredge
   ________________________________
   ________________________________
   ________________________________

   Dry washer
   ________________________________
   ________________________________
   ________________________________

   Trommel
   ________________________________
   ________________________________
   ________________________________

   Beach box
   ________________________________
   ________________________________
   ________________________________
3. What government requirements, if any, are associated with the equipment listed in number 2 above?
4. What are the advantages or disadvantages to the equipment listed in number 2 above?

Sluice box

Rocker box

High banker

Bucket dredge
5. Use at least two of the types of equipment listed in number 2 above to prospect for gold.

6. Pathfinders are supposed to take only pictures and leave only footprints, but prospecting requires moving rocks and digging large holes. How can you reconcile these two conflicting requirements?
Heart and Circulation

1. Describe the basic function of the following parts of the circulatory system:
   heart ____________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   blood vessels __________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   blood _________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   lungs _________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

2. Describe the major difference between arteries and veins.
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

   What is a capillary and what is its function?
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
3. Identify two locations for measuring your pulse. Demonstrate your ability to accurately take someone's pulse.

_____________________________________________________________
_____________________________________________________________
_____________________________________________________________

4. Record your resting pulse rate, then exercise strenuously (ie jog, swim laps, climb stairs, etc.) for 10 minutes. Retake your pulse immediately after exercising, and then again after five minutes. Do this each day for one week recording your results on a chart or a graph. Did the exercise effect your heart rate?

5. Make a simple stethoscope and listen so someone’s heart beat.

6. List at least five things you can do to keep your heart healthy. Put these into practice if you have not been doing so already.
   1. __________________________________________
   2. __________________________________________
   3. __________________________________________
   4. __________________________________________
   5. __________________________________________

7. What is cholesterol and how is it related to arteriosclerosis?

_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________

8. What is a heart attack and what are its symptoms? How can CPR help?

_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
9. What is an ECG and how is it used by a doctor?

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

10. Find five verses in the Bible that refer to your heart. Memorize two of them.

   1. ______________________________________________________________

   2. ______________________________________________________________

   3. ______________________________________________________________

   4. ______________________________________________________________

   5. ______________________________________________________________
Record for 1 week your resting heart rate then exercise strenuously (ie jog, swim laps, climb stairs, etc.) for 10 minutes. Retake your pulse immediately after exercising, and then again after five minutes. Do this each day for one week recording your results on a chart or a graph. Did the exercise effect your heart rate?

<table>
<thead>
<tr>
<th>Day</th>
<th>Resting</th>
<th>Exercise</th>
<th>Heart rate</th>
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</tbody>
</table>
1. What is meant by the term “heredity”?

_____________________________________________________________
_____________________________________________________________
_____________________________________________________________

2. Draw a picture of an animal cell and label the following parts: Cell membrane, cytoplasm, nucleus, nuclear membrane, ribosomes

3. What is a chromosome and where are they located?

_____________________________________________________________
_____________________________________________________________
What is a gene and where is it found?
_____________________________________________________________
_____________________________________________________________

4. What is meant by the term “allele”?

_____________________________________________________________
How does a dominant allele differ from a recessive allele?

Determine which allele you have of the following genetic traits:

- Widow’s peak
- Free earlobe
- Dimples
- Curved Thumb
- Bent pinky
- Digit hair
- Rolling tongue
- Second toe longer

Using a punnet square, predict the ratio of offspring produced from these monohybrid crosses: TT (tall) crossed with tt (short), Tt (tall) crossed with Tt (tall), Tt (tall) crossed with tt (short)
5. What does the process of mitosis accomplish?

_____________________________________________________________

_____________________________________________________________

_____________________________________________________________

Draw a sequence of cells that shows the process of mitosis including: prophase, metaphase, anaphase and telophase.

_____________________________________________________________

_____________________________________________________________

_____________________________________________________________

Briefly explain how the DNA in the chromosomes is copied during this process.

_____________________________________________________________

_____________________________________________________________

_____________________________________________________________
6. What does the process of meiosis accomplish and how does it differ from mitosis?

Draw a sequence of cells that shows the process of meiosis including: prophase I & II, metaphase I & II, anaphase I & II and telophase I & II.

Do the cells resulting from meiosis remain haploid? Explain.
7. Describe how DNA encodes the specific proteins that result in genetic traits. Demonstrate your knowledge of this process by using diagrams or paper models.

8. What is a mutation? Using the diagrams or models created in question 7 to illustrate the effect of a mutation on the genetic trait.

9. Know at least five genetic disorders and tell a story about a famous person or someone that you know who has had one of these disorders.
   1. ________________________________
   2. ________________________________
   3. ________________________________
   4. ________________________________
   5. ________________________________

10. Is Biological Heredity the only factor contributing to your character, i.e., what makes you who you are?

11. Find 3 statements from Ellen Whites writings that relate to the previous question
   1. ________________________________
   2. ________________________________
   3. ________________________________
   4. ________________________________
Hot Air Balloon

1. State the role each of the following played in the development of flying balloons.

   Joseph Michel Montgolfier and Jacques-Etienne Montgolfier

   Jean Francois Pilatre de Rozier and Francois Laurent Marquis d'Arlandes

   Jacques Alexandre Cesar Charles and Nicolas Louis Robert

   Ben L. Abruzzo, Maxie L. Anderson, and Larry Newman

   Bertrand Piccard and Brian Jones

2. Cite the principle of Archimedes, and briefly describe how it applies to each of the following:

   ____________________________
   ____________________________
   ____________________________
   ____________________________
A piece of cork floating in a bowl of water

A ship floating in the ocean

A hot air balloon floating in the atmosphere

3. Using a textbook of Chemistry, or a reference book of scientific tables, draw up a simple table showing the composition of air by weight and by volume.

4. Draw up a simple table showing a comparison of the atomic number, atomic weight, and density of hydrogen, helium, nitrogen, and oxygen.
5. Name two gases that are used in flying gas filled balloons.
   1. __________________________________________________________
   2. __________________________________________________________

6. Explain how heat/temperature affect the density of air, and how this applies to flying hot air balloons.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

7. Explain the role of each of the following in the structure and flying of a hot air balloon.
   Envelope __________________________________________________
   __________________________________________________________
   __________________________________________________________
   Support structure __________________________________________
   __________________________________________________________
   __________________________________________________________
   Throat __________________________________________________
   __________________________________________________________
   __________________________________________________________
   Fuel source _______________________________________________
   __________________________________________________________
   __________________________________________________________

8. Name two materials that may be used for the envelope of a hot air balloon, and compare the advantages each cords because of its properties.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
9. Describe how flying balloons have served a useful function in Military campaigns
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
Scientific research ___________________________________________
   ____________________________________________________________
   ____________________________________________________________

10. At what time of the day do most sport balloon flights take place? Why?
    ____________________________________________________________
    ____________________________________________________________

11. Describe how a pilot controls the vertical movement of
    A hot air balloon __________________________________________
    ____________________________________________________________
    ____________________________________________________________
    A gas filled balloon _________________________________________
    ____________________________________________________________
    ____________________________________________________________

12. Describe how a pilot controls the lateral or horizontal movement of a flying balloon.
    ____________________________________________________________
    ____________________________________________________________

13. Build to completion one model hot air balloon (or two if working in pairs).

14. Successfully launch, fly, and recover the model hot air balloon(s) which you have built.
Hunger Relief

1. View an ADRA video on the topic of world hunger and discuss with your Pathfinder Club unit or class the methods shown in the video which ADRA is using to combat hunger.

2. Interview the person who directs the community food pantry in your local church or another local church in your area. Ask this person about the types of people they serve, what causes food needs in the community, and how they meet these needs. Take notes during the interview.

3. Visit a food bank and talk with the staff, and then explain to your instructor how the food bank gathers donated groceries and provides supplies to food pantries, soup kitchens, etc.

4. Describe in an essay of at least 500 words the causes of hunger in each of the following situations:
   - Developing nations overseas
   - Inner-city and other disadvantaged areas in this country
   - Alternate requirement: Make a presentation of at least 10 minutes during a Sabbath School program, Pathfinder Club Devotional, to a school assembly or civic club on the same topics.
   - Alternate requirement: Create a video tape, slide and sound show, or presentation software production on the same topics and show the production to a Sabbath School group, school assembly or civic club.

5. Collect at least 50 non-perishable food items for the community food pantry in your local church or the nearest Adventist Community Services center.

6. Volunteer in a soup kitchen for at least two meals, This can be done as a group project with others in your Pathfinder Club or school. If there is no Soup Kitchen in your area, prepare and distribute six sack lunches to the needy or homeless.
Indian Lore

1. Name five uses made of natural materials by the Northwest Indians.
   1. __________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________

2. Name five uses made of the yucca plant by the Southwest Indians.
   1. __________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________

3. Name five uses made of the birch tree by the Eastern Woodland Indians.
   1. __________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________

4. Know 15 plant foods introduced to us by the Indians. Include four plant names used today.
   1. __________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________
   6. __________________________________________________________
   7. __________________________________________________________
8. ________________________________

9. ________________________________

10. ________________________________

11. ________________________________

12. ________________________________

13. ________________________________

14. ________________________________

15. ________________________________

☐ 5. Describe Indian stalking and tracking.

Stalking ________________________________

______________________________________________________________________________

Tracking ________________________________

______________________________________________________________________________

☐ 6. Name five rocks and/or minerals and uses made of them by the Indians.

<table>
<thead>
<tr>
<th>Rocks/Minerals</th>
<th>Uses</th>
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☐ 7. Explain one way in which arrowheads were made by the Indians.

______________________________________________________________________________

______________________________________________________________________________

☐ 8. Define pictograph.

______________________________________________________________________________

______________________________________________________________________________

What are Indian petroglyphs and where can you find them?

______________________________________________________________________________

______________________________________________________________________________
9. Describe the use of seashells by the Indians.

________________________________________________________
________________________________________________________
________________________________________________________

10. Name at least ten materials used in making Indian arts and crafts.
1. ______________________________________________________
2. ______________________________________________________
3. ______________________________________________________
4. ______________________________________________________
5. ______________________________________________________
6. ______________________________________________________
7. ______________________________________________________
8. ______________________________________________________
9. ______________________________________________________
10. _____________________________________________________

11. Make a craft item, using any of the materials named in requirement nine (9).
Craft made _______________________________________________
Indian Lore, Advanced

1. Have the Indian Lore Honor.

2. Know and have a list of at least 40 foods introduced to us by the Indians of North and South America.
   1. ______________________ 21. ______________________
   2. ______________________ 22. ______________________
   3. ______________________ 23. ______________________
   4. ______________________ 24. ______________________
   5. ______________________ 25. ______________________
   6. ______________________ 26. ______________________
   7. ______________________ 27. ______________________
   8. ______________________ 28. ______________________
   9. ______________________ 29. ______________________
  10. ______________________ 30. ______________________
  11. ______________________ 31. ______________________
  12. ______________________ 32. ______________________
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  14. ______________________ 34. ______________________
  15. ______________________ 35. ______________________
  16. ______________________ 36. ______________________
  17. ______________________ 37. ______________________
  18. ______________________ 38. ______________________
  19. ______________________ 39. ______________________
  20. ______________________ 40. ______________________

3. Participate in a meal using as many Indian foods and cooking methods as possible.
4. Name five drugs or medicine plants used by the Indians.
   1. ______________________________________________________
   2. ______________________________________________________
   3. ______________________________________________________
   4. ______________________________________________________
   5. ______________________________________________________

5. Discuss the Indians of your area with regard to:
   a. Tribes located there
   b. Homes and clothing
   c. Native crafts performed, such as basketry, pottery, mats, etc.
   d. Religious practices
   e. Form of Government

6. Name ten articles used by the Indians in their religious ceremonies.
   1. ______________________________________________________
   2. ______________________________________________________
   3. ______________________________________________________
   4. ______________________________________________________
   5. ______________________________________________________
   6. ______________________________________________________
   7. ______________________________________________________
   8. ______________________________________________________
   9. ______________________________________________________
   10. _____________________________________________________

7. Explain two methods of mounting and displaying arrowheads.
   1. _____________________________________________________
   2. _____________________________________________________

8. Explain one method of restoring and mending damaged arrowheads, ollas, blankets, and baskets.
   Arrowheads
   1. ___________________________________________________
   Ollas
   1. __________________________________________________
Blankets
1. ________________________________________________

Baskets
1. ________________________________________________

9. Name and locate at least ten different tribes of the present day and tell for what each is noted.

<table>
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<tr>
<th>Tribes</th>
<th>Noted for</th>
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10. Experiment with plant dyes as used by the Indians and try to obtain at least two shades of color.

<table>
<thead>
<tr>
<th>Colors/Shades</th>
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11. Do one of the following:
   a. Visit an Indian museum
   b. Visit Indian ruins or mounds
   c. Make a personal visit with an Indian
   d. Visit an Indian village or reservation
1. Define the following terms:

Internet ____________________________________________________
________________________________________________________________
________________________________________________________________

World Wide Web (WWW) _________________________________________
________________________________________________________________
________________________________________________________________

Chat Room ________________________________________________________________________
________________________________________________________________
________________________________________________________________

Download ________________________________________________________________________
________________________________________________________________
________________________________________________________________

Upload __________________________________________________________________________
________________________________________________________________
________________________________________________________________

Website __________________________________________________________________________
________________________________________________________________
________________________________________________________________

Virus* __________________________________________________________________________
________________________________________________________________
________________________________________________________________
2. Define the following terms and give examples of each:

mail ____________________________
________________________________________________________________________
________________________________________________________________________

Web browser ____________________________
________________________________________________________________________
________________________________________________________________________

IRC/IM (Instant Messenger) client ____________________________
________________________________________________________________________
________________________________________________________________________

Streaming ____________________________
________________________________________________________________________
________________________________________________________________________

Search Engine & Search Directories ____________________________
________________________________________________________________________
________________________________________________________________________

Antivirus software ____________________________
________________________________________________________________________
________________________________________________________________________

Firewall ____________________________
________________________________________________________________________
________________________________________________________________________

3. Complete one of the following:

a. Write a brief 250-300 word history of the Internet.

b. Present a 2-3 minute talk concerning the history of the internet. Regardless of the option chosen, include date/events surrounding its origin, the major landmark events, the birth and growth of web browsers (such as Mosaic, Netscape, Internet Explorer), and what it is doing today. Remember, this is not a history of computers, but rather a brief history of the Internet. You should list at least 2 online resources from which you found information relevant to your report.
4. Why is antivirus software important? Include in your answer: What are some ways you can receive virus’ via the Internet? How is having up-to-date antivirus software important for keeping your computer files safe? How can not being protected lead to sharing the virus with other family and friends? What harm can a virus do to your computer or to other people’s computers?

