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**Philosophy of the Pathfinder Honors**

Each honor is designed to be a course of study that introduces a subject. This subject should have practical value and should enhance the lifestyle of the person pursuing the honor. Honor study should assist the person in his/her development as a well-rounded Christian by directly affecting the social, emotional, physical, and spiritual aspects of life. The study of an honor should direct the person to a deeper love of the Creator and should increase one’s interest in committing their life in service to God and to the community.

Honor study is intended to help the person’s spiritual character development. Therefore, every honor should be designed to require high standards of excellence by clearly stating in all requirements what tasks are to be accomplished. Fulfilling the requirements should be interesting and fun, while at the same time providing the person with a sense of achievement.

The study of an honor should provide a person with an attractive way to learn about their surroundings or widen their exposure to new horizons of adventures. Such study topics might include learning about hobbies, a special interest, or being introduced to a new vocation. Each honor should be designed to accommodate group study of a club meeting, family, or individual study by a highly motivated person. The entire content of the honor should be capable of being completed in less than three months.

Because Pathfinder honors are a part of a church-sponsored program, all facets of course study should be in harmony with basic church standards. For this reason honor study would normally avoid topics with requirements calling for destruction of plant or animal life as well as types of armed or unarmed defense. Also, subjects should be avoided that could only be studied by a small group of people in a single local area.

It is the purpose of all honors to help the person to “increase in wisdom and stature and in favor with God and man.”

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**Introduction**

This 2011 Edition of the Pathfinder Honor Handbook is representative of the continual growth of Youth Ministry in the Seventh-day Adventist Church.

We live in a rapidly changing world, and consequently this book is quite likely outdated as of press time. The honors reflect this fact as they now undergo continual systematic revisions in order to provide nothing but the best for our youth. By design and definition, honors are “windows to be opened in the mode of discovery” within the philosophical framework of the church.

This manual includes all honors currently recognized at the General Conference level of Youth Ministry, and it also includes those specialized honors recognized by various divisions. A few of the patch designs pictured may not match those utilized in the field because it is the desire of the World Pathfinder organization that honors received by Pathfinders reflect in their design that which the recipient can relate to. For instance, the patch for the Bird Honor depicts a member of the Corvid family known as a Blue Jay; however, this bird is not known in many parts of the world. Therefore, South America has chosen to depict one of their beautiful Cardinals, which is much better known.

The original concept of honors was agreed to at a General Conference Youth Advisory in 1927. They were first called Vocational Merits, then they became Vocational Honors. The first handbook listing the requirements was published in 1928. At that time there were 16 topics selected. While requirements have changed and names have been modified, those original honors remain today. Often these patches were hand-sewn on treadle machines; some were sewn in private sewing rooms utilizing the pictured design as a pattern. These original patches have a quaint appearance when compared to today’s computer-generated designs sewn on high precision machines at the Lion Brothers plant near Baltimore, MD, USA.

Down through the years other honors have joined these original 16, and today there are more than 300 Pathfinder honors recognized worldwide.

It is the desire of the General Conference Youth Department that this edition of the Pathfinder Honor Handbook will lead you into many new adventures as you discover the world around you. We also hope that these very enjoyable activities will prepare young people for the world to come.
Guidelines for Participating in the Pathfinder Honor Program

Adventist youth follow in a long tradition of service to humanity. They can be found all over the world applying their skills to the myriad tasks and many vocations and professions needed to carry the “gospel to all the world in this generation.” Many Adventist youth who are now successful in overseas mission service, in business or professional work, trace their vision of service to the Pathfinder honor system.

We all should be able to draw from the great book of nature lessons that will inspire and enable others to emulate the example of Jesus, the greatest nature Teacher this world has ever known. Youth should know how to place truth-filled literature in the hands of those who may thus be led to the Savior. Every young person must be prepared to answer the call of the Master in many fields of endeavor.

The Youth Ministries Department desires to help young people reach these ideals, and Pathfinder honors enable young people to gain proficiency in many areas. Sometimes study for honors leads to the adoption of a vocation or at least a useful hobby. While some may consider Pathfinder honors as just study, theory, and book work, remember that the Pathfinder honor system is based on the philosophy, “an ounce of theory to a pound of practice.” Enjoyment and adventure are the keys to any honor achievement.

Advanced Honors: A Glimpse Toward the Future

There have always been those persons who would like to see even greater challenges in a given honor. This desire created the concept of Advanced Honors. To reduce production costs and provide interested persons with additional levels, advanced levels will be written for every honor. As these sets of requirements come into existence, a small bronze star will be available to be attached to the patch.

Check List for Evaluating New Pathfinder Honors

Check to see if the honor (or a similar one) already exists: http://gcyouthministries.org/Ministries/Pathfinders/Honors/tabid/85/Default.aspx

If no existing honor is found, please complete the following requirements:

1. The honor requirements must uphold the standards and philosophy of the Seventh-day Adventist church.
2. The honor requirements must include a balance of theory and “hands on” activities.
3. If possible, requirements should be developed on two levels of study: Basic (ages 10-15), and Advanced (ages 16 and older). Having the basic honor should be the pre-requisite for earning the advanced honor on a given subject.
4. Requirements should be usable in a group setting or by a single individual.
5. Requirements should be able to be completed in less than three months. This is a general rule only as some honors (e.g. Outdoor Industries category) need more time.
6. Requirements should clearly state in simple terminology exactly what is to be accomplished. (Avoid ambiguous words or phrases such as “explain briefly,” or “demonstrate ability.”)
7. Requirements must consider care of our natural environment. For example, to avoid destruction of animal or plant life, ask for photos or drawings rather than collections.
8. Activity requirements of extended time are worded so as to avoid conflicts with school or work schedules (e.g. a four day campout could be done in two weekends).
9. All requirements are to be accomplished in a safe and supervised environment. They must comply with legal requirements and will avoid involvement in armed or unarmed defenses.
10. Requirements should be able to be accomplished without unduly affecting the safety of its participants.
11. The requirements should reflect current practice and language.
Approval Procedure for a New Pathfinder Honor