5. In what ways does filterware / Parental controls (programs like Net Nanny™ or AOL Parental Control) protect your family? With your family, develop & sign a Covenant of Family Internet Usage including the following elements:

a. Never reveal personal information
b. Remember that people may not be who they say they are
c. Never meet an online friend in the flesh for the first time without a parent present
d. Never respond to flames
e. Stop immediately if you see or read anything that upsets you.
f. Time each member of the family may spend on the internet per week. Set boundaries that encourage time for family, homework, and other necessary family activities.
g. Types of websites that are acceptable/unacceptable to view. What are the principles that your family will use to determine what are acceptable? Base these principles on the Bible.

6. Show your ability to navigate your way around the internet by demonstrating the following:

a. Visit at least 3 different websites (distinct domain names). Print out or show the front page of each site for your instructor.
b. Demonstrate your ability to use a search engine to find an online Bible website. Go to the website, look up at least 3 different Bible memory texts in 3 different versions, and print or show your results to your instructor.

c. Find 3 websites created by the Seventh-day Adventist Church. Print out or show the front page of each site for your instructor.

d. Download a compressed file from the internet (tar, zip, etc.) to your hard drive and uncompress it and operate the program or file.

☐ 7. Demonstrate your ability to use email by demonstrating the following to your instructor. (If necessary, create an email account, with a distinct username and password):

a. Create and send email
b. Receive and download email
c. Download/view an attachment
d. Know 5 principles of operating email safely.

☐ 8. Memorize Philippians 4:8. How does this Bible text guide a Christian’s use of the internet?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

*Throughout this honor, the term “virus” represents the traditional virus, as well as trojans, worms, and other malicious code.
Internet, Advanced

1. Have the Internet Honor

2. Have the Basic Computer Honor

3. Define the following terms (or their equivalents) and tell when and how they are used:
   - HTTP
   - Hyperlink
   - HTML
   - Browser safe colors and hex codes
   - URL
   - Gif
   - JPEG
4. Learn and demonstrate the use of these HTML tags OR demonstrate equivalent website construction commands in one of the current website development languages (PHP, XML, etc.)

   a. \( \texttt{\<html\>\<html\>} \)
   b. \( \texttt{\<head\>\<head\>} \)
   c. \( \texttt{\<body\>\<body\>} \)
   d. \( \texttt{\<b\>\<b\>} \)
   e. \( \texttt{\<i\>\<i\>} \)
   f. \( \texttt{\<a \text{href}="URL"\>\<a\>} \)
   g. \( \texttt{\<p\>\<p\>} \)
   h. \( \texttt{\<br\>\<br\>} \)
   i. \( \texttt{\<img \text{src}="name"\>} \)
   j. \( \texttt{\<hr\>\<hr\>} \)
   k. \( \texttt{\<table\>\<table\>} \)
   l. \( \texttt{\<tr\>\<tr\>} \)
   m. \( \texttt{\<td\>\<td\>} \)

5. Make a simple table – include text, a graphic, a horizontal rule, and a link. Use hex Codes to color your text. Make your title larger then the main document text.

6. Learn about:

   a. Web graphics and be able to explain the process used to make them download quickly.
   b. Web safe colors and know when to use them. Use this knowledge to create a jpg and a gif that are both under 15k, but that are still easily viewable on a website, and to create at least five graphical navigation buttons and a title header for your website.

7. Individually or as a family, unit, or other group, develop a functioning website. All the pages of the website should be “linked” together so that someone visiting your “Homepage” may click to each of the other pages on your website. The website should be composed of no less than 4 pages. The website should include:

   a. A welcome page that states the reason for the website & includes at least one image or photograph.
   b. A photos page that shows activities/events you, your family, or group have enjoyed
   c. A guest book or contact page where people can “sign in” that they have visited OR where a contact email address is listed where people can email you when they visit your website.
   d. A links page to other websites that you enjoy. This page should contain at least 8 links.
e. If your page is for Pathfinders/Youth group/Church or similar organization, create a calendar page that contains upcoming events.

f. Maintain the above website for at least 3 months. Keep the website information current by changing and editing the content often (Add pictures, update the calendar, etc.).
Lapidary

1. Name four safety precautions to be taken when sawing rocks.
   1. __________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. __________________________________________________________

2. Name two types of diamond saw lubricating and cooling solutions and their purpose.
   1. __________________________________________________________
   2. _________________________________________________________
   Purpose ___________________________________________________

3. Explain how a diamond saw cuts rocks, how it gets dull, and how it can be sharpened.
   Cuts Rock ________________________________
   Gets dull ________________________________
   Sharpened ________________________________

4. Describe the five basic steps to follow in bringing a slab or a flat surface to a polish.
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. _________________________________________________________
   5. _________________________________________________________
5. What important precaution should be taken between each stage of grinding and sanding?

________________________________________________________

6. What is a template, and how is it used?

________________________________________________________

7. What is a cabochon, and what is the usual thickness of the slab from which it is made?

________________________________________________________

8. How do you decide the best angle or position to slab a specimen?

________________________________________________________

9. Explain two methods of wet sanding while shaping and polishing the rock.
   1. ______________________________________________________
   2. ______________________________________________________

10. From what material are polishing compounds made?

     _______________________________________________________

If a scratch appears while polishing, how is it removed?

     _______________________________________________________

11. Saw, trim, properly dop, and carry a cabochon through the necessary grinding, sanding, and polishing stages to a high gloss or glassy finish.

12. Mount the cabochon on some type of backing, such as a stick pin, sweater pin, key ring, etc., with cement.
Letter Boxing

1. Define the following

   Cache _________________________________________________  
   __________________________________________________________  
   __________________________________________________________  
   __________________________________________________________  

   Letterbox ______________________________________________ 
   __________________________________________________________  
   __________________________________________________________  
   __________________________________________________________  

   Trail name _____________________________________________ 
   __________________________________________________________  
   __________________________________________________________  
   __________________________________________________________  

   Personal log book _______________________________________ 
   __________________________________________________________  
   __________________________________________________________  
   __________________________________________________________  

   Stamp in _______________________________________________ 
   __________________________________________________________  
   __________________________________________________________  
   __________________________________________________________  

   Hitchhiker _____________________________________________ 
   __________________________________________________________  
   __________________________________________________________  
   __________________________________________________________  

   Hybrid box ____________________________________________ 
   __________________________________________________________  
   __________________________________________________________  
   __________________________________________________________  

   Bonus box _____________________________________________ 
   __________________________________________________________  
   __________________________________________________________  
   __________________________________________________________  

Pathfinder’s Name
2. List at least five behaviors you should practice while letterboxing.
   1. ____________________________________________
   2. ____________________________________________
   3. ____________________________________________
   4. ____________________________________________
   5. ____________________________________________

3. Know the basic orienteering skills of
   Pacing
   Compass use
   Know how to find the four major directions without a compass

4. Design, create and carve your own personal stamp.

5. As a unit, club or family find the clues and then locate at least ten letterboxes, four which can be part of a series. Individually “stamp in” your stamp, imprint the letterbox stamp in your log book and record your find on the web site.
Letter Boxing, Advanced

1. Complete the Letterboxing honor.

2. Create a letterbox stamp, post clues on a web site, establish and maintain a letterbox for six months.

3. As a unit, club or family find the clues and then locate an additional twenty letter boxes not found for the basic honor, eight which can be part of two or more series. Individually “stamp in”, imprint the letterbox stamp in your log book and record your find on the web site.

4. Design, create and carve your own hitchhiker stamp. Hide in a letterbox, post on a web site and track its travels for six months.

5. Participate in an exchange with letterboxers other than your local club members and obtain a minimum of 20 stamp images.

Pathfinder’s Name

Date completed ____________  Instructor’s Signature ____________________
Lighthouses

1. Describe the following in detail concerning lighthouses:
   a. What is the function of a lighthouse?

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   b. When were the first lighthouses of record built?

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   c. What is the name of the most famous ancient lighthouse?

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   d. What are people called who study lighthouses? Why?

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   e. Do all lighthouses have keepers? If not, how are they run?

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. Research the structure and function of Fresnel lenses. Explain what makes these lenses so effective.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
3. Throughout history, what fuels were used for lighthouse lights?

__________________________________________________________

__________________________________________________________

__________________________________________________________

4. Are all lighthouses located along ocean shores? If not, list other locations where you would find a lighthouse.

__________________________________________________________

__________________________________________________________

__________________________________________________________

5. What is the lighthouse service called in your country? What organization or branch of government is responsible for maintaining lighthouses in your country?

__________________________________________________________

__________________________________________________________

__________________________________________________________

6. When a lighthouse is a visible landmark seen from the ocean during the day it can be identified by certain markings. What are these called?

__________________________________________________________

__________________________________________________________

__________________________________________________________

7. What is a foghorn? Why would one be used at a lighthouse? What are three things that affect how far away a foghorn can be heard?

__________________________________________________________

__________________________________________________________

__________________________________________________________
8. Since lighthouses are often called “lights, explore the concept of “lights” in scripture by doing the following:

a. Look in the Bible Concordance to find “lights” and discuss lights as referred to in the Bible

b. Explain why you think God’s word is like a lighthouse.

c. Memorize John 8:12.

9. Write a poem or a story about a lighthouse light. Include thoughts of God’s “light”. Read your story or poem to your group.

10. Draw or photograph five lighthouse forms/types being used today.

11. Do one of the following:

a. List the names and locations of 5 lighthouses in your state/province.

b. Locate on a map the location of 10 lighthouses in your country/division

12. List the references you used to learn about lighthouses.
Lighthouses, Advanced

1. Have the Lighthouses Honor

2. Make a scrapbook including the following:
   a. Pictures, post cards or drawings of twenty-five lighthouses. Label should include a brief description of: location, year built, active / non-active status, and order of the lens.
   b. Write up a short history of the above lighthouses.
   c. Include drawings/pictures and answers to all the requirements for this honor in your scrapbook.

3. List the development of a Fresnel lens, including: Name of the gentleman that invented it, country that he came from, year developed.

4. Draw a Fresnel lens: Show how prisms are used to concentrate light, draw a bull’s eye lens and state its purpose.
5. Make a chart showing each class of Fresnel lens:
   a. Define order and list by size
   b. Name at least one lighthouse using each order

6. Research and describe the history of the mechanism for rotating lights.

7. Make a chart of six lighthouses showing nighttime (light) and daytime (day mark) signature.

8. What is a lightship? Why and where are lightships needed?

9. Read about lighthouse keepers and list some of the hazards they faced in completing their duties.

10. Study quotes by Ellen White mentioning lighthouses and discuss the meaning. Place a copy of the quotes in your scrapbook.

11. Obtain a “Lighthouse Passport” and have it stamped at 10 different lighthouse locations.

12. Build a lighthouse modeled after a real lighthouse using a lighthouse kit, wood, or other medium. Know the name, location, and date when the actual lighthouse was originally built.
Make a chart of six lighthouses showing nighttime (light) and daytime (day mark) signature

<table>
<thead>
<tr>
<th></th>
<th>Night Time</th>
<th>Daytime</th>
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<tbody>
<tr>
<td>Lighthouse 1</td>
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<td>Lighthouse 2</td>
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<td>Lighthouse 4</td>
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<td>Lighthouse 5</td>
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<tr>
<td>Lighthouse 6</td>
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</tr>
</tbody>
</table>
1. Earn the Cycling Honor.

2. Using a mountain bike and a road bike as examples, show and describe five differences between mountain and road bicycles.

3. Demonstrate the function and advantages of cleats, bar ends and a front shock on a mountain bike.

4. List at least three materials that mountain bike frames are made from and explain why new materials are always being tested for mountain bike frames.
   1. ______________________________________________________
   2. ______________________________________________________
   3. ______________________________________________________
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

5. Explain differences between single track, double track, and fire roads.
   Single track ______________________________________________
   ______________________________________________________
   Double track ______________________________________________
   ______________________________________________________
   Fire roads ________________________________________________
   ______________________________________________________

6. Give the definition for the terms “hard tail” and “full suspension” and explain the advantages and disadvantages of a full-suspension bike compared to a hard tail.
   Hard tail ________________________________________________
   ______________________________________________________
Full suspension _____________________________________________

________________________________________________________

Advantages ________________________________________________

________________________________________________________

Disadvantages ______________________________________________

________________________________________________________

7. Describe the basic rules of courtesy that should be followed when doing off road riding.

________________________________________________________

________________________________________________________

8. List 3 basic pieces of safety equipment that should be worn when mountain biking.
   1. _______________________________________________________  
   2. _______________________________________________________  
   3. _______________________________________________________  

9. Know the 3 most commonly broken bones in mountain biking accidents and how to prevent these injuries from occurring.
   1. _______________________________________________________  
   2. _______________________________________________________  
   3. _______________________________________________________  

10. Demonstrate how to properly clean, polish and lube your bike after you ride it.
11. Complete the following riding requirements: All rides must be done on some sort of off-road trail like single track and a given trail may be used for more than one ride or repeated to make a ride long enough to meet the requirements (if needed).

a. Three 5 mile rides.
   Date completed ________________________________

b. Two 10 mile rides.
   Date completed ________________________________

c. One 20 mile ride.
   Date completed ________________________________
1. What was paper quilling called when the craft first began?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Know the history of quilling.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. Know the tools used in quilling.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4. Know and be able to correctly make each of the following rolls:
   a. Tight Circle
   b. Loose Circle
   c. Teardrop
   d. Shaped Teardrop
   e. Marquise
   f. Shaped Marquise
   g. Crescent n Holly Leaf
   h. Square
   i. Rectangle
   j. Triangle
   k. Bunny Ear
   l. Half Circle
   m. Rolled Heart (Arrow)
5. Know and be able to correctly make each of the following scrolls:
   a. Loose Scroll
   b. Open Heart
   c. V Scroll
   d. S Scroll
   e. C Scroll

6. Make a simple floral design by using at least three of the methods above.

7. Make a filled-in picture or ornament.
Paper Quilling, Advanced

1. Know and be able to correctly make each of the following Eccentric shapes.
   
   a. Eccentric Loose Circle
   b. Eccentric Teardrop
   c. Eccentric Marquise
   d. Eccentric Fan
   e. Eccentric Crescent
   f. Eccentric Bunny Ear
   g. Eccentric Tulip

2. Know and complete three of the following shaping techniques.

   a. Fringed Flower
   b. Grape Roll
   c. Spiral
   d. Loop Method
   e. Pegs
   f. Weaving Paper
   g. Twisted Loop
   h. Huskings
   i. Folded Roses
   j. Curled Flowers

3. Make a picture or ornament using at least three of the Eccentric Shapes.

4. Make a three-dimensional object.
Parade Floats

1. Learn and implement the following safety rules in the creation of a parade float.

2. List at least five materials that can be used in your float building and decorating.
   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________
   4. _______________________________________________________
   5. _______________________________________________________

3. Help build a float by:
   a. Helping design a float for your Pathfinder Club/Church youth group
   b. Assist in planning materials needed and be involved in collecting those items
   c. Decorating a float for at least 4 hours

4. Be in a parade experience with the float you have helped to build and decorate, and as appropriate, hand out pamphlets that explain the youth/Pathfinder ministry of your group.

5. Photograph your float during its creation and during the parade and share the experience in one of the following ways.
   a. With at least two shut-ins how your group witnessed in the community
   b. Report with pictures and stories for a church or Sabbath School program and for a Pathfinder club worship program

6. Memorize Mark 16:15 and discuss with a group how the honor’s parade float project helps fulfill this biblical command.
Parade Floats, Advanced

1. Complete the Parade Floats honor.

2. Review with your team the basic safety requirements concerning usage of ladders, hand tools, knives, and other power equipment used to complete this honor.
   - ladders
   - hand tools
   - knives
   - other equipment

Demonstrate safety in all aspects of creating your float.*.

3. Build a float (with your Pathfinder/youth group) not previously used for completing honor requirements with the following minimum specifications:
   a. 6’ x 10’ minimum base size
   b. Mechanically moving float display parts (not including axles, wheels, etc. used to transport the float)

4. Be centrally involved in the design of the float. As part of this involvement.
   a. Plan materials needed and delegate collection of those items
   b. Decorate a float for at least 6 hours
   c. Be involved in directing the development and creation of at least one portion of the float

5. Enter a float, not previously used, in two parades. One of the parades may be a Pathfinder Fair or its equivalent.

Note: Risk Management (adventistrisk.com) has guidelines listed on their website concerning safety management
1. Define conflict and discuss the difference between good and bad conflict.

2. Identify the 4 causes of conflict as described in the Bible. Read the following passages for assistance:
  Acts 15:22-20

   1 Corinthians 12:12-31

   Genesis 13:1-12

   James 4:1-3
3. Identify each segment of the slippery slope of addressing conflict, and discuss examples of each type from the Bible and your own experiences.

   a. Escape – Denial
      • Blame Game
      • Run Away
   b. Attack
      • Fight
      • Gossip
      • Put Downs
   c. Conciliation
      • Over look
      • Talk it out
      • Negotiate

4. Reverse role-play a conflict from your own life and identify where you are on the “slippery slope” and what possible conciliation options you might try.
Peace Maker, Advanced

Instructor Required

1. Complete the Peace Maker honor

2. Define mediation and arbitration and discuss the similarities and differences between them.

3. Identify and demonstrate the role and responsibilities of an effective mediator and arbitrator.

4. Discuss the difference between litigation (an adversarial relationship) and Christian conciliation.

5. Identify what types of conflicts should be:
   - Mediated
   - Arbitrated
   - Litigated
   - Negotiated

6. Participate in mediating a conflict (i.e. role play) between two people or groups and discuss the process, identifying what worked. What didn't work, and why.

7. Participate in arbitrating a conflict (i.e. role play) between two people or groups and discuss the process, identifying what worked. What didn't work, and why.

Date completed ____________  Instructor’s Signature ____________________
1. Name the four basic components of a Pinewood Derby car.
   1. ________________________________________________________
   2. ________________________________________________________
   3. ________________________________________________________
   4. ________________________________________________________

2. Cars must meet the basic following requirements:
   a. Must be made during the current calendar year or Pathfinder club year.
   b. Width of car shall not exceed 2-3/4" or 70 mm
   c. Length of car shall not exceed 7" or 178 mm
   d. Weight of car shall not exceed 5 oz. (142 grams)
   e. Width between wheels shall be 1-3/4" or 44 mm
   f. Height from bottom of car to bottom of tires shall be 3/8" min. or 10 mm
   g. Use only axles, wheels, and wood provided in the kit you purchase.
   h. Wheel bearings, washers, and bushings are prohibited.

3. Know how to use safely the following while building your project:
   a. Saw
   b. Wood rasp
   c. Course sandpaper
   d. Fine sandpaper
   e. Wood plane
   f. Hammer
   g. Shaping stick

4. Know the basic steps in designing a car:
   a. Design
   b. Transfer of design
   c. Building the car
   d. Axles and wheels
   e. Adding weight
   f. Lubrication
5. Design and build to completion a Pinewood Derby car from a basic kit using the instructions in the kit or if no instructions, follow the directions in # 2.

6. Participate in a sponsored Pinewood Derby event using the car you built in number five (5).
   - Event _____________________________________________________
   - Date of event _______________________________________________

7. Define and practice good sportsmanship as it relates to your Christian walk.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

Note: If you are planning to participate in a conference Pinewood Derby event be sure you use the correct specifications from your conference because some use different specifications than listed above.

Where to Order:

S & W Crafts Manufacturing or Pine Car
PO box 5501 PO Box 98
Pasadena, CA 91117 Linn Creek, MO 65052

Note: Pinewood Derby cars are usually available through the Boy Scout organization.
Pinewood Derby, Advanced

1. Have the Pinewood Derby Honor.

2. Know the Pinewood Derby race regulations for your district, area, or conference. NOTE: Many conferences have special Pinewood Derby events and the rules may vary as to length, weight and wheels.

3. Be aware of the following:
   a. Cars shall not ride on any kind or type of springs.
   b. No loose materials of any kind are allowed in or on the car.
   c. Official number must be clearly marked and visible.

4. Review tool safety.

5. Know the various ways to prepare and finish your project:
   a. Sanding wood
   b. Filling holes
   c. Sealing new wood
   d. Coloring wood
   e. Gloss finishes
   f. Enamel finishes
   g. Stain finishes
   h. Wax finishes
   i. Acrylic finishes
   j. Water colors
   k. Leather look on wood
   l. Decoupage
   m. Forged foil

6. Know the principle meaning of friction and how it can effect the performance of your car.
7. Know the three best ways to reduce friction on your car.
   a. Axle lubrication
   b. Aerodynamic design
   c. Smooth finish
   d. Proper wheel/axle clearance
   e. Reduce wheel shaking

8. Know the three theories of weight distribution and how it could affect the performance of your car.
   1. 
   2. 
   3. 

9. Design and build to completion the following (not previously built):
   a. Basic car kit with complete exterior finish
   b. Deluxe/fancy car kit with complete exterior finish and decals
   c. Be creative by building one of the following: tank, submarine, airplanes, piano, ice cream sandwich, fire engine, vege-link, school bus, baby carriage, etc.

10. Use details on your project such as steering wheel, driver, decals, and etc. as long as these details do not exceed the maximum length, width, and weight specification.

11. Participate in a club, district, or conference sponsored Pinewood Derby event with a current car.

   Event 
   Date of event 

12. Define and practice good sportsmanship as it relates to your Christian walk.

   ____________________________________________
   ____________________________________________
   ____________________________________________
Plastic Canvas

1. What is plastic canvas?

2. Name four (4) types of plastic canvas and give a brief description of each.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________

3. Which type of yarn is best for use on plastic canvas?

4. Describe the following types of yarn and say on which type of canvas they work best.
   Worsted Weight Yarn
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   Sport Weight Yarn
   __________________________________________________________
5. What type of needle is used on plastic canvas? Which size needle is used on each type of plastic canvas?

6. Which instruments are used for cutting plastic canvas? How do you cut plastic canvas?

7. Name at least ten (10) stitches and make a one-inch sample of each.
   1. 
   2. 
   3. 
   4. 
   5. 
   6. 
   7. 
   8. 
   9. 
   10. 
8. Make two of the following items using three different stitches.
   a. Coaster
   b. Bookmark
   c. Picture Frame
   d. Refrigerator Magnet
   e. Christmas Ornament
   f. Door Hanger

9. Make one of the following using four different stitches.
   a. Tissue Box Cover
   b. Tote Bag
   c. Floppy Disk Holder
   d. Trinket/Coaster Box
1. Earn the Plastic Canvas honor.

2. Name six (6) stitches (not previously used in Plastic Canvas, Basic) and make a two-inch sample of each.
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   4. __________________________________________________________
   5. __________________________________________________________
   6. __________________________________________________________

3. Use four (4) of these stitches to design your own round Plastic Canvas basket. The basket should have a handle and a cover. Be as creative as possible.

4. Make a six-piece coaster set with a matching coaster box for your kitchen.

5. Make an item of your choice. Use your imagination, be creative and moreover, have fun!
1. Have the Advanced Beginner’s Level of the Swimming Honor.

2. Know the laws regulating pleasure boating in your state or province.

3. Know what hazards of weather can affect boating safety and performance.

4. Know the nautical rules of the road and waterway aids to navigation.
   Rules
5. Know what safety equipment, signaling devices, and lights are required on Class A and Class 1 boats.

<table>
<thead>
<tr>
<th>Class A</th>
<th>Class 1</th>
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<tbody>
<tr>
<td>Safety Equipment</td>
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<table>
<thead>
<tr>
<th>Signaling Devices</th>
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<thead>
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<th>Lights</th>
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7. What should the passengers do if the boat capsizes?
8. What is the General Prudential Rule?

__________________________________________________________
__________________________________________________________

9. Know the meaning of the following boating terms:
   Abaft ____________________________________________________
   _________________________________________________________
   Abeam __________________________________________________
   _________________________________________________________
   Aboard _________________________________________________
   _________________________________________________________
   Aft or After ______________________________________________
   _________________________________________________________
   Amidships ______________________________________________
   _________________________________________________________
   Astern _________________________________________________
   _________________________________________________________
   Beam _________________________________________________
   _________________________________________________________
   Below _________________________________________________
   _________________________________________________________
   Bend _________________________________________________
   _________________________________________________________
   Bilge _________________________________________________
   _________________________________________________________
   Bow _________________________________________________
   _________________________________________________________
   Bulkhead ______________________________________________
   _________________________________________________________
   Cleats ________________________________________________
   _________________________________________________________
10. Show how to properly operate a power boat by doing the following:
   a. Assist in putting a boat in the water from a boat trailer.
   b. Check for all safety equipment. Check fuel and motor.
   c. Start motor and get underway from a beach or dock.
   d. Drive boat in a straight line for one fourth of a mile. Make a 90-degree turn to the left and right. Make a 180-degree turn.
   e. From a stop, drop and retrieve the anchor.
   f. Dock or beach with proper tie up.
   g. Assist in loading a boat from the water onto a boat trailer.

11. Know how to prepare and store a boat and motor for the off season.
Preach It

(instructor required)*

Note: Unlike many AY Honors, this honor does not have “knowledge” requirements categorized separately from action requirements. Rather, the requirements for honor completion are listed categorically.

1. Spiritual Preparation
What is intentional spiritual preparation?

________________________________________________________

________________________________________________________

________________________________________________________

Discuss with your instructor the role of spiritual preparation in Evangelism.

2. Seed Sowing
What is seed sowing?

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

Name 5 examples of “seed sowing”
1. ______________________________________________________
2. ______________________________________________________
3. ______________________________________________________
4. ______________________________________________________
5. ______________________________________________________

Participate in at least one “seed sowing” event

3. Invitation — Demonstrate and/or explain three ways to invite someone to an evangelistic meeting.
1. ______________________________________________________
2. ______________________________________________________
3. ______________________________________________________

North American Division
2002 Edition
Update 2009
4. Understand a Budget
   1. Develop a budget with the Pastor or your evangelistic team leader
   2. Know how much money you have to work with and how to adjust your planning based on your budget
   3. Unless it is already available at your venue, find out the costs of:
      Equipment
      Printed materials
      Mailing and postage costs
      Advertising
      TV
      Radio announcements
      Building rent

5. Know the law/code regarding holding public meetings in your area.

6. Equipment Knowledge
   List, describe the use of, and specialized care for the equipment needed in a media based evangelistic series, such as the following:
   Projector: Know proper care of equipment, How to protect from dust (especially in 3rd world countries), Demonstrate ability to properly connect to computer and operate.

   Computer:
   Know proper care (protection from dust etc.)
   Demonstrate ability to hook up and use with projector.
      Understand the program for using a “split screen”
      Be familiar with the various plug adapters for use in other countries
   Power Inverter
7. Sermon Preparation — Using Media type split screen computer evangelist sermons:
   1. Demonstrate ability to edit
   2. Use the “1st time translation sheet” and learn spacing
   3. Work with a translator*
   4. Practice the sermon 3-5 times out loud with a translator*
   5. Work with your instructor for advice and input to improve your presentation.

8. Getting Decisions — Alater Calls
   What is an altar call?

   __________________________________________________________
   __________________________________________________________

   What are some key ingredients of an altar call?

   __________________________________________________________

9. Present a five minute sermon you have edited

10. Evangelist Meeting Follow-up
   What does the term Disciple mean?

   __________________________________________________________
   __________________________________________________________

   What was Christ method of discipling?

   __________________________________________________________

   Name five things a church can do to disciple a new believer.
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. _________________________________________________________
   5. _________________________________________________________
Preach It, Advanced

☐ 1. Complete the basic Preach It honor

☐ 2. Participate in a Media type evangelistic series:
   a. in any country
   b. preach at least 6 of the sermons in that series

☐ 3. Read *Evangelism* pp 628-683 The Worker and His Qualifications
Refugee Resettlement

1. Be at least in the 8th grade.

2. Explain why refugees from other countries arrive in your nation. What are the causes and what governmental authorities must certify each case before the individual or family is allowed to travel?

3. List the immediate needs that a refugee has when they arrive in your country. Describe the feelings that the refugee may have about a new language, culture and environment.

4. Find out about the organizations in your community that assist refugees and immigrants. Use the telephone or visit the office of at least one such organization and ask how they would assist if your local church were to cosponsor a newly-arrived refugee with ADRA or Adventist Community Services.

5. Write a plan of at least 500 words describing the arrangements that your local church could make if it were the cosponsor with ADRA or Adventist Community Services for a refugee arriving in your community.

6. Interview a person who immigrated to your country. Ask them about the contrast between the culture in your community and the community where they were raised. Ask them to describe the process they went through to become comfortable in your community. Take notes during the interview.

7. Give a report of at least 10 minutes duration to a Sabbath School program, Pathfinder Club church committee or civic club on what you have discovered in completing the requirements for this honor. Tell why the refugee situation is so important and make specific recommendations to the group of ways in which they can help meet the needs of refugees.
Rural Development

1. Explain to your instructor why some nations in our world are called "developing" countries and why others are called "developed" countries.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Name ten developing countries and list two things that ADRA is doing in these countries that would fall under the description of "relief" and three things that would fall under the description of "development."