1. All new honor requests should be submitted to the local conference Pathfinder director for verification that the honor has met criteria as stated on the worksheet for developing new honors.
2. The local conference Pathfinder director then submits the new honor to the Division Pathfinder Specialty Committee chairman.
3. The new honor request is then submitted to the Pathfinder Honor Study Committee for approval. Honors which are not approved are then returned to their author with written explanation for reasons of rejection or need for revision. A copy of the letter should also be sent to the local conference Pathfinder director.
4. Approved honors are submitted to the General Conference Honor Committee for final approval and processing of the honor. A letter of recognition and thanks would be sent to the author by the Honor Committee chairman.

Instructions for Completing New Honor Worksheet

1. Supply all biographical data as requested.
2. Indicate proposed title and topical category for new honor.
3. Briefly state the purpose for the proposed honor.
4. Submit a suggested sketch for the honor. Indicate design colors. (Note: patch designs should include no more than three colors plus the background color.)
5. Indicate the appropriate difficulty level(s) for the honor. Difficulty levels are as follows: Basic (ages 10-15), Advanced (ages 16 and older).
6. List specific sources needed for completing honor requirements. For each source be sure to list title, author, publisher, and copyright date.
7. List materials needed to complete honor and an estimate of their cost per person. Also estimate the time needed to complete the honor.

WORKSHEET FOR DEVELOPING NEW PATHFINDER HONORS

NAME _______________________________________________________
ADDRESS _________________________________________________
CITY _____________________ STATE ______ ZIP ________
DATE OF SUBMISSION _________________________________
TITLE ______________________________________________
CATEGORY __________________________________________
PURPOSE OF ________________________________________
Level(s) of difficulty: ___________ Basic (10-15)
_________________ Advanced (16-up)
References (Include author, title, publisher, date published): ___
___________________________________________________
___________________________________________________
Materials needed and estimated cost:
___________________________________________________
___________________________________________________
Estimated time needed to complete Honor:
_________________ Hours

(For Office Use Only)
DATE RECEIVED _________________________________________
DATE ACTED ON _________________________________________
CONFERENCE ___________________________________________
SIGNATURE _____________________________________________
(Conference Youth Director)

_________ Accepted. Send on to Division Committee.

_________ Rejected. Send back to author with letter of explanation.
HONOR REQUIREMENTS
(List)

___________________________________________________
___________________________________________________
___________________________________________________

HONOR ANSWER SHEET
Briefly suggest what should be required for testing an individual or how to determine if the Honor has been completed.

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<td>Refugee Resettlement</td>
<td>2009</td>
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1. Select a community or urban area that you’re familiar with and describe, to the best of your ability, the following information: location on a map, economic conditions, demographical description of residents (age, gender, most common jobs, etc.), degree of health access, crime rate, and education.

2. List the needs you see in your community. This can include better support for low-income families, assistance for lonely or elderly people, and better clean up of public areas, etc.

3. Listen to a community leader, teacher, church pastor, or police officer talk about ways that someone like you can make a positive impact in a community. Remember to take notes.

4. Report in your own way to your Pathfinder Club about your findings and describe what you have specifically learned about the community you chose. Be creative.

5. Describe the most important improvements your community needs and what you can do to help.
Requirements

1. Define “community development.”
2. Explain to your instructor why some countries are considered “developing” while others are referred to as “developed.”
3. Name five developing countries and list three things that ADRA is doing in these countries that would be considered “development” and two things that would fall under “relief.”
4. Read about why there are poor people among us in the book Desire of Ages, written by Ellen G. White (Chapter 70, “The Least of These My Brethren”). Describe to your instructor what you learned.
5. Describe at least one need in your community that requires attention.
6. Write a short community development plan that your Pathfinder group can implement (planting trees, cleaning parks or yards, repainting public walls, etc.). The plan should describe the activity, group size, transportation logistics, and materials.
7. Spend at least four hours participating in one of the following field trips:
   a. Participate with a group that provides assistance to the homeless in your community.
   b. Participate with a work team that is repairing or building housing for the poor.
   c. Work in a food distribution center, soup kitchen, or homeless shelter in your community.

Requirements

1. Read the following Bible texts and explain what you think God is asking us to do to help the poor and suffering in our community:
   a. Isaiah 58:3-12
   c. Matthew 25:31-46
2. Explain to your instructor 1) what the letters “ADRA” stand for and the difference between “development” and “relief”; 2) talk about a local organization that serves the poor and disadvantaged in your community and what services it provides.
3. Meet with a community leader in your area and ask about projects that your Pathfinder unit could accomplish to help meet needs in your community.
4. Plan, organize, and complete a community service project with your Pathfinder unit or class in your community. This project should target a certain need that your community has. Total time from planning to completion of this project should be approximately 10 hours.
**Requirements**

**DISCUSSION GROUP (Adult Facilitator Required)**

1. Explain how Christ encouraged people in conflict in the following Bible stories. Identify the nature of the conflict or human needs in each story that you explain.
   a. John 8:1-11 (Mary Magdalene)
   b. Matthew 18:1-6 (Disciples – Greatest Kingdom in Heaven)
   c. 1 Kings 3:16-28 (Solomon and the Baby)

2. Discuss relationship, identity, racial, and cultural conflicts that teenagers in your community face today (i.e. relationship with parents, self esteem, friendships).