1. ___________________________________________
   ___________________________________________
________________________________________________________________________

2. ___________________________________________
   ___________________________________________
________________________________________________________________________

3. ___________________________________________
   ___________________________________________
________________________________________________________________________

4. ___________________________________________
   ___________________________________________
________________________________________________________________________

5. ___________________________________________
   ___________________________________________
________________________________________________________________________

6. ___________________________________________
   ___________________________________________
________________________________________________________________________

7. ___________________________________________
   ___________________________________________
________________________________________________________________________
3. Read what Ellen White has written about why we have the poor with us in *Desire of Ages*, Chapter 70, entitled "The Least of These My Brethren." Summarize what you have learned from this chapter in 50 words or less.

4. View an ADRA video reporting on development activities in other countries than your own, and participate in a discussion about what you see for at least 20 minutes following the video.

5. Participate in one of the following field trips or group projects:
   a. Work as a volunteer in ADRA's Global Village program when it is operating.
   b. Go on a mission trip to a disadvantaged rural area in another country or within your own nation.
   c. A project in your community to collect a truck-load of clothing, hand tools, medical supplies, tents or other items that ADRA can use in rural development projects overseas. This includes raising sufficient donations to transport the collected items to the nearest ADRA warehouse.
   d. A 24-hour group fast and educational "lock-in" session with your youth group focused on understanding the needs of the poor in developing nations, and designed to raise funds for rural development.
6. Write a letter to a person of your same age and gender in a rural, underdeveloped area in another country. Ask questions to learn about how they live their life and express your concern for supporting development in their country without using condescending language.
Sanctuary Honor

1. Name the three main parts of the sanctuary and the court yard.
   1. ___________________________
   2. ___________________________
   3. ___________________________

Tell what was in each part.
   1. ___________________________
   ___________________________
   ___________________________
   ___________________________

   2. ___________________________
   ___________________________
   ___________________________
   ___________________________

   3. ___________________________
   ___________________________
   ___________________________
   ___________________________

Tell what each piece of furniture represents.
   1. ___________________________
   ___________________________
   ___________________________
   ___________________________

   2. ___________________________
   ___________________________
   ___________________________
   ___________________________

   3. ___________________________
   ___________________________
   ___________________________
   ___________________________
2. Draw a scale model of the sanctuary, the court yard and the position of all the furnishings. (Remember to add N, S, E, W)
3. How many coverings were over the sanctuary?

List the type of coverings in the order from inside to outside.

Tell what each covering represented.
1. 

2. 

4. The following colors were used in the sanctuary and in the priests clothing. Tell what each color represented.
Red

Blue

Purple

White

Black

Gold

Silver

Brass

5. Discuss and memorize 1 John 1:9, Daniel 8:14, and Exodus 25:8.
6. The priests were from which of the 12 tribes?

Why?________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

7. Describe the robe of the common priest.

________________________________________________________

________________________________________________________

________________________________________________________

The high priest.

________________________________________________________

________________________________________________________

8. Read and discuss The Great Controversy page 488 and Hebrews 4:14-16.

9. What kinds of animals were brought daily to the courtyard?

________________________________________________________

________________________________________________________

10. Write a paragraph or tell how you see Christ represented in the sanctuary and its services.

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

Date completed ____________ Instructor’s Signature ____________________
Scrapbooking

1. What is the purpose of Scrapbooking?

2. Why journal?

3. What is cropping and why is it done?

4. What are the four (4) main types of scrapbooks used?
   1. 
   2. 
   3. 
   4. 

5. What is the purpose of using acid-free products?
6. What are the four (4) different types of acid-free adhesive?
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. _________________________________________________________

7. What ‘tool’ is used to sharpen scissors and punches when they get dull?
   __________________________________________________________

8. Name five (5) different types of acid-free paper used in Scrapbooking.
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. _________________________________________________________
   5. _________________________________________________________

9. Make a scrapbook of at least 12 pages (8 1/2 x 11 or larger) on one of the following themes, and incorporating the use of colored paper, stickers, decorative scissors, matting and journaling.
   - School Year
   - Sporting Events
   - Vacations
   - Holidays
   - Building Projects (mission trips, new home, ECT.)
   - Wedding
   - Birthday Party
   - All About Me (birth to now)
   - Family Reunions

10. Memorize Joel 1:3

Date completed ____________  Instructor’s Signature ____________________

Scrapbooking 2002 Edition
Scrapbooking, Advanced

1. Have the Scrapbooking Honor.

2. What is lignin? _____________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

3. What plastic is safe to use in Scrapbooks?
   _______________________________________________________

4. What plastic is not and why not?
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

5. Describe the value of Scrapbooking to future generations.
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

6. How do you fix a journaling error?
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
7. Complete an album of at least 24 pages of a size not less than 8 1/2 x 11 using techniques that includes the use of at least 10 of the following:

- Matting
- Double Matting
- Border Designs
- Journaling Boxes
- Colored Paper
- Printed Paper
- 2 Page Layouts
- Die Cuts
- Self Designed Die Cuts
- Stickers
- Punches
- Memorabilia Pockets
- Decorative Scissors
- Templates
- Photos Cropped into a circles or ovals

Date completed ____________  Instructor’s Signature ____________________
Skiing, Cross-country

1. List and describe the principle characteristics, qualities, and sizing of the following cross-country skiing equipment: (Complete Chart #1)
   a. Skis (both waxable and unwaxable)
   b. Bindings
   c. Shoes
   d. Poles

2. Describe and demonstrate how the above gear would be prepared for use and cared for both on the field and during the off season. (Complete Chart #2)

3. What consideration should be made when selecting clothing to be worn while cross-country skiing?

4. Demonstrate properly on skis the following travel techniques:
   a. Flat striding with good kick, purchase, and form
   b. Single poling, change-up, and double poling
   c. Side stepping up and down slopes
   d. Herringbone slope climbing
   e. Traverse-side stepping up slope with kick turns
   f. Straight up slope climbing
   g. Straight downhill running under control, 20 degree slope (schuss)
   h. Moving step turning down slope
   i. Snow plowing for slowing speed and stopping
   j. Sitback stopping

5. Explain the purpose of waxing.
Briefly explain the need for different waxes for different snow types and temperatures.

6. Explain basic safety precautions to follow in cross-country skiing.

7. Know and explain the official National Ski rules for conduct in cross-country skiing.

8. Demonstrate skiing ability by doing the following:
   a. Take three separate three-mile trail tours with another individual. If possible, have varying snow conditions.
      Dates Other individual
      1. 
      2. 
      3. 
   b. Take a ten-mile tour over varying terrain.
      Date of tour ________________
   c. During all tours carry necessary gear (safely) and wear proper clothing for conditions demonstrating ability to maintain proper body temperature, dryness, and condition.

Date completed ___________    Instructor’s Signature ____________________

Skiing, Cross-Country
2002 Edition
<table>
<thead>
<tr>
<th>Item</th>
<th>Characteristics</th>
<th>Qualities</th>
<th>Sizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skis Waxable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skis Unwaxable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bindings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poles</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Skiing, Cross-Country, Chart #2

<table>
<thead>
<tr>
<th>Item</th>
<th>Preparations for use and care on the field</th>
<th>Preparations for use and care during the off season</th>
<th>Demonstrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waxable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unwaxable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bindings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAME</td>
<td>Flat striding</td>
<td>Single poling, chgn-up &amp; dbl poling</td>
<td>Side Stepping</td>
</tr>
<tr>
<td>------</td>
<td>---------------</td>
<td>-----------------------------------</td>
<td>---------------</td>
</tr>
</tbody>
</table>
Slow-Pitch Softball

1. Know the basic rules of slow-pitch softball.

2. What is the meaning of “Good Sportsmanship?”

3. Name and demonstrate your understanding of the skills required for the ten (10) softball playing positions.
   1. _____________________________
   2. _____________________________
   3. _____________________________
   4. _____________________________
   5. _____________________________
   6. _____________________________
   7. _____________________________
   8. _____________________________
   9. _____________________________
  10. _____________________________

4. Identify the following:
   Bat _____________________________
   _____________________________
   _____________________________

   Batter’s box _____________________________
   _____________________________
   _____________________________

   Coaches’ box _____________________________
   _____________________________
   _____________________________
5. Define or explain the following game terms:

Bases Loaded ____________________________________________
________________________________________________________
________________________________________________________

Bunt ____________________________________________________
________________________________________________________
________________________________________________________

Fielder’s choice __________________________________________
________________________________________________________
________________________________________________________

Fly Ball __________________________________________________
________________________________________________________
________________________________________________________

Force Play _______________________________________________
________________________________________________________
________________________________________________________

Foul tip __________________________________________________
________________________________________________________
________________________________________________________

Grand Slam _____________________________________________
________________________________________________________
________________________________________________________

Grounder __________________________________________________
________________________________________________________
________________________________________________________
6. Explain the following official’s calls or rules:

   Double Play ________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

   Error _______________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

   Fair ball _________________________________
   __________________________________________
   __________________________________________
   __________________________________________

   Foul ball _________________________________
   __________________________________________
   __________________________________________
   __________________________________________

   Ground rule double _______________________
   __________________________________________
   __________________________________________
   __________________________________________

   Infield fly rule __________________________
   __________________________________________
   __________________________________________
   __________________________________________

   Out _______________________________________
   __________________________________________
   __________________________________________
   __________________________________________

   Safe ______________________________________
   __________________________________________
   __________________________________________
   __________________________________________

7. Demonstrate the ability to read a basic scorecard that was scored in a game you participated in.
8. List and describe five (5) responsibilities of an umpire.
   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________
   4. _______________________________________________________
   5. _______________________________________________________

9. Name 5 mental and physical attributes to be gained from slow-pitch softball.

   **Mental**
   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________
   4. _______________________________________________________
   5. _______________________________________________________

   **Physical**
   1. _______________________________________________________
   2. _______________________________________________________
   3. _______________________________________________________
   4. _______________________________________________________
   5. _______________________________________________________

10. As a team or individual, develop a plan to practice outreach while completing the requirements for this honor. Possible options could include the following:
    a. Invite 3 friends not from your church to play a game.
    b. Have prayer before each game.
    c. Exhibit good sportsmanship and fair play.

11. Play three (3) slow-pitch official games with an umpire and demonstrate reasonable skills.

12. Write a one page report on a famous athlete. Discuss why they are or are not a good Christian role model.

13. Discuss with your Pathfinder leader, pastor or teacher the problems facing a Seventh-day Adventist youth considering participating in sports in Jr. High, High School of college. What alternatives are there to allow for continued activity in sports?
Soccer

1. Know the basic rules of soccer.

2. What is the meaning of “Good Sportsmanship?”

3. Make a drawing of the soccer playing field.

4. Demonstrate reasonable skill in playing the game of soccer.

5. Describe the different skills required at each position.
   - Goaly
   - Forward
   - Mid-fielder
   - Defensemen

6. Know the meaning of and the Referee signals for the following:
   - Off sides
   - Holding
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corner kick</td>
<td>_______________________________________________________________________</td>
</tr>
<tr>
<td>Indirect kick</td>
<td>_______________________________________________________________________</td>
</tr>
<tr>
<td>Direct kick</td>
<td>_______________________________________________________________________</td>
</tr>
<tr>
<td>Goal</td>
<td>_______________________________________________________________________</td>
</tr>
</tbody>
</table>

7. Define the following terms:

Advantage __________________________________________________________

Booking __________________________________________________________

Clearing __________________________________________________________

Corner Arcs _______________________________________________________

Cross ____________________________________________________________

Dribble __________________________________________________________

Drop ball _________________________________________________________

Drop kick ________________________________________________________
8. Spend at least 4 hours helping less skilled or younger players improve their skills.
   Date completed ________________________________

9. Play at least 5 games with family or friends. Show good sportsmanship during your practice and games.
   Date of games ____________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

10. Write a one page report on a famous soccer player. Discuss why they are or are not a good Christian role model.

11. Discuss with your Pathfinder leader, pastor or teacher the problems facing a Seventh-day Adventist youth considering sports in Jr. High, High School or college. What alternatives are there that allows for continued activity in sports.
   Discussion date ________________________________
   Person ____________________________________________

Date completed ____________        Instructor’s Signature ___________________________
1. Define what "soil" means?

________________________________________________________________________
________________________________________________________________________

2. Where on earth is all soil located?

________________________________________________________________________
________________________________________________________________________

3. What are 5 key factors in soil formation?
   1. ____________________________________________________________________
   2. ____________________________________________________________________
   3. ____________________________________________________________________
   4. ____________________________________________________________________
   5. ____________________________________________________________________

4. Define the following terms:
   A-Horizon ______________________________________________________________
   ______________________________________________________________
   B-Horizon ______________________________________________________________
   ______________________________________________________________
   C-Horizon ______________________________________________________________
   ______________________________________________________________
   Organic layer __________________________________________________________
   ______________________________________________________________
   Mineral layer __________________________________________________________
   ______________________________________________________________
   Clay ______________________________________________________________
   ______________________________________________________________
5. Define the term "Soil Classification". Why are soils classified?

6. Discuss three differences between the following soil types:
   Desert
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   Temperate
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
   Tropical
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________
7. Examine a 2-foot vertical section of soil. Label the different types of organic matter found, identify the different soil horizons, and mark the transition from the soil layer to the mineral layer.

8. Draw, photograph, or collect and correctly label 5 different soil types.
1. Know what the best types of materials are for dyeing and how to prepare them for dyeing.

2. Know what the purpose of the Soda Ash is and how long the fabric is to soak.

3. Know the purpose of the Urea that is mixed with the Dye.

4. What safety equipment should be worn when mixing up the dye for Tie-Dyeing? Why?

5. Determine what the three primary colors are.
   1. 
   2. 
   3. 

6. Verbally describe what primary colors of dye will be needed to make the following secondary colors. Orange, Green, & Purple.

7. Verbally describe what the outcome will be if two secondary colors are mixed.
8. Use a Kleenex tissue & colored marker to demonstrate two different types of folds one could do on a T-shirt.

9. Once you have seen the outcome of the different folds you have created on tissue, fold & dye an item for yourself. *Bandana, t-shirt, pillowcase, etc...* Always keep in mind, no two items will be identical, nor will they be perfect. Each item will be as unique as the individual who made it.

10. Wear or bring this item to the next meeting for your club members to see.
1. List as many modes of transportation you can think of that people use to get around the planet.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Narrow down the previous list to a “Top Five” most common modes of transportation. List the pros and cons of each of the “Top Five.”

1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
4. __________________________________________________________
5. __________________________________________________________

2. List some of the pros and cons of the following types of lodging:
Hotel/motel
Pros
________________________________________________________________________
________________________________________________________________________
Cons
________________________________________________________________________
________________________________________________________________________
Youth hostel
Pros
__________________________________________________________
__________________________________________________________
Cons
__________________________________________________________
__________________________________________________________
Friends/family
Pros
__________________________________________________________
__________________________________________________________
Cons
__________________________________________________________
__________________________________________________________
RV/trailer/camping
Pros
__________________________________________________________
__________________________________________________________
Cons
__________________________________________________________
__________________________________________________________
Resorts
Pros
__________________________________________________________
__________________________________________________________
Cons
__________________________________________________________
__________________________________________________________
3. What types of documentation may be necessary for travel? Explain the purpose of each type of document.

________________________________________________________________________
________________________________________________________________________

4. Watch a travelogue program that shows travel scenery and geography of a unique location.

5. Discuss in a group setting what kind of attitude travelers should have when traveling abroad.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

6. Create a simple 7-day trip plan for a “family vacation.” As part of your plan, create a 7-day trip planner and include:
   Details on one historic place to visit
   Details on two natural sites to visit
   Details on one recreational site to visit
   **Note:** the first and last days may be travel days

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
7. List a few different ways people got around in Bible times.


8. Calculate approximately how long it would take to walk between Jerusalem and Damascus.


9. Sketch a map of a trip mentioned in the Bible:
Show name of person(s) and path taken including notable stops made.
Show different types of lines for each different mode of transport taken.
Show a “legend/key” for identifying markings and transport types.
**Note:** You may have to logically guess some aspects of the information if not mentioned directly in scripture.
Travel, Advanced

1. Earn the Travel honor.

2. View a travelogue program not previously watched, of a unique location you would like to visit.

3. What safety considerations should you think of when traveling?

4. What health recommendations or requirements are recommended by your country’s health depart/office when traveling internationally?

5. Create a 7-day international trip plan for a “family vacation”:
   Create a 7-day planner and include:
   i. A description of one historic site to visit
   ii. A list and description of two natural sites to visit
   iii. A description of one recreational site to visit
   Note: First and last days may be travel days
Create a 7-day budget for the “family vacation” and include projected financial figures for a “family group” of four people:

i. Round trip airfare to that country
ii. Automobile Rental (economy/compact)
iii. Legitimate gas costs (remember that many countries list gas prices per liter)
iv. Determine an average per night hotel expense
v. Determine an average per day food expense
vi. Budget costs for sites you plan to visit
vii. Legitimate souvenir expenses
viii. Include 10% for miscellaneous expenses
6. Write a 100-word description or discuss in a group what you think traveling around in Bible times was like. Discussion topics might include:

- contrasting distances traveled then vs. now
- expectations of what you'd have available to you at your lodging (bathing, beds, # of people lodging together, etc.)
- food eaten during a journey (no refrigeration or grocery stores back then)
- why you would travel (recreation vs. necessities)
Tutoring

1. Be at least in the 8th grade.

2. Describe the social conditions that make it more difficult for underprivileged children to achieve basic reading and math skills during elementary school.

3. Explain the major types of community-based tutoring programs:
   - In-school, cross-age tutoring
     ____________________________________________________________
     ____________________________________________________________
     ____________________________________________________________
   - After-school or weekend program
     ____________________________________________________________
     ____________________________________________________________
     ____________________________________________________________
   - Community homework center
     ____________________________________________________________
     ____________________________________________________________
     ____________________________________________________________

4. Explain the difference between one-on-one tutoring and small-group classes, and list the pros and cons of each approach.
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
5. List the basic functions included in the job description of the volunteer tutor in a community-based tutoring program.

__________________________________________________________
__________________________________________________________
__________________________________________________________

6. Describe the resources or tools that a volunteer tutor uses in a community-based tutoring program.

__________________________________________________________
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7. Complete at least ten tutoring sessions with a younger child.

Date completed ____________ Instructor’s Signature ____________________
1. Know the name and purpose of the various parts of a unicycle.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Define these basic unicycle terms:
   - free mount _________________________________________________
   - idle _______________________________________________________
   - UPD _______________________________________________________

3. Know what safety gear one should use while unicycling and why one should use it.

________________________________________________________________________
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________________________________________________________________________
4. Name 5 different types of unicycles and explain what makes them unique.
   1. __________________________________________________________
      __________________________________________________________
      __________________________________________________________
   2. __________________________________________________________
      __________________________________________________________
      __________________________________________________________
   3. __________________________________________________________
      __________________________________________________________
      __________________________________________________________
   4. __________________________________________________________
      __________________________________________________________
      __________________________________________________________
   5. __________________________________________________________
      __________________________________________________________
      __________________________________________________________

5. How is unicycling thought to have been invented?
   __________________________________________________________

6. Repair a punctured unicycle tire.

7. Be able to free mount, ride 50 meters/150 feet, turn right and left, and gracefully dismount, all without falling off.
Urban Development

1. Explain the process of urbanization and list some of the human needs that it creates, especially for the poor.

2. Read the chapters in *Ministry of Healing* by Ellen White entitled "Help for the Unemployed and Homeless" and "The Helpless Poor," and write a one-page summary of the key points.

3. Interview the pastor or Adventist Community Services leader or Inner City Program coordinator in an inner-city Seventh-day Adventist Church and ask how the church is meeting the needs of the poor in the community. Take notes during the interview.

4. Present a 15-minute report on how a youth group might help in the urban development problems the church is sponsoring. The report may be presented one-on-one to your instructor or youth-group adult sponsor, or it may be presented in a group setting.

5. Spend at least four hours in one of the following field trips as a participant observer:
   - Go out with a street ministry team that provides food and/or blankets or coats to the homeless in an urban neighborhood,
   - Go out with a health screening van that operates in an urban neighborhood.
   - Go out with a Christian work team that is repairing or building urban housing for the poor.
   - Work in a soup kitchen or homeless shelter in an urban neighborhood.
   - Volunteer in an Adventist Community Services center located in an urban neighborhood.
6. Attend a worship service in a church in an urban neighborhood made up of a different ethnic group than your own. List for your instructor the things you observed that were different than what you have grown up to be used to in your own culture. Then list the things that were similar to what you are used to.

7. Write a proposal of at least four pages for an urban development project that could be conducted largely by teen and/or young adult volunteers. Include objectives, action plan, personnel needed, schedule and budget. This proposal may be written by an individual or as a team project in a work team of no more than four persons.
Wakeboarding

☐ Have the Advanced Beginner’s Swimming Honor.

☐ 1. Know and practice the following safety rules:
   a. Never wakeboard at night.
   b. Never wakeboard during an electrical storm.
   c. Always wear a ski vest while wakeboarding.
   d. Make sure the wakeboarding rope is in good condition.
   e. Make sure the wakeboarding bindings are in good condition.
   f. Always have a spotter and flag in the boat.
   g. Stay clear of objects, such as other skiers, swimmers, tubers, docks or floating objects.
   h. If you fall let go of the rope.
   i. After a fall, raise a hand to indicate you are all right.
   j. Do not stand in the boat while it is moving.

☐ 2. Know the following hand signals:
   a. Slower
   b. Speed is OK
   c. Faster
   d. Back to dock
   e. Stop
   f. Turn

☐ 3. Put on the wakeboard by yourself. Be able to remove the wakeboard in deep water by yourself.

☐ 4. Execute a deep-water start on the wakeboard on a full line rope.

☐ 5. Successfully cross both wakes and return to center without falling.

☐ 6. Do a small jump off the wake and land without falling.

*NOTE: All wakeboarders in AY sponsored wakeboarding class must wear a ski vest.
1. Relate briefly the history of whistle making and tell why whistles were invented.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Explain the importance of conservation in regard to whistle making.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. What do the seasons of the year have to do with making a willow whistle?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4. Name two (2) trees that make the best whistles and why. List three (3) other trees that can be used to make whistles.

1. ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

2. ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

North American Division
2002 Edition
Update 2007
5. Give a brief description of the following styles of whistles:
   Tube Whistles ____________________________________________
   ________________________________________________________
   ________________________________________________________
   Pan Whistles _____________________________________________
   ________________________________________________________
   ________________________________________________________
   Flute Whistles ___________________________________________
   ________________________________________________________
   ________________________________________________________

6. Name five (5) types of modern whistles and their uses.
   1. ________________________________________________________
   ________________________________________________________
   ________________________________________________________
   2. ________________________________________________________
   ________________________________________________________
   ________________________________________________________
   3. ________________________________________________________
   ________________________________________________________
4. ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

5. ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

☐ 7. What modern musical instrument is a sophisticated whistle?
   ________________________________________________________________

☐ 8. How does a whistle work?
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

☐ 9. What is the most common equipment used in making whistles?
   ________________________________________________________________
   ________________________________________________________________

☐ 10. Explain the importance of wood grain in whittling a whistle.
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

☐ 11. Why must the size of the holes and chamber be proportional to the amount of airflow?
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

☐ 12. How do you tune a whistle?
   ________________________________________________________________
13. Demonstrate that you can make a two-handed whistle using your hand and a piece of grass.

14. Demonstrate the technique and try to accomplish a whistle using your hands (s) or fingers.

15. Review and demonstrate the proper first aid and safety rules for the usage of a pocketknife.

16. Know how to sharpen a pocketknife using a whetstone or oil sharpening stone.

17. Make the following whistles:
   - Pan (Tubes) whistle
   - Flute Whistle

18. Learn to play a simple song on each whistle you have made.
1. Have the Whistle Honor

2. What is a sliding bark whistle and who first made this type of whistle?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

3. What happens when a branch for making a sliding bark whistle is too large or too small?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

4. What is a recorder whistle?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

5. Make the following whistles:
   willow (sliding bark) whistle
   recorder whistle

6. Demonstrate your ability to correctly use each of the whistles you have made.
1. What is a worm?

2. Where do worms live?

3. What do worms eat?

4. What kingdom are worms found in?

5. Name the 3 major phyla (the next largest category of classification) that contain worms, and describe them.
   1. 
   2. 
   3. 
6. What do “free living” and “parasitic” mean?

7. Which phyla, mentioned in question 5, are free living or parasitic?

8. Answer the following questions about earthworms.
   Where do they live?
   What do they eat?
   How are they helpful to humans?
   How short and how long do they get?
   How many are there in one square meter of soil?
   How many species are there?
What is the clitelum?


9. Find an earthworm outside and do the following:
   a. Be able to distinguish the following parts: Head end, Tail end, and clitelum.
   b. Observe, and describe how it moves.

   c. How long does it take your worm to move one foot?

   d. Race your earthworms!

10. Answer the following questions about leeches.
   Where do they live?

   What do they eat?

   How are they harmful to humans?

   How are they helpful to humans?

11. Find a verse in the bible where worms are mentioned and demonstrate the story (through music, poem or drama)
Worms, Advanced

1. What are the 3 major classes of platyhelminthes and describe them.
   1. __________________________________________________________
      __________________________________________________________
      __________________________________________________________
   2. __________________________________________________________
      __________________________________________________________
      __________________________________________________________
   3. __________________________________________________________
      __________________________________________________________
      __________________________________________________________

2. Name an example of a nematoda and describe its lifecycle.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

3. What are the three major classes of annelida and how do they move?
   1. __________________________________________________________
      __________________________________________________________
      __________________________________________________________
   2. __________________________________________________________
      __________________________________________________________
      __________________________________________________________
   3. __________________________________________________________
      __________________________________________________________
4. Answer the following:
   Distinguish between the following body structures: coelomates, pseudocoelomates, and acoelomates
   Which body structures are common in the three phyla of worms?

5. Be able to demonstrate three ways to purify water.

6. Complete the following:
   From what you have learned about worms. Why is the availability of fresh water so important to human health, especially in third world countries?

Organize a fund raise to support organizations that strive to provide fresh water to third world counties.

8. Describe a spiritual lesson about living water from the Bible.
South Pacific Division Honors

Aboriginal Lore
Abseiling
Abseiling, Advanced
Abseiling, Instructor
Bible Marking
Bible Marking, Advanced
Cetaceans
Eucalypts
Herbs
Kayaking
Maori Lore
Marsupials
Music, Beginners
Music
Music, Advanced
Parrots and Cockatoos
Puppetry
Puppetry, Advanced
Skateboarding*
  (* Voted not to be used in North American because of insurance regulations.)
Triathlon
Triathlon, Advanced
Upholstery
Video
Wattles
Aboriginal Lore

1. Who are the Aborigines and where did they come from?

________________________________________________________________________

How many tribes were there when European colonization commenced?

________________________________________________________________________

2. Discuss the tribal system. What are totems?

________________________________________________________________________

________________________________________________________________________

3. Discuss the food of the Aborigines:
   Kinds _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   How obtained ____________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   How prepared ____________________________________________________
   _____________________________________________________________
   _____________________________________________________________

4. Discuss their homes. Of what are they made and why are they not permanent?

________________________________________________________________________

________________________________________________________________________

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Where do the young men and boys sleep?

________________________________________________________________________

________________________________________________________________________
5. How do they communicate with other tribes who may not understand their language?

How do they send signals within the tribe?

What is the purpose of the Tjuringa (or Churinga)?

6. What are some of the articles of trade and exchange?

What domestic utensils do they use.

7. Describe some of the weapons used in hunting and warfare.

8. What is a corroboree?

Explain its purpose.
What are clap sticks and the didgeridoo?

9. What games do children play?

How are young men trained?

How are they initiated?

What is the bora ground?

What is a bull roarer?

10. Discuss the two main types of Aboriginal art.

1. 

2. 

11. Briefly relate the history of the Aborigines since the white man arrived in Australia, mentioning the government policies through the years and the work of missions.
Abseiling

1. a. List and explain the safety rules

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
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_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

b. Explain the “dangers of falling” chart.

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

2. Explain the uses of the following knots:
   Tape ______________________________________________________
   ______________________________________________________
   Alpine butterfly _____________________________________________
   ______________________________________________________
   Figure of eight loop __________________________________________
   ______________________________________________________
   Double fishermans ___________________________________________
   ______________________________________________________
   Prussik ____________________________________________________
   ______________________________________________________
   Bowline __________________________________________________
   ______________________________________________________
3. Draw the diagrams for the setting up of the following abseil descents:
   a. Single rope technique
   b. Canyoning setup
4. Know the ways to identify safe anchors in various circumstances.
   Trees _______________________________________________________
   Boulders ___________________________________________________
   Bollards ____________________________________________________

5. Explain the various verbal calls.
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

6. Explain the principle of belaying and the three methods used.
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

Give the advantages and disadvantages of each method:

<table>
<thead>
<tr>
<th></th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>Body belay</td>
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Abseiling
2002 Edition
7. List the rules for care of ropes.