3. Describe the types of human needs and give a real-life example of each.

4. What is active listening? Practice active listening by role playing conflicts noted in #2.

5. Apply the following method of conflict resolution to an example in #2.
   a. Set the scene
   b. Gather information
   c. Identify the problem
   d. Brainstorm solutions

6. Negotiate a solution.

7. Explain how to make a referral to a professional counselor or pastor.

8. Discuss your own motives for wanting to help your friends when they face conflict. What about strangers?

**Requirements**

1. Explain the type of damage most likely to occur to homes, individuals, and communities for each of the following major types of disaster, and indicate for each in which parts of the world it occurs most frequently:
   a. Hurricane/Typhoon/Cyclone
   b. Tornado
   c. Floods
   d. Earthquake
   e. Tsunami
   f. Fires
   g. War/Civil conflict

2. Describe briefly the types of services that are provided to survivors of disasters in your country by ADRA, the government, or local emergency responders.

3. Read a newspaper or ADRA news report (go to www.adra.org) concerning a recent disaster and discuss some important things to keep in mind when responding to a disaster or emergency.

4. Explain what the letters “ADRA” stand for and which letter describes ADRA’s role as a disaster responder.

5. Describe at least one of these disaster response organizations and how it can work with ADRA during an emergency:
   a. Red Cross
   b. Adventist Community Services (ACS) in the U.S.
   c. United Nations High Commissioner for Refugees (UNHCR)
   d. World Food Programme (WFP)

6. Explain the role of the government when a disaster occurs and identify the key government agency in your nation that manages emergency response.
Requirements

1. Describe the underlying causes of each of these disaster scenarios and give a recent example of at least six and its impact on a community or country. Point to at least one in which ADRA responded.
   a. Hurricane/Typhoon/Cyclone
   b. Tornado
   c. Floods
   d. Drought
   e. Earthquake
   f. Tsunami
   g. Fires
   h. Volcanic eruption
   i. War/Civil conflict

2. The four stages of managing a disaster or emergency include: 1) Planning and Mitigation, 2) Preparedness, 3) Response, 4) Recovery. In your own words, describe to your instructor what each of these terms mean and why they are important.

3. Preparedness is key during a disaster. If you were to build a home disaster kit, describe to your instructor what items you would include. Discuss the advantages of choosing battery over electricity-powered items, and non-perishable over perishable foods.

4. Draw the floor plan of where you live. Think about what you should do in three of the disasters listed in question #1. Design an escape route for your house and discuss it with your instructor and family.

5. Find three stories in the Bible that involved natural disasters or political emergencies. Put yourself in the place of the people in the stories and describe how those events would affect you. Also, briefly discuss how the people in the stories got through the difficult times.

6. Give a short report at your Pathfinder Club about what you learned about disasters and disaster preparedness. You can do this through a presentation, skit, short video, or any method that will best convey what you learned.

Requirements

1. Find a news report on the topic of world hunger and discuss with your Pathfinder Club unit what steps are being taken to reduce hunger in the area featured in the story.

2. Listen to a person who directs food distribution in your area, including a church, community center, soup kitchen, etc. Find out about the people they serve, causes of food needs in the community, and how they meet these needs. Share your findings with your instructor.

3. Describe the causes of hunger in your country. You can do this by writing a short essay, doing a presentation, skit, or producing a one-minute video. Present this at your school, civic group, Pathfinder Club, or at church.

4. Collect food items for the local community food bank or food distribution center, or if this is not possible select a family that needs assistance and bring the items to them.

5. Visit a food bank, food distribution center, or soup kitchen and volunteer to assist the staff. This can be done with your Pathfinder group or unit. Talk with the staff to find out how the food is gathered and what some of the challenges are in finding food to distribute.
**Literacy**

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<tr>
<td>2</td>
<td>2009</td>
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**Requirements**

1. Define the term “literacy.”
2. Research and briefly describe how two or three organizations in your community or country promote literacy or provide literacy services to children and adults.
3. Write a paragraph explaining why literacy is important.
4. Complete three of the following activities:
   b. Read a short story to a group of young children and discuss it with them afterward.
   c. Make 10 flash cards with simple words and illustrations or pictures and give them to someone who is learning how to read.
   d. Read several chapters from the Bible to an elderly person you know who is blind or unable to read. This can be done in one visit or several visits.
   e. Give a five-minute presentation in your school or Sabbath school or church on what you learned about literacy.
5. Choose three words and explain to your instructor how you would teach someone what the words mean and how to spell them.

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**Refugee Resettlement**

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<tr>
<td>2</td>
<td>2009</td>
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**Requirements**

1. Describe some general causes as to why refugees move to other countries. Also, define the terms refugee, internally displaced person (IDP), and immigrant, and explain how these words are similar or different.
2. List the immediate needs that a refugee may have when they arrive in their new country. Describe how you would feel if you were suddenly faced with a new language, culture, and environment.
3. Find out what organizations in your community, country, or the world assist refugees and IDPs.
4. Describe in a short paragraph how you would help a refugee or IDP in your community.
5. Ask a person from another country that lives in your community how they adjusted to their new environment. Have that person describe the challenges and contrasts they experienced during the process of settling into their community.
6. Give a short report at your Pathfinder Club, church, school, or civic group about what you learned about refugees and IDPs and the challenges they face. You can do this through a presentation, skit, short video, or any method that will best convey your findings. Discuss why it is important to be aware of the refugee situation and to try to find solutions to this issue.
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<tr>
<td>Wood Handicraft</td>
<td>1938</td>
<td>GC</td>
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</tr>
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</table>
Requirements

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, including:
   a. Kinds of food
   b. How food is obtained
   c. How food is prepared
4. Discuss their homes. Of what are they made and why are they not permanent? 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.
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.
**African Lore**

**Level 1**

**Year 2001**

**Originating Institution**

**East Central Africa Division**

**Requirements**

1. Be able to name and locate at least 10 different African tribes of the present day and name several outstanding features of each.