8. Explain the difference between dynamic and static rope.


9. Know the right type of equipment needed for abseiling.

10. Know the best way to store your ropes, e.g. coiling and chaining.

11. a. Know which descending device to use in different abseils.

b. Give reasons why you chose that device
   On/off time
   Security
   Heat
   Versatility

12. Know about how to treat a patient for the following injuries:
   Sprains
   Concussion
   Hypothermia
13. Explain how to perform the following rescues:
The pulley system


The change-over method


SECTION TWO-PRACTICAL

1. Pass the abseiling exam with a pass mark of 60%. The exam is available from the conference youth ministries office, or through the instructor.

Date of examine

Mark

2. Answer the questions on the following topics:
   a. Uses of the six abseiling knots
   b. What are, and give the meaning of the standard climbing calls
   c. Uses of various descenders
   d. Give seven rules for are of rope
   e. Give seven rules for safety
   f. Know about first aid and how to treat patients
   g. Give five ways to detect faults of ropes

3. Perform the following tasks:
   a. Tie the six knots
   b. Set up the single rope setup and canyoning setup
   c. Witness a cliff rescue demonstrated by the instructor
   d. Coil and chain a rope
   e. Set up the belay methods

4. From a minimum height of 10 meters, complete two abseils on each of the following devices, and know how to attach them to the rope:
   a. Whale tail
   b. Robot
   c. Harpoon (easy access)
   d. Figure of eight
5. Explain how to do the classic abseil, and over the shoulder abseil, for emergency use.

6. Be able to prussik a ten-meter cliff.
<table>
<thead>
<tr>
<th>NAME</th>
<th>Demonstrate</th>
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<tr>
<td></td>
<td>Tie the six knots</td>
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<td>Cliff rescue by instructor</td>
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<tr>
<td></td>
<td>Set up the belay methods</td>
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<td>Rock</td>
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<td></td>
<td>Figure of eight</td>
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<td>Rappel-rack</td>
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<td>Cross karabiner</td>
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</table>
Abseiling, Advanced

- 1. Repeat the theory and practical requirements for the Abseiling Honor
   Date completed

- 2. Pass the exam with 80% pass mark.
   Date of examine
   Mark

- 3. Abseil over a knot in the rope.
   Date completed

- 4. Abseil over an overhand or cave.
   Date completed

- 5. Demonstrate the pulley method of cliff rescue.
Abseiling, Instructor

1. Instruct how to abseil, being confident in every aspect of the Abseiling Honor.
   Date completed ________________________________

2. Demonstrate all the theory to a class.
   Date completed ________________________________

3. Teach abseiling first aid to a class.
   Date completed ________________________________

4. Lead at least two abseiling expeditions checking the safety of each individual.
   Date completed ________________________________
   Date completed ________________________________
Bible Marking

1. a. Name five different methods of Bible Marking.
   1. __________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________
   4. _________________________________________________________
   5. _________________________________________________________

b. Explain how each method would be used.
   1. __________________________________________________________
      __________________________________________________________
      __________________________________________________________
   2. _________________________________________________________
      __________________________________________________________
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   3. _________________________________________________________
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   4. _________________________________________________________
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   5. _________________________________________________________
      __________________________________________________________
      __________________________________________________________

c. List advantages and disadvantages of each.
   1. __________________________________________________________
   1. __________________________________________________________
   2. __________________________________________________________
2. List five guidelines you would consider before starting to mark your Bible.
   1. 
   2. 
   3. 
   4. 
   5. 

3. a. What method would you follow for giving a Bible study and why?

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   b. And mark your Bible for two topics/subjects using this method.
      Topics/Subjects
      1. 
      2. 

4. a. What methods would you use for ongoing devotional study and why?

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   b. And mark your Bible for two topics/subjects using one of these methods, and using a minimum of ten texts each.
Topics/Subjects

1. __________________________________________________________
   1. ___________________________  6. ___________________________
   2. ___________________________  7. ___________________________
   3. ___________________________  8. ___________________________
   4. ___________________________  9. ___________________________
   5. ___________________________ 10. ___________________________

2. __________________________________________________________
   1. ___________________________  6. ___________________________
   2. ___________________________  7. ___________________________
   3. ___________________________  8. ___________________________
   4. ___________________________  9. ___________________________
   5. ___________________________ 10. ___________________________

Date completed ____________  Instructor’s Signature ____________________

Bible Marking  2002 Edition
1. Mark an additional two Bible studies using a minimum of twenty texts each.

1. ____________________________________________

11. ____________________________________________

2. ____________________________________________

12. ____________________________________________

3. ____________________________________________

13. ____________________________________________

4. ____________________________________________

14. ____________________________________________

5. ____________________________________________

15. ____________________________________________

6. ____________________________________________

16. ____________________________________________

7. ____________________________________________

17. ____________________________________________

8. ____________________________________________

18. ____________________________________________

9. ____________________________________________

19. ____________________________________________

10. ____________________________________________

20. ____________________________________________

2. ____________________________________________

11. ____________________________________________

2. ____________________________________________

12. ____________________________________________

3. ____________________________________________

13. ____________________________________________

4. ____________________________________________

14. ____________________________________________

5. ____________________________________________

15. ____________________________________________

6. ____________________________________________

16. ____________________________________________

7. ____________________________________________

17. ____________________________________________

8. ____________________________________________

18. ____________________________________________

9. ____________________________________________

19. ____________________________________________

10. ____________________________________________

20. ____________________________________________
2. Using a concordance mark ten texts for devotional study
   1. ___________________  6. ___________________
   2. ___________________  7. ___________________
   3. ___________________  8. ___________________
   4. ___________________  9. ___________________
   5. ___________________ 10. ___________________

3. In writing:
   a. State the guidelines taken to maintain a clear marking procedure.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   b. Provide a key to understanding your Bible markings.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

4. Give a Bible study from an outline you have marked.
   Date of Bible study ________________________________
   Date completed ____________  Instructor’s Signature _________________
Cetaceans

1. In what way is the Cetaceans family different to most other sea life?

2. Explain the difference between Baleen and Toothed Whales.
   Baleen ____________________________________________________
   Toothed __________________________________________________

3. In what way have Whales and Dolphins been a benefit to man?

4. Explain how it is that a Whale which breeds in the warm waters of the tropics can also survive the ice cold water of the Antarctica where they go to feed, (considering the whale is a warm blooded mammal like humans).

5. Memorize the following Scriptures concerning whales:
   a. Genesis 1:21  c. Job 7:12
   b. Ezekiel 32:2  d. Matthew 12:40

6. Write and read to a group, or tell from memory, the story of Jonah.
7. Successfully draw a Baleen Whale and identify where the following body parts are:
   a. Baleen Plates  
   b. Blowhole  
   c. Dorsal Fin  
   d. Ear  
   e. Eye  
   f. Throat Pleats  
   g. Flukes  
   h. Flippers  
   i. Genital Slit  
   j. Median Notch  
   k. Peduncle

8. Be able to identify at least fifteen Cetaceans.
   1. __________________________  
   2. __________________________  
   3. __________________________  
   4. __________________________  
   5. __________________________  
   6. __________________________  
   7. __________________________  
   8. __________________________  
   9. __________________________  
   10. __________________________  
   11. __________________________  
   12. __________________________  
   13. __________________________  
   14. __________________________  
   15. __________________________

Date completed ____________  
Instructor’s Signature ____________________

Cetaceans  
2002 Edition
Eucalypts

1. How many different species of Eucalypts have been named in Australia?

2. Where does the name Eucalypt come from?

To what family do Eucalypts belong?

3. In what other parts of the world do Eucalypts grow?

In how many are they indigenous to that country?

4. Which country has the tallest Hardwood?

Where is it growing?

How tall is it?

Which country has the tallest flowering trees?

5. Into what groups are Eucalypts divided and what feature is used for this purpose?

6. How do Eucalypts adapt to

Frequent bush fires?

Arid regions?
7. From what species do they extract Eucalyptus oil?

__________________________________________________________

__________________________________________________________

Where is it done in Australia?

__________________________________________________________

__________________________________________________________

8. Name ways in which Eucalypts help man, animals, birds, insects.

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

9. Make a collection of 15 different species of Eucalypts that you can identify and draw or trace or collect the fruit of each showing date and place and name of collector.

__________________________________________________________

Date completed ____________ Instructor’s Signature ____________________

Eucalypts 2002 Edition
1. List 25 culinary herbs and their uses.

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<th>Culinary Herbs</th>
<th>Uses</th>
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2. List 25 medicinal herbs and their uses.

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<th>Medicinal Herbs</th>
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</table>
3. Cook one dish using herbs.
Herb cooked __________________________________________________

4. Make one of the following herbal products:
   a. Cream
   b. herb pillow
   c. jam
   d. soap, paper
       Product made _______________________________________________

5. Make one batch of potpourri.

6. Make one pomander.

7. Name and identify 5 herbs growing wild near you.
   1. ______________________  4. ______________________
   2. ______________________  5. ______________________
   3. ______________________
8. Name 5 herbs you can use for dying and state the color they give.
   1. __________________________  4. __________________________
   2. __________________________  5. __________________________
   3. __________________________

9. Name 5 herbs that can be used in insect control.
   1. __________________________  4. __________________________
   2. __________________________  5. __________________________
   3. __________________________

10. Grow 5 culinary herbs for 3 months.
    1. __________________________  4. __________________________
    2. __________________________  5. __________________________
    3. __________________________

11. Name 5 herb plants that particularly attract bees.
    1. __________________________  4. __________________________
    2. __________________________  5. __________________________
    3. __________________________

12. Name 5 herbs mentioned in the Bible and give the Bible references for them.

<table>
<thead>
<tr>
<th>Herbs</th>
<th>Bible reference</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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</tbody>
</table>
Kayaking

Qualified Instructor Required

Prerequisite: Intermediate Swimming Honor

1. Satisfy the examiner that you have knowledge of different types of kayaks (Slalom, river, touring, sea); the uses for each and the equipment necessary for safe kayaking (helmet, life jacket, sprayskirt, bow and stern loops, floatation in kayak).

   Examiner’s signature ____________________________

2. Demonstrate an ability to enter and exit a kayak.
   a. From a beach
   b. From a pier or landing
   c. From deep water

3. Demonstrate ability to complete the following strokes:
   a. Straight forward and backward paddle
   b. Left and right turn by forward and back paddling
   c. Draw (sweep) stroke
   d. Support stroke
   e. Cross current paddling

4. Explain the steps involved in Eskimo rolling and demonstrate the proper method of doing this.

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

5. Explain how to repair a hole in fiberglass:
   Permanently in a workshop (fiberglassing)

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
Emergency repair on the riverbank (duct tape)


6. After completing a minimum of 2 training sessions complete either
   a. An overnight kayak trip
   b. Two day trips (one including some white water)
   Trip chosen ________________________________________________
   Date of trip ________________________________________________

Date completed ____________ Instructor’s Signature ____________________

Kayaking
2002 Edition
Kayaking Instructor's Chart

Demonstrate

From a pier or landing

From deep water

From a beach

<table>
<thead>
<tr>
<th>Cross current paddling</th>
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<tbody>
<tr>
<td>Support stroke</td>
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<tr>
<td>Draw (sweep) stroke</td>
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<td>Back paddling</td>
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<td>Left &amp; right turn by forward and backward paddle</td>
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<tr>
<td>Straight forward &amp; backward paddle</td>
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<tr>
<td>From deep water</td>
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<tr>
<td>From a pier or landing</td>
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</table>

NAME
1. Define the following commonly used terms:

Maree _____________________________________________________

__________________________________________________________

Powhiri ____________________________________________________

__________________________________________________________

Karakia ____________________________________________________

__________________________________________________________

Mate ______________________________________________________

__________________________________________________________

Waiata ____________________________________________________

__________________________________________________________

Korero ____________________________________________________

__________________________________________________________

Haka _____________________________________________________

__________________________________________________________

Kuia ______________________________________________________

__________________________________________________________

Tane ______________________________________________________

__________________________________________________________

Wero ______________________________________________________

__________________________________________________________

Mana _____________________________________________________

__________________________________________________________

Manuhiri __________________________________________________

__________________________________________________________
2. a. Draw or trace a map of the world and show with arrows the directions of Polynesian settlement.

b. Where do Maoris consider themselves to have come to New Zealand from?

________________________________________________________________________
________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
c. Explain what the Great Migration Myth is.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Who was the originator of the myth?

________________________________________________________________________

What were the canoes that arrived in this migration and where did they come from?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

d. Draw or trace a map of New Zealand showing all the major tribal areas, and make in the canoe for each. (SIC)

e. Why was Rangitoto named “Rangitoto”?

________________________________________________________________________

________________________________________________________________________

3. Visit a marae with a group that has been called to a hui. Write a report on the events that take place from the time you arrive at the marae to the time you leave. State the name of the marae, its locality and the tribe to which it is affiliated.

4. Briefly relate the customs observed at each of the following events:

Mate

________________________________________________________________________
________________________________________________________________________

Meal times

________________________________________________________________________
________________________________________________________________________
5. a. What are the two Maori religions currently in use today, and what are some of their characteristics?

<table>
<thead>
<tr>
<th>Religions</th>
<th>Characteristics</th>
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</table>

b. Briefly describe the Maori story of creation.

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</table>

b. Briefly outline the story of Seventh-day Adventism among the Maori people.

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</table>

b. What is the Maori attitude to religion in general?

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</table>
6. Make a sample tukutuku panel (approx 30cm x 30cm) OR a tipare OR a small flax mat/basket.

7. Know how to correctly:
   a. Greet people in Maori
   b. Hongi

8. a. What are five different pastimes enjoyed by Maori children in former times?
   1. __________________________________________________
   2. __________________________________________________
   3. __________________________________________________
   4. __________________________________________________
   5. __________________________________________________
   b. Learn how to do three string figures and walk on stilts.

9. Visit an old pa site in your locality and make a brief written report on what you could see.
Pathfinder's Name

**Marsupials**

- **1.** Distinguish:
  - a. Mammal from other animals.
  - b. Placentals, marsupials and monotremes from one another.

- **2.** Understand how marsupials are classified into families and describe, in a general way, the habits of these families.

<table>
<thead>
<tr>
<th>Families</th>
<th>Habits</th>
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</table>

- **3.** Describe the distribution, habitat (i.e. type of country they live in), diet, breeding behavior, as well as any other interesting information of twelve different groups of marsupials and monotremes.