2. Do the following:
   a. Select an African Tribe for study. (If you belong to an African Tribe, select one other than your own.)
   b. Find out detailed information on the tribe selected, in the following areas:
      i. Eating habits
      ii. Initiation ceremony
      iii. Witch doctors
      iv. Living and worship conditions
      v. Education
      vi. Burials
      vii. Money
      viii. Dress
      ix. Industry

3. Tell an African folk story, bringing out its moral.

4. Make a collection of at least 15 objects manufactured by African tribes (other than your own).

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**Airplane Modeling**

**Level 2**

**Year 1944**

**Originating Institution**

**General Conference**

**Requirements**

1. Build and successfully fly an airplane from a kit made of balsa wood and tissue paper; it can be either rubber band 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 8 and 14 inches (20-35 cm) in width and length.

4. Define, locate, and explain the usage of the following basic items:
   a. Fuselage
   b. Wing
   c. Aileron
   d. Rudder
   e. Horizontal stabilizer
   f. Strut
   g. Cockpit
   h. Engine
   i. Landing gear
   j. Propeller
**Basketry**

**Requirements**

1. Provide (written or orally) two countries where Rattan (cane) is grown.
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 base can be used.
7. Describe how to lay:
   a. A footridge border
   b. A three-rod border
8. Do the following: simple weaving, slewing, and bispoking, and stitch a raffia base.
9. Make a cane sandwich tray with a wood base.
10. Make a hot roll basket with a woven base.
11. Make a round hot pad six inches in diameter in Raffia or Indian basketry.

**Block Printing**

**Requirements**

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 book plate or book cover.
6. Going through the steps of designing, carving, and printing, create another original piece of work of your choice.
**Requirements**

1. Make a three-strand braid, using hair, rope, or cord.
2. Make a zipper pull or a key chain using the four-strand round or square braid.
3. Make a four-strand hanger cover.
4. Make a four-strand round braid lanyard.
5. Know how to start and end all projects.

**Braiding Advanced**

Level 2  Year 1976  Originating Institution General Conference

**Requirements**

1. Have the Braiding Honor.
2. Make a six- or eight-strand zipper pull or key chain.
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.
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
5. Know how to start and end all projects.
**Requirements**

1. Make a list of the 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 to bread dough articles?
5. Make at least two of the following flowers with leaves: rose, daisy, daffodil, dogwood, violet, grape hyacinth, carnation, iris, pansy, poppy, poinsettia, tulip, forget-me-not. (Bread dough cutters may be used.) Arrange flowers into four separate arrangements using containers of your choice. (Some suggestions: miniature baskets, shells, plastic flower pots, thimble, empty thread spools, vitamin bottle caps, etc.)
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. Item of your choice

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**Cake Decorating**

**Requirements**

1. List equipment necessary for cake decorating.
2. Learn from memory the two cake icings, butter cream and royal, and their proper uses. Name one other icing used for frosting.
3. Learn and demonstrate proper construction of the decorating tube using parchment and wax paper. 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.
5. Demonstrate pressure control and name proper tip used on: star drop, rosette, shell border, “s” design, fleur-de-lis, ribbon, leaves and zig zag border.
6. Name four color techniques. Demonstrate two, including two-color icing.
7. Be able to make four different flowers such as: sweet pea, half rose, half carnation, daisy, and one being the full rose.
8. Demonstrate writing technique using two different tips and methods.
9. Make a doll cake or a cake prepared in a speciality cake pan using the star fill-in method.
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, flowers, string work, and writing.
**Candle Making**

<table>
<thead>
<tr>
<th>Level</th>
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<th>Originating Institution</th>
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<tr>
<td>1</td>
<td>1972</td>
<td>General Conference</td>
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</table>

**Requirements**

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
2. Know two kinds of wax used for candle making and their uses.
3. Know size of wicking and which one will burn properly in each particular candle.
4. When should a metal core wick be used?
5. Know the safety techniques of candle making.

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**Ceramics**

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<tr>
<td>2</td>
<td>1956</td>
<td>General Conference</td>
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</tbody>
</table>

**Requirements**

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
3. Explain the use of cones in kilns.
4. Know how and when to use underglaze and glaze.
5. Know what tools are used in completing your projects in ceramics.
6. Complete one item using a crystal glaze.
7. Complete two of the following using underglaze on at least one item:
   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 his own firing.
**Copper Enameling**

**Requirements**

1. Know the difference between low-temp and high-temp enameling.
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?
8. Make at least five items using the following techniques:
   a. Swirling
   b. Stencil
   c. Threads
   d. Mosaic
   e. Scraffito

**Copper Enameling Advanced**

**Requirements**

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 appliqué technique?
4. Use four of the following techniques in completing requirement #5:
   a. Counter enameling
   b. Appliqué
   c. Cloisonnes
   d. Dry painting
   e. Scraffito
5. Make four of the following projects:
   a. Holiday decoration
   b. Kitchen decoration
   c. Foil flower
   d. Pin or stick pin
   e. Metal bookends
   f. Metal switch plate
   g. Three-dimensional item
   h. Similar item of your choice

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.
**Requirements**

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.
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” (13 cm x 18 cm) counted cross-stitch on aida-14 of a nature scene.

**Crocheting**

**Requirements**

1. Define and crochet the following: ST, SP, STS, RND, INCL, INC, DEC.
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 wool, orlon, nylon, and 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**

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<tbody>
<tr>
<td>3</td>
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</table>

**Requirements**

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.

**Cultural Heritage**

<table>
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<th>Level</th>
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<tbody>
<tr>
<td>2</td>
<td></td>
<td>South Pacific Division</td>
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**Requirements**

1. Outline why it is important to know about our cultural heritage.
2. List the special ceremonies in your culture for:
   a. The birth of a child
   b. Becoming an adult
   c. Death and burial
3. Do the following:
   a. List the customary ways of dressing for everyday life and two special occasions.
   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 the following:
   a. Explain briefly the meaning of the term “bride price.”
   b. What are the advantages of bride price?
   c. Explain the disadvantages of bride price.
7. Explain the leadership structure in your village area. (Include the chiefly system and the extended family.)
## Requirements

1. Relate briefly the story of barter, showing three reasons why money came into being and naming at least 10 unusual forms of money used in place of currency.

2. Relate briefly the history of coinage and/or paper currency in your country, making sure to mention the dates of the establishment of any mints or engraving plants. Also, discover some changes made in metals or designs, giving any interesting highlights concerning such changes.

3. Explain how money is distributed by the government in your country.

4. Define any of the following terms as they may apply to your country’s monetary system:
   - a. Alloy
   - b. Cast coins
   - c. Clad coinage
   - d. Commemorative
   - e. Die
   - f. Field
   - g. Inscription
   - h. Lettered edge
   - i. Obverse
   - j. Reeded edge
   - k. Reverse
   - l. Series
   - m. Overprint
   - n. Counterfeit proofing
   - o. Magnetic strip
   - p. Florescent ink
   - q. Inflation controls

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

6. Know how coins are graded in quality by collectors.

7. Have a coin or notes from 10 different countries. Describe what is on each, give the names of any people or objects portrayed on them, and give the dates for them whenever possible.

8. Do one of the following:
   - a. Collect at least five coins or notes from your country that are no longer in circulation.
   - b. Collect a date series of coins from your country beginning with your birth year (expensive and rare coins need not be included).
Decoupage

Requirements
1. Give the meaning and history of decoupage.
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. Explain three ways in which a print may be used in decoupage.
5. Use the basic steps in completing two of the following objects:
   a. Modpodge print
   b. Key ring
   c. Bookends
   d. Bottle
   e. Tissue box
   f. Item of your choice

Digital Photography

Requirements
1. Explain the following:
   a. The principles of digital camera construction and how a digital camera works
   b. The effect of light on an image sensor
   c. How color images are created from the BW image the sensor captures
   d. What the camera lens does; what focal length means
2. How are lens aperture and depth of field related?
3. Describe pixels, image resolution, and image size.
4. What are the two types of image compression?
5. Name and describe three types of image formats.
6. Give the principle uses of photography.
7. 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
8. Learn how to place photos in PowerPoint. Create a PowerPoint presentation showing the pictures you took using the above techniques.
9. Using a photo editing program on a computer, show ability to crop, color correct, sharpen, and adjust brightness/contrast to photos.
10. Complete at least three creative photographic projects in a photo editing program; such as a CD cover, a photo scrapbook page, a collage, etc.
11. Have a basic understanding of file organization techniques.
Requirements

1. Make and submit 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 and light and shade.
3. Make and submit 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. Print a flower spray or leaf spray in color.
6. Paint an outdoor scene in either water color or oil.

Felt Craft

Requirements

1. From what fiber is felt made? What gives it its tensile strength?
2. Give 15 uses of felt.
3. Give three reasons why felt is a good material for handicrafts.
4. Give the essential steps in felt manufacture.
5. Make two of the following, using at least two different colors of felt:
   a. Sabbath School visual aid
   b. Bookmark
   c. Needle case
   d. Pennant
   e. Refrigerator magnet
6. Make one of the following:
   a. Small wall mural
   b. Holiday decoration
   c. Hand Puppet
   d. Kitchen knick-knack
7. Sew one of the following:
   a. Stuffed animal
   b. Stuffed toy
   c. Tote bag
   d. Bean bag
**Requirements**

1. Name six perennials and six annuals suitable for indoor flower arrangement.
2. Name at least three flowers that bloom in the spring or early summer, suitable for indoor flower arrangement.
3. Name at least three flowers that do not keep well when cut and three that do.
4. Give six suggestions regarding the cutting of flowers and their aftercare, such as when to cut, how to cut, and how to keep.
5. At what stage of development should we cut roses, gladioluses, and dahlias?
6. Give three suggestions on the relation of containers to the flowers used, and three on relation of arrangement to the room and furnishings.
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:
   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?

**Genealogy**

**Requirements**

1. Define the following words:
   a. Genealogy
   b. Ancestor
   c. Descendant
   d. Spouse
   e. Sibling
2. Read the genealogy of Christ:
   a. Be able to tell where it is found in the New Testament
   b. Write out the genealogy of Christ – beginning with Adam
3. List five ways to obtain family genealogy information.
4. Know at least three societies that help with genealogy research.
5. Learn four steps important to genealogy research.
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 yourself.
9. List ways to record your genealogy information.
10. Research your family history by talking/writing to your oldest living relative. Ask the following:
    a. First memory?
    b. When and where you were born?
    c. First church you remember attending?
    d. Names of schools, and location, you attended?
    e. Where you lived at age ten and age fourteen?
    f. From what country did our ancestors emigrate?
    g. Where and when were you married?
    h. If you had children please give their names, place and date of birth.
    i. 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

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!