<table>
<thead>
<tr>
<th>Marsupials/Monotremes</th>
<th>Description</th>
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</table>
4. Be able to explain the difference between marsupial reproduction and that in true mammals (i.e. placentals).

5. Explain the significance of the direction of opening of the pouch and the number of young per litter in marsupials.

6. Give an explanation of the unique occurrence of marsupials in Australia.

7. Be able to explain the need for conservation of our marsupials.
8. Write a report of your visit to a natural history museum, wild-life sanctuary, zoo, etc. indicating in about 10-15 lines, the extent of your observations.

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Music, Beginners

☐ 1. Pass in Grade 2 Practical AMEB, or Trinity College, or Royal Schools of Music, or Suzuki Method Graduation Level 1.

☐ 2. Pass in Grade 1 Theory and Musicianship.

☐ 3. Play or sing ten choruses or hymns.
Pathfinder’s Name

Music

1. Complete the Beginners Music Honor.

2. a. Pass in Grade 5 Practical AIMEB, or Trinity College, or Royal Schools of Music, or Suzuki Graduation Level 3.

   b. Pass in Grade 3 Musicianship or Theory.

3. Submit a list of thirty hymns and/or choruses you can play or sing and be tested on these at random.

OR

1. Play or sing a scale, and know its composition.

2. Write a scale in both treble and bass clefs.

   3. Know a half tone, a whole tone, a third, a fifth and an octave.

4. Be able to distinguish a march from a waltz, and give the time of each.

   March _____________________ Waltz _________________________

5. Define the following. Draw the symbols for each

   What is a quarter note?

   A half note?
6. Name five great composers and one composition of each, including an oratorio, a piano composition, a song.

<table>
<thead>
<tr>
<th>Composer</th>
<th>Composition</th>
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</table>

7. Play (a hymn), or sing from memory one stanza of thirty hymns or choruses.

<table>
<thead>
<tr>
<th>Hymn/Song/Chorus</th>
<th>Composer</th>
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<td>16.</td>
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<td>17.</td>
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</table>
8. Play, or sing from memory, one piece of good music.
   Music _____________________________________________________

9. For instrumentalists: play at sight a moderately difficult piece and
   explain all signs and terms in it.
   Music _____________________________________________________

10. For singers: Show with a baton how to lead a group in singing
    compositions written in 3/4 and 4/4 time.

11. Define orchestra
    _______________________________________________________
    _______________________________________________________
    _______________________________________________________

Name at least five instruments in an orchestra.
1. ___________________________  4. ___________________________
2. ___________________________  5. ___________________________
3. ___________________________
Music, Advanced

1. Complete the Music Honor.

2. Pass in Grade 7 Practical AMEB, or Trinity College, or Royal Schools of Music, or Suzuki Graduation Level 5.

3. Be able to play or sing any hymn chosen at random from the Church Hymnal or Sabbath School chorus books.
1. Name 15 species of parrot and five species of cockatoo that are common to Australia and be able to identify them from real life or pictures.

Parrots

1. ____________________________ 9. ____________________________
2. ____________________________ 10. ____________________________
3. ____________________________ 11. ____________________________
4. ____________________________ 12. ____________________________
5. ____________________________ 13. ____________________________
6. ____________________________ 14. ____________________________
7. ____________________________ 15. ____________________________
8. ____________________________

Cockatoo

1. ____________________________ 4. ____________________________
2. ____________________________ 5. ____________________________
3. ____________________________

2. Name two species of parrot that builds its nest in a termite mound and tell where each is found.

<table>
<thead>
<tr>
<th>Species</th>
<th>Location</th>
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</table>

3. Where in Australia would you find each of the following and describe the natural diet of each.

Long Billed Corella

<table>
<thead>
<tr>
<th>Location</th>
<th>Natural Diet</th>
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<tr>
<td>Parrots and Cockatoos</td>
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</table>

<table>
<thead>
<tr>
<th>Great Palm Cockatoo</th>
<th>Natural Diet</th>
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<tbody>
<tr>
<td>Location</td>
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<table>
<thead>
<tr>
<th>Gang Gang Cockatoo</th>
<th>Natural Diet</th>
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<tbody>
<tr>
<td>Location</td>
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</table>

4. Which three species of cockatoo are known as the most rare?
   1. 
   2. 
   3. 

5. Which is the largest species in the Rosella family?
   Where does it come from and what is its usual food?
   
6. Every State of Australia has a Rosella that is common to that State. Some are found in more than one State but there is one that is commonly associated with your State. Which is it?

7. When the Eclectus parrot was first found it was thought that the Male and Female were of different species. Why was this?
   Where are they found and what is their usual diet?
8. What Australian cockatoo is regarded as the most beautiful in the world?

Describe what it looks like and where it is found.

9. Name four different Lorikeets and tell why they all have brush tongues.

<table>
<thead>
<tr>
<th>Lonikeets</th>
<th>Why</th>
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<tbody>
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</tbody>
</table>

10. Be able to describe the nest of any one of the above parrots or cockatoos and also tell the color of the egg.

<table>
<thead>
<tr>
<th>Color of egg</th>
<th>Nest</th>
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<tbody>
<tr>
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</table>
11. Make a list of all the parrots and cockatoos that are common to your area.

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Puppetry

☐ 1. Make at least one puppet, and make/or buy two other puppets.

☐ 2. Develop at least three puppet characters with their own voices.

   Characters
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________

☐ 3. Write three, two to three minute scripts.

   Scripts
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________

☐ 4. Perform to any audience (not family or immediate friends) at least three times.

   Dates of performances
   1. __________________________________________________________
   2. __________________________________________________________
   3. __________________________________________________________

☐ 5. Obtain an assessment of each performance, by someone not related to the puppeteer.

   Person ____________________________________________________

Date completed ____________ Instructor’s Signature ____________________

South Pacific Division
2002 Edition
**Puppetry, Advanced**

**Prerequisite:** Puppetry Honor

- 1. Make at least two or more additional puppets.
- 2. Develop characters and voices for these puppets.

  **Characters**
  1. ______________________________________________________________
  2. ______________________________________________________________

- 3. Write a ten-minute script.
- 4. Construct your own staging.
- 5. Give at least one church or public performance.

  **Dates of performance** __________________________________________

---

Date completed ____________  Instructor’s Signature ____________________
Skateboarding

1. Use the following safety gear and know why it should be worn when skateboarding.
   - Helmet ____________________________________________________
   - Elbow pads ________________________________________________
   - Knee pads _________________________________________________
   - High top boots _____________________________________________
   - Wrist support gloves _________________________________________

2. Name all the parts of a skateboard.
   - 1. _______________________________________________________
   - 2. _______________________________________________________
   - 3. _______________________________________________________
   - 4. _______________________________________________________
   - 5. _______________________________________________________
   - 6. _______________________________________________________
   - 7. _______________________________________________________
   - 8. _______________________________________________________
   - 9. _______________________________________________________
   - 10. _______________________________________________________

3. Completely disassemble and reassemble a skateboard, repacking the bearings and setting wheelnuts and truck pivoting nut at correct tension.
4. Demonstrate eight skateboarding skills which will include some of the following and do them to the instructors satisfaction on authorized property. Five of these should be demonstrated on a skateboarding ramp.

Tick Tack— from a standing start to a minimum of 10 meters on level ground
Ollie—minimum of 10 centimeters
Rail Slide—minimum of 1 meter
Drop In—off a ramp 2-3 meters high
Gurreo Slide
4-Wheel Look Up
Pump on a ramp up to the Coping
Acid Drop
Kick Flip
Ollie up a Gutter
Front-Back side grind
Carve
Pump

**Note:** The Skateboarding honor is not available in the North American Division because of insurance regulations.
<table>
<thead>
<tr>
<th>Demonstrate</th>
<th>Pump</th>
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<tbody>
<tr>
<td>Carve</td>
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<td>Front-back side grind</td>
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<td>Acid drop</td>
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<tr>
<td>Pump on a ramp up to the coping</td>
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<tr>
<td>4-Wheel look up</td>
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<tr>
<td>Cuerno slide</td>
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<tr>
<td>Drop in</td>
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<td>Rail slide</td>
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<tr>
<td>Ollie</td>
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<td>Tick tack</td>
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</table>
1. Give three Bible principles and two Spirit of Prophecy principles to support exercise.

**Bible principles**
1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________

**Spirit of Prophecy principles**
1. __________________________________________________________
2. __________________________________________________________

2. Give a report on the correct diet to maintain peak physical condition and how this was maintained for the duration of training. Include fluid intake during and precompetition, and in-competition food intake.

3. a. Give guidelines for correct training, including warm-up, stretching, injury prevention, prevention of overtraining, etc.

   b. Present your regular training program.

   c. List the correct equipment, including bike, shoes, clothing.

4. Exhibit knowledge of the techniques of swimming, cycling and running.

5. Compete in all three aspects of a recognized triathlon event, either solo or as a team member, where the triathlon is similar to:
   a. Swim—500m
   b. Cycle—15km
   c. Run—10km
   d. within 4.5 hours

   Date completed ________________________________

Date completed ____________ Instructor’s Signature ____________________

South Pacific Division
2002 Edition
Triathlon, Advanced

1. Have the Triathlon Honor.

2. Developing a training schedule for yourself.

3. Keep a training log for two months. (Complete Chart #1)

4. Participate in an Advanced Triathlon as a solo participant, where the triathlon is similar to:
   a. Swim—1.5km
   b. Cycle—40km
   c. Run—10km
   d. within 4.5 hours

   Date completed ____________________________
### Triathlon, Advanced, Chart #1

**Month:**

|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

**Additional Notes:**

Month: _________________________________
1. Know five of the following terms used in upholstery to describe the tools and give their uses:

   Tack Claw

   Use

   Staple Remover

   Use

   Regulator, Mattress Needle

   Use

   Magnetic Hammer

   Use

   Sharp Knife or “Snap” blade knife

   Use

   Work Table

   Use

   Industrial Sewing Machine

   Use

   Sundry Items

   Use
2. Explain the use of the following items:
   Webbing
   ____________________________________________________________
   ____________________________________________________________
   Staples and Tacks
   ____________________________________________________________
   ____________________________________________________________
   Hessian
   ____________________________________________________________
   ____________________________________________________________
   Buttoning Cord or Waxed Flax
   ____________________________________________________________
   ____________________________________________________________
   Calico
   ____________________________________________________________
   ____________________________________________________________
   Fibre
   ____________________________________________________________
   ____________________________________________________________
   Flock
   ____________________________________________________________
   ____________________________________________________________
   Foam Sheeting
   ____________________________________________________________
   ____________________________________________________________
   Glues
   ____________________________________________________________
   ____________________________________________________________
   Back Tacking Strip
   ____________________________________________________________
   ____________________________________________________________

3. Name two types of material used for upholstery.
   1. __________________________________________________________
   2. __________________________________________________________

4. Explain how to fit the top cover to a lid.
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
5. What is the name of the material used for the base of lounges and the base of your box etc., and what is its purpose?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

6. Name two methods of attaching covers to chairs.
   1. __________________________________________________________
   2. __________________________________________________________

7. Complete a or b:
   a. Ottoman
   b. Toybox

   Project _______________________________________________________
   Date completed _______________________________________________

8. Complete a Feature Panel.
   Date completed _______________________________________________
Video

1. Be familiar with the type of videos available. Know the difference between VHS-C and Video 8 tapes.

VHS-C ____________________________________________________

__________________________________________________________

Video 8 ___________________________________________________

__________________________________________________________

2. Identify the following parts on a video camera and know how to use them:
   a. Viewfinder
   b. Record button
   c. Lens
   d. Zoom button
   e. Power on/off switch
   f. Manual focus and zoom levers/rings
   g. Tape loading door
   h. Time lapse switch

3. Know what the viewfinder messages mean.

4. Identify and change the battery. Know how to charge up the battery and when to replace-recharge the battery. Know how to get the best life from the Ni-cad battery.

5. How else can the camera be powered?

6. Video a five minute segment them view with your instructor. Discuss your technique including the following and learn how to correct if necessary:
   a. Zooming
   b. Lighting
   c. Panning
   d. Steadiness of camera

Date completed _____________________________________________

7. Demonstrate how to set up and use a tripod.

Date completed _____________________________________________
8. Demonstrate how to edit video using a VCR by editing segment taken for requirement 6.
   Date completed __________________________________________________________________________

9. Demonstrate your ability to use titles and design your own by hand or computer.
   Date completed __________________________________________________________________________

10. Complete one of the following and show it in a public place. Length of video clip must be 4-7 minutes.
    a. Object lesson
    b. Music video clip
    c. Bible story (dramatized, puppets, acted etc.)
    d. Nature
    e. Modern life dilemma
    f. Advertisement for church program, publication, etc.

   Project ________________________________________________________________________________
   Date shown ______________________________________________________________________________
Wattles

1. What is the approximate number of named varieties of wattles in Australia?

2. What are phyllodes? What work do they do for the plant? Why are phyllodes so important in the study of acacias?

3. How are acacias classified into two major groups?

4. How does the shape of the seed pod and the way the seeds lie in the pad help in identification?

5. How many acacias in your state have true leaves (bipinnate) when adults?

6. In seeding acacias what is seen first, true leaves or phyllodes? How many have true leaves?

7. What must happen to an acacia seed before it will germinate and grow?
8. What acacias phylloides are used to feed stock in times of drought?

9. What is the bark of some acacias used for in Australia?

10. What species of acacias are used for furniture making?

11. How do acacias help and benefit man, animals, insects, birds?

12. Make a collection of 10 or more dried pressed wattles with flowers and phylloided and where possible pods and seeds. Show dates, place collected, common and scientific names. Some must be spike type flowers, some raceme type or single balls and some bipinnate leaves. (Complete Chart #1)

OR
20 or more close-up photographs you have taken of wattles showing the above details.
<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Place Collected</th>
<th>Common/Scientific Name</th>
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</table>
South Pacific Division/Island Ed. Index

Canoe Building
Cultural Food Preparation
Cultural Heritage
Island Fishing
Mat Making
Native Bush Construction
Palm Trees
Subsistence Farming
Tapa Cloths
Tree Climbing
Canoe Building

1. What trees in your area are used for building canoes?

__________________________________________________________
__________________________________________________________

Name them in your language.

__________________________________________________________
__________________________________________________________

Are they considered softwoods or hardwoods?

__________________________________________________________
__________________________________________________________

2. What trees are used for building canoes, softwoods or hardwoods?

__________________________________________________________

3. What tools are used for building canoes?

__________________________________________________________
__________________________________________________________
__________________________________________________________

Start with felling the tree up to completion.