Requirements

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 years:
   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 seven 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 filled 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 # 5 including birth, marriage, and death.

9. Show a copy of three obituaries on relatives with documentation where you found them.

10. List four web sites and/or libraries where you have been able to locate information for your family research.

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?
Requirements

1. Name 10 kinds of glass.
2. Know what kind of glass is used for furniture, cloth insulation, airplanes, and automobiles.
3. Collect and prepare at least three colors of glass for picture making.
4. Know the steps in making a picture with glass and complete such a picture, using at least three colors.
5. Write a report of at least 300 words or give a three-minute oral report on the history of glass and how glass is made.

Glass Etching

Requirements

1. Name the tools and items needed for Glass Etching.
2. Name the 11 steps of Glass Etching.
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
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.
Glass Painting

Level: 1  Year: 1938  Originating Institution: General Conference

Requirements

1. Know the primary colors, the secondary colors, and how to mix the primary colors to obtain the secondary colors.
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:
   a. Animal
   b. Flower
   c. Scenery
4. Make a silhouette on glass and mount them for hanging.
5. Make a hand-painted mirror picture.

Hot Air Balloons

Level: 2008  Originating Institution: North American Division

Requirements

1. State the role each of the following played in the development of flying balloons:
   a. Joseph Michel Montgolfier and Jacques-Etienne Montgolfier
   b. Jean Francois Pilatre de Rozier and Francois Laurent Marquis d’Arlandes
   c. Jacques Alexandre Cesar Charles and Nicolas Louis Robert
   d. Ben L. Abruzzo, Maxie L. Anderson, and Larry Newman
   e. Bertrand Piccard and Brian Jones
2. Cite the principle of Archimedes and briefly describe how it applies to each of the following:
   a. A piece of cork floating in a bowl of water
   b. A ship floating in the ocean
   c. A hot air balloon floating in the atmosphere
3. Using a Chemistry textbook 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.
6. Explain how heat/temperature affects 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:
   a. Envelope
   b. Support structure
   c. Throat
   d. 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:
   a. Military campaigns
   b. 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. A hot air balloon
    b. 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).
Requirements

1. Define the following: K, P, STS, RND, TOG, PSSO, INC, DEC, YO.
2. Demonstrate your ability to do the following: cast on, bind off, pick up a dropped stitch, cable stitch, garter stitch, stockinette stitch, and ribbing.
3. Know how to care for these kinds of yarn: wool, hair, and synthetic.
4. Show how to join on a new ball of yarn.
5. Be able to identify and know the purpose of the following weights of yarn:
   a. Bulky
   b. Medium weight
   c. Sports weight
   d. Heavy weight
6. Knit two items from the following: slippers, mittens, baby booties, hat, scarf, sleeveless sweater, or another reasonable choice.

Requirements

1. Have the Knitting Honor.
2. Knit a pair of argyle socks or some other article using four needles and yarn bobbins.
3. Knit two additional items from the following: slippers, mittens, baby booties, hat, scarf, sleeveless sweater, or another reasonable choice.
4. Knit a sweater with long sleeves or a baby set of sweater, bonnet, and booties.
Lapidary

Requirements

1. Name four safety precautions to be taken when sawing rocks.
2. Name two types of diamond saw lubricating and cooling solutions and their purpose.
3. Explain how a diamond saw cuts rocks, how it gets dull, and how it can be sharpened.
4. Describe the five basic steps to follow in bringing a slab or a flat surface to a polish.
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.
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.

Leather Craft

Requirements

1. List the necessary tools a beginner needs in Leather Craft work, 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. Design and tool some object in leather, such as a billfold, magazine cover, or belt.
5. Show how to use leather dye.
6. What kind of finish should be used on leather?
Leather Craft Advanced

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1977</td>
<td>General Conference</td>
</tr>
</tbody>
</table>

Requirements

1. Have the Leather Craft Honor.
2. Demonstrate ability to punch holes, set snaps, do saddle stitching, and to 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. Design, cut out from leather, punch, and lace your own pattern for a case, purse, bag, etc.
6. Exhibit six leather items you have made.

Lettering & Poster Making

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>1933</td>
<td>General Conference</td>
</tr>
</tbody>
</table>

Requirements

1. Write from memory the complete lower case alphabet in two of the following: Gothic, Roman or 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.
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.
5. Make five posters on topics of your own choice. NOTE: These posters will be judged for acceptance on the three following conditions:
   a. neatness
   b. arrangement
   c. selection in type of lettering used
6. Practice all strokes until they can be done easily and accurately.
**Requirements**

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.

**Lighthouses Advanced**

**Requirements**

1. Have the Lighthouses Honor.

2. Make a scrapbook, including the following:
   a. Pictures, post cards or drawings of 25 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:
   a. Name of the gentleman who invented it
   b. Country that he came from
   c. Year developed

4. Draw a Fresnel lens:
   a. Show how prisms are used to concentrate light
   b. 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 (daymark) signature.

8. What is a lightship? Why and where are lightships needed?

9. Read about lighthouse keepers and list some of the hazards they face 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.
Requirements

1. Give a brief history of the art of decorative knotting.
2. What is a good macrame cord?
3. Know three kinds of cords that are good and why they are good.
4. Know the basic knots used in macrame. Know two variations of each of these knots.
5. How is the overhand knot useful in macrame?
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: i.e., 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.

Maori Lore

Requirements

1. Define the following commonly used terms:
   a. Marae
   b. Powhiri
   c. Karakia
   d. Mate
   e. Waiata
   f. Korero
   g. Haka
   h. Kuia
   i. Tane
   j. Wero
   k. Mana
   l. Manuhiri
   m. Hongi
   n. Hui
   o. Poroporoaki
   p. Whanau
   q. Tangi
   r. Aroha
   s. Whakairo
   t. Koro
   u. Kaumatua
   v. Wahine
   w. Mihi
   x. Whaikorero
   y. Tangata whenua
   z. Taonga

2. Do the following:
   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:
a. Mate  
b. Meal times  
c. Speeches  
d. Sleeping  

5. What are the two Maori religions currently in use today, and what are some of their characteristics?  
   a. Briefly describe the Maori story of creation.  
   b. Briefly outline the story of Seventh-day Adventism among the Maori people.  
   c. What is the Maori attitude to religion in general?  

6. Make a sample tukutuku panel (approx 30cm x 30cm) OR a tipare OR a small flax mat/basket.  

7. Know how to correctly greet people in:  
   a. Maori  
   b. Hongi  

8. What are five different pastimes enjoyed by Maori children in former times?  
   a. 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.  

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**Metal Craft**

<table>
<thead>
<tr>
<th>Requirement</th>
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<tbody>
<tr>
<td>1. Name the various metals that can be used in Metal Craft.</td>
</tr>
<tr>
<td>2. Complete one project using metal foil tooling, and finish by antiquing and framing.</td>
</tr>
<tr>
<td>3. Complete one project using a metal punch.</td>
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<tr>
<td>4. Complete one project using drilling, riveting, and bending of metal.</td>
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<tr>
<td>5. Demonstrate ability to use properly the following: tin snips, soldering iron, try square, jeweler's saw, mallet, and riveting hammer.</td>
</tr>
</tbody>
</table>
**Model Boats**

**Requirements**

1. Do two of the following:
   a. Purchase and build one kit for a sailboat 10- to 15- inches (25 cm to 40 cm) long and about four- to five-inches wide and operate the 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 cm to 45 cm) and operate the boat for three to five minutes.
   c. Build a model boat 18- to 30-inches (45 cm to 80 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:
   a. Displacement
   b. Center of gravity
   c. Propeller pitch
   d. Thrust and lift
   e. Mono hull
   f. Hydro
   g. Bow
   h. Keel
   i. Transom
   j. Cavitation
   k. Heeling
   l. Planing
   m. Drag

---

**Model Cars**

**Requirements**

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

2. Choose one:
   a. 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 a paint job.
   b. Build a Pine Car according to Pine Car Derby rules and enter it in a Derby race.

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.
## Requirements

1. Give the history and development of model railroading.
2. Tell the difference in how the following prototype motive power units operate:
   a. Steam
   b. Diesel
   c. Electric
3. Know the name, scale, and track gauge for four model railroad gauges.
4. Know the shapes and names of at least eight track plan arrangements.
5. Know at least six points to check for maintenance of a model railroading layout.
6. Identify and explain the use of:
   a. Five types of freight cars
   b. Three types of passenger cars
   c. Three types of steam engines according to their wheel arrangement
   d. Two types of grade crossing warning devices
   e. Two types of railroad signals
   f. Five types of railroad-related buildings or structures
7. Know the meaning of the following model railroad terms:
   a. Ballast
   b. Blind drivers
   c. Block
   d. Bolster
   e. Crossing
   f. Crossover
   g. Double header
   h. Draft gear
   i. Flange
   j. Frog
   k. Gap
   l. Gauge
   m. Grade
   n. Gravity yard
   o. Hot Box
   p. Insulated rail joiner
   q. Journal
   r. Layout
   s. Machine
   t. Mainline
   u. Prototype
   v. Rail joiner
   w. Reverse loop
   x. Siding
   y. Spur
   z. Switch
   aa. Talgo truck
   ab. Truck
   ac. Turnout
   ad. Two-rail
   ae. Wye
   af. Y switch
   ag. Yard
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.
Requirements

2. Know and explain the importance of the basic model rocket components.
3. Draw the following:
   a. The steps in the flight of a model rocket
   b. A cut-away view of a model rocket engine, labeling each part
   c. A schematic plan for a simple launch system using proper electrical symbols
4. Define the following:
   a. Wadding
   b. Boost gliders
   c. Stall
   d. Payload
   e. Apogee
   f. Center of gravity
   g. Center of pressure
   h. Impulse
   i. Velocity
   j. Ejection
5. Name and describe at least four different recovery systems.
6. From a kit, build, finish, and paint a single-stage rocket that has a minimum length of six inches. Successfully launch this rocket with a parachute or streamer recovery system.

**Model Rocket Safety Code**

http://nar.org/NARmrsc.html

1. Materials. I will use only lightweight, non-metal parts for the nose, body, and fins of my rocket.
2. Motors. I will use only certified, commercially-made model rocket motors, and will not tamper with these motors or use them for any purposes except those recommended by the manufacturer.
3. Ignition System. I will launch my rockets with an electrical launch system and electrical motor igniters. My launch system will have a safety interlock in series with the launch switch, and will use a launch switch that returns to the “off” position when released.
4. Misfires. If my rocket does not launch when I press the button of my electrical launch system, I will remove the launcher’s safety interlock or disconnect its battery, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the rocket.
5. Launch Safety. I will use a countdown before launch, and will ensure that everyone is paying attention and is a safe distance of at least 15 feet away when I launch rockets with D motors or smaller, and 30 feet when I launch larger rockets. If I am uncertain about the safety or stability of an untested rocket, I will check the stability before flight and will fly it only after warning spectators and clearing them away to a safe distance.
6. Launcher. I will launch my rocket from a launch rod, tower, or rail that is pointed to within 30 degrees of the vertical to ensure that the rocket flies nearly straight up, and I will use a blast deflector to prevent the motor’s exhaust from hitting the ground. To prevent accidental eye injury, I will place launchers so that the end of the launch rod is above eye level or will cap the end of the rod when it is not in use.
7. Size. My model rocket will not weigh more than 1,500 grams (53 ounces) at liftoff and will not contain more than 125 grams (4.4 ounces) of propellant or 320 N-sec (71.9 pound-seconds) of total impulse. If my model rocket weighs more than one pound (453 grams) at liftoff or has more than four ounces (113 grams) of propellant, I will check and comply with Federal Aviation Administration regulations before flying.
8. Flight Safety. I will not launch my rocket at targets, into clouds, or near airplanes, and will not put any flammable or explosive payload in my rocket.
9. Launch Site. I will launch my rocket outdoors, in an open area at least as large as shown in the table (http://nar.org/NARmrsc.html), and in safe weather conditions with wind speeds no greater than 20 miles per hour. I will ensure that there is no dry grass close to the launch pad, and that the launch site does not present risk of grass fires.
10. Recovery System. I will use a recovery system such as a streamer or parachute in my rocket so that it returns safely and undamaged and can be flown again, and I will use only flame-resistant or fireproof recovery system wadding in my rocket.
11. Recovery Safety. I will not attempt to recover my rocket from power lines, tall trees, or other dangerous places.
Model Rocketry Advanced

**Requirements**

1. Have the Model Rocketry Honor.
2. From a kit, build, successfully launch, and recover a boost glider.
3. Design, build (not from a kit), finish, and paint a single-stage rocket. Check for stability, and successfully launch and recover this rocket.
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.
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.
6. Describe and demonstrate single station altitude tracking. 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.
7. Compare the velocity and altitude of two different weights of rockets using the same size engine.

Music

**Requirements**

(Instructor Required)

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. Distinguish a march from a waltz, and give the time of each.
6. Name five great composers and one composition of each, including an oratorio, piano composition, and a song.
7. Play with or without music or sing from memory 15 hymns and/or other sacred songs or choruses and list the composer of each (One verse or Stanza each).
8. Play or sing from memory one piece of good music other than those used in #7.
9. For instrumentalists: Be able to sight-read and play a moderately difficult piece of music. Explain all signs and terms in it.
10. For singers: Show with baton or arm how to lead a group in singing compositions written in 3/4 and 4/4 time.
11. Define orchestra, and name at least five instruments in an orchestra.
12. Do a biographical sketch on a famous hymn writer and orally present it to a group.
**Music Advanced**

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>South Pacific Division</td>
</tr>
</tbody>
</table>

**Requirements**

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.

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**Native American Lore**

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1944</td>
<td>General Conference</td>
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</tbody>
</table>

**Requirements**

1. Name five uses made of natural materials by the Northwest Indians.
2. Name five uses made of the yucca plant by the Southwest Indians.
3. Name five uses made of the birch tree by the Eastern Woodland Indians.
4. Know 15 plant foods introduced to us by the Indians. Include four plant names used today.
5. Describe Indian stalking and tracking.
6. Name five rocks and/or minerals and uses made of them by the Indians.
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 10 materials used in making Indian arts and crafts.
11. Make a craft item using any of the materials named in requirement #10.
Native American Lore Advanced

Level 2  Year 1976  Originating Institution General Conference

Requirements

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.
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.
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
   f. If you do not live in North America, choose any of the following for study: Northeast, Southeast, Northwest, Southwest
6. Name 10 articles used by the Indians in their religious ceremonies.
7. Explain two methods of mounting and displaying arrowheads.
8. Explain one method of restoring and mending damaged arrowheads, ollas, blankets, and baskets.
9. Name and locate at least 10 different tribes of the present day and tell for what each is noted.
10. Experiment with plant dyes as used by the Indians and try to obtain at least two shades of color.
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

Native Bush Construction

Level 3  Year  Originating Institution South Pacific Division

Requirements

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. Do the following:
   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 requirements 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.
Requirements

1. Show articles you have made using any 10 of the following:
   a. Outline
   b. Lazy daisy
   c. Chain
   d. Cross-stitch
   e. Eyelet or cut work
   f. Embroidery
   g. Satin
   h. Whipping
   i. Heavy chain
   j. French knot
   k. Blanket
   l. Feather
   m. Stem
   n. Back
   o. Buttonhole
   p. Fishbone
   q. Long and short
   r. Split
   s. Braid

2. 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:
      i. Punch embroidery
      ii. Candle wicking
      iii. Crewel
   c. Make a pillow cover, wall hanging, cover for chair, etc. in needlepoint.
   d. Make an article using any of the following methods:
      i. Applique
      ii. Fagoting
      iii. Smocking
      iv. Shirring
      v. Swedish weaving
   3. Show the correct way of gathering lace and whipping it to hemmed edge.
   4. Describe a satisfactory method of keeping your fancywork equipment in good condition.

Origami

Requirements

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 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

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

5. Fold the following models:
   a. House
   b. Lotus blossom
   c. Cicada
   d. Housefly
   e. Butterfly

6. Choose four of the following models to fold or select similar models from Origami books:
   a. Jumping Frog
   b. Carrier Pigeon
   c. Sailboa
   d. Hen
   e. Leaf
   f. Walking