4. Choose a good canoe tree about four meters in length and observe the correct felling of it. Explain what happened.

__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________

5. Describe how a log is prepared to build a canoe.

__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
6. With the help of others properly shape the outside of the canoe and hollow out the inside. Correctly smooth both surfaces inside and outside.
   Date completed 

7. Assist in the making of paddles, seats, poles and fittings for the canoe.
   Date completed 

8. Assist in the construction of decking, outrigger, mast and sail if the canoe is of a double hull or outrigger type.
   Date completed 

9. Make a tree model of the type of canoe used in your district.
   Date completed 

Date completed ___ Instructor’s Signature _____________

Canoe Building
2002 Edition
Cultural Food Preparation

Cook a meal using local methods and foods by yourself.

See example below.

Materials

1. Raw foods (e.g. Dalo, cassava, yams, sweet potatoes, taro leaves, etc.)
2. Banana leaves or other leaves used in your area.
3. Stones
4. Firewood
5. Banana stems
6. Coconut leaves

Methods

1. Light the fire first.
2. Pile the firewood in order (criss-cross method).
3. Put all the stones on top of the firewood.
4. Let the fire completely burn the wood until you notice that the stones are red-hot.
5. Clean the lovo/oven.
6. Put the smashed up banana stems on top of the stones.
7. Start to put all the raw foods on top of the banana stems,
8. Cover it up first with green coconut leaves before you completely cover it with leaves and leave it for one to one and a half hours.
9. Uncover the lovo/oven and the food is ready.
Cultural Heritage

1. Outline why it is important to know about our cultural heritage.

__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________

2. List the special ceremonies for
   The birth of a child _________________________________________
   _________________________________________________________
   Becoming an adult _________________________________________
   _________________________________________________________
   Death and burial _________________________________________
   _________________________________________________________

3. List the customary ways of dressing for everyday life and two special occasions.
   1. _______________________________________________________
   2. _______________________________________________________
   Special Occasions
   1. _______________________________________________________
   2. _______________________________________________________
   b. Draw, explain or present in pictures these customary dresses.
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
4. What is or was the customary pre-marriages for young people in your area?

__________________________________________________________

How is/was marriage arranged?

__________________________________________________________

5. List the advantages of traditional marriages over western style marriages and courtship.

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

6. Explain briefly the meaning of the term “bride price.”

__________________________________________________________

What are the advantages of bride price.

__________________________________________________________

__________________________________________________________

Explain the disadvantages of bride price.

__________________________________________________________

7. Explain the leadership structure in your village area. (Include the chiefly system and the extended family.)

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________
Island Fishing

1. Name five native methods that are used for island fishing.
   1. _________________________________
   2. _________________________________
   3. _________________________________
   4. _________________________________
   5. _________________________________

2. Demonstrate your ability to make at least one type of fishing gear out of native material used in your area.
   Types of fishing gear made
   1. _________________________________

3. In your cultural setting identify types of fishing according to tides and phases of the moon.

4. Display and label a collection of baits, lures and hooks traditionally used in your area.

5. Participate in a fishing trip and catch two fish using two different traditional methods.
   Fish                      | Methods used
   1. __________________________ | _________________________________
   2. __________________________ | _________________________________

6. a. Collect pictures of ten tropical fish and identify their local names and their habitation.

   b. Name ten poisonous or dangerous fish in your area.
      1. _________________________________
      2. _________________________________
      3. _________________________________
      4. _________________________________
      5. _________________________________
      6. _________________________________

Pathfinder's Name
1. In your culture name the materials which are used in mat making.

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

2. Explain and demonstrate how to prepare this material.

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

3. Name plants that can be used for making dyes in your culture. Tell where they come from and how to prepare them for dying. (Complete Chart #1)

4. Show how to use native and synthetic dyes in dyeing mat making material.

5. Make two mats showing two different types of weaving. One of the mats must have a reasonably fine weave.

<table>
<thead>
<tr>
<th>Mats</th>
<th>Types of Weaving</th>
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<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<tr>
<td>Plants</td>
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<tr>
<td>Place</td>
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<tr>
<td>Prepare for dying</td>
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</table>
Native Bush Construction

1. Assist in setting out the ground of a simple house squarely and accurately.

2. Assist with choosing and cutting proper timber from the bush for posts, floor, rafters, wall plates, studs, steps and doors.

3. a. Plait local materials for walls.
   b. Make sections for a wall 1m x 1m and show two different wall patterns.

4. Show ability to thatch a roof correctly, especially the ridge and hips using kunai grass, sago palm leaves, coconut palm leaves or any other materials.

5. Where applicable select, prepare and use vines for tying and lashing.

6. Take part in building a house not less than 4m x 2m using native materials. In building the house practice all demonstrations nos. 1-5. Show while building the house that you have taken measures to keep it free from termites.

7. Demonstrate ability to name, use and care for the following tools: ax, saw, hammer, chisel, bush knife, ruler and tape spade.
Palm Trees

1. Give the general characteristics of the palm tree referring to the following parts:
   - Stem or trunk
   - Roots
   - Leaves
   - Inflorescence or flowers
   - Fruits

2. What happens when the crown of a palm is cut out?

   ______________________________________________________
   ______________________________________________________

   What happens when the trunk of a palm is damaged?

   ______________________________________________________
   ______________________________________________________

3. In the Pacific islands there are several species of palm trees which are helpful to man. Name two of these and list as many ways as you can how each helps man.

   Palm Trees                                 Helpful to man
   1. ____________________  ________________________________
   2. ____________________  ________________________________
4. Identify by sight six different types of palms which grow in your area. Do this in any language.

1. _______________________________________________________
2. _______________________________________________________
3. _______________________________________________________
4. _______________________________________________________
5. _______________________________________________________
6. _______________________________________________________

5. Draw and name the six palm trees you have identified showing clearly the leaf formation, flowers and seed shape as well as the fruit.

6. Parts of palms are used for food or to help with the preparation of food. From your culture tell how a palm tree or part of it is used as food or in food preparation e.g. sago palm, coconut palm. Tell how to prepare it.

_________________________________________________________________
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_________________________________________________________________
Subsistence Farming

1. Participate in the preparation of a food garden nine meters square. Cover the following points.
   a. Choosing the site
   b. Clearing the bush
   c. Cleaning the area
   d. Preparation of the soil for planting

2. Through a practical demonstration show how you will make and use compost in your garden.

3. List the crops from the following plant families you will plant in your garden and the time of year that you can do this.
   Root crops—e.g. cassave, sweet potatoes, carrots
<table>
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<th>Plants</th>
<th>Time of year</th>
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   Grass—e.g. corn, sugar cane
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<th>Plants</th>
<th>Time of year</th>
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   Legumes—e.g. beans, peanuts
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<th>Plants</th>
<th>Time of year</th>
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Leafy vegetables—e.g. cabbage varieties, aibika

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Fruit—e.g. Bananas, pawpaw, tomatoes, egg plant, pumpkins, cucumber

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☐ 4. Show by practical demonstration and by diagram how you will divide your garden to plant your crops.

☐ 5. What crops will best grow where you have burnt out stumps and logs?

☐ 6. Show and demonstrate how you will keep your garden free from weeds and garden pests.

☐ 7. Demonstrate how you will plant your crops to have a continual supply.

☐ 8. Show how to harvest crops for family use and commercial sale.

☐ 9. Show how you will rotate your crops.

☐ 10. Outline what you would do with your garden area after several seasons of cropping.
Tapa Cloths

1. What are the main uses of Tapa cloth?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. Know three different ways that Tapa cloth is made in the Pacific Islands.
   1. _________________________________________________________
   2. _________________________________________________________
   3. _________________________________________________________

3. Know the trees used for making Tapa cloth in your area.
   __________________________________________________________
   __________________________________________________________

4. a. Explain the steps in making tapa cloth and then demonstrate your knowledge by making a 1/2 meter square tapa cloth.
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________

   b. Explain the process of dying tapa cloth using natural dyes and decorate your tapa cloth.
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________

5. Make a collection of a number of different types of tapa cloth designs and outline the purpose for which they were used.
Tree Climbing

1. Practice your tree climbing skills a number of times on a 10-15 foot tree.

2. Climb a 20-foot coconut tree. Demonstrate the manner of getting back down to the ground safely.

3. a. Climb a tree using any one of four common methods.
   Method used __________________________________________
   b. Describe the other methods in details to the instructor.

4. The instructor should select trees suitable for climbing; one with lots of branches, the other a coconut tree.
   Each person must demonstrate on each of the two trees how to apply the two methods of tree climbing (squat hopping and monkey type.)

   Tree               Method used
   1. _____________   1. ______________________________________
       2. __________________
   2. _____________   1. ______________________________________
       2. __________________

5. Demonstrate how you would safely carry a bush knife and an axe up a tree.

6. a. Climb a coconut tree demonstrating how you would carry a bag.
   b. Remove a coconut without using a knife or sharp instrument using only your limbs and return to the ground with it in your bag.

7. Know how to remove an injured person from a tree.
North American Division
of the Seventh-day Adventist Church
Honor Submission Form

Date Submitted: ____________________________________________

Submitted by: ______________________________________________

Club Name: ________________________________________________

Conference Name: __________________________________________

<table>
<thead>
<tr>
<th>Piloted by</th>
<th>Director Name</th>
<th>Pathfinder Club</th>
<th>Number of Participants</th>
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I, ______________________________, Pathfinder Director of the ______________________ Conference
recommended this Honor to the NAD Pathfinder Honors Committee on ______________________.

Date ____________________________

Signed

Process:

1. The Conference Director of Pathfinder Ministries will submit the Honor proposal by January 1, to the NAD Director of Pathfinder Ministries.

2. The new Honor proposal will be considered by the NAD Pathfinder Honor Committee. Recommendations on whether to accept the honor proposal as submitted, or indicate the need for possible changes, or rejection of the proposal will be made to the NAD Pathfinder Committee.

3. The NAD Director of Pathfinder Ministries will write the Conference Director of Pathfinder Ministries with information on the recommendations made by the NAD Pathfinder Committee on the Honor proposal submitted.

Continued on next page
4. Honor proposals need to be type written and double spaced. Please submit hard copy and electronic version of the requirements and answers to requirements, along with a proposed patch design.

5. New Honor proposals should be submitted after Honors have been piloted by at least three (3) local Pathfinder Clubs in the Conference submitting the honor. A written statement by the Conference’s Director of Pathfinder Ministries to the NAD Director of Pathfinder Ministries stating that the Honor being proposed has been piloted, needs to accompany the new Honor proposal.
Check List for Evaluating Honors

___ 1. All requirements uphold the basic standard and philosophy of the Seventh-day Adventist Church.

___ 2. Requirements include a balance of theory and “hands on” experience.

___ 3. If possible, requirements have been developed in the areas of Basic and Advanced. Having the Basic Honor should be the pre-requisite for earning the Advanced Honor in a given subject.

___ 4. Requirements are usable in a group setting or by a single individual.

___ 5. Requirements can be fully completed in less then three months.

___ 6. Requirements clearly state in simple terminology exactly what is to be accomplished. (Avoid ambiguous words or phrases such as: explain briefly, submit, explain orally, or demonstrate ability.)

___ 7. Activity requirements of extended time are worded so as to avoid conflicts with school or work schedules. (Examples: a four day campout could be done in two weekends.

___ 8. Requirements avoid destruction of animal or plant life. (Ask for photos or drawings as opposed to collections.

___ 9. Requirements avoid involvement in armed or unarmed defenses.

___ 10. Requirements can be accomplished without unduly affecting the safety of its participants.
Alphabetical Index

Aboriginal Lore South Pacific Division
Abseiling South Pacific Division
Abseiling, Advanced South Pacific Division
Abseiling, Instructor South Pacific Division
Accounting General Conference—Vocational
Adventurer for Christ General Conference—Outreach Ministries
Adventurer for Christ, Advanced General Conference—Outreach Ministries
African Lore East Africa Division
Agriculture General Conference—Outdoor Industries
Airplane Modeling General Conference—Arts, Crafts & Hobbies
Amphibians General Conference—Nature
Amphibians, Advanced General Conference—Nature
Animal Tracking General Conference—Nature
Animal Tracking, Advanced General Conference—Nature
Antelopes East Africa Division
Antelopes, Advanced East Africa Division
Archery General Conference—Recreation
Archery, Advanced General Conference—Recreation
Automobile Mechanics General Conference—Vocational
Automobile Mechanics, Advanced General Conference—Vocational
Backpacking General Conference—Recreation
Baking General Conference—Household Arts
Barbering/Hairstyling General Conference—Vocational
Basic Rescue General Conference—Health & Science
Basic Sewing General Conference—Household Arts
Basketball North American Division—Recreation
Basketry General Conference—Arts, Crafts & Hobbies
Bats North American Division—Nature
Bats, Advanced North American Division—Nature
Beekeeping General Conference—Outdoor Industries
Bible Evangelism General Conference—Vocational
Bible Marking South Pacific Division
Bible Marking, Advanced South Pacific Division
Bird Pets General Conference—Nature
Birds General Conference—Nature
Birds, Advanced General Conference—Nature
Block Printing General Conference—Arts, Crafts & Hobbies
Blood and the Body’s Defenses General Conference—Health & Science
Bones, Muscles and Movement General Conference—Health & Science
Bookbinding General Conference—Vocational
Bookkeeping General Conference—Vocational
Braiding North American Division—Arts, Crafts & Hobbies
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CPR General Conference—Health & Science
Cacti General Conference—Nature
Cacti, Advanced General Conference—Nature
Cake Decorating General Conference—Arts, Crafts & Hobbies
Camp Craft General Conference—Recreation
Camp Safety North American Division—Recreation
Camp Safety, Advanced North American Division—Recreation
Camping Skills I General Conference—Recreation
Camping Skills II General Conference—Recreation
Camping Skills III General Conference—Recreation
Camping Skills IV General Conference—Recreation
Candlemaking General Conference—Arts, Crafts & Hobbies
Canoe Building South Pacific Div/Island Ed.
Canoeing General Conference—Recreation
Carpentry General Conference—Vocational
Cats General Conference—Nature
Cats, Advanced General Conference—Nature
Cattle Husbandry General Conference—Outdoor Industries
Caving General Conference—Recreation
Caving, Advanced General Conference—Recreation
Ceramics General Conference—Arts, Crafts & Hobbies
Cetaceans South Pacific Division
Chemistry General Conference—Health & Science
Child Care - Babysitting Euro Africa Division
Christian Drama North American Division—Outreach Ministries
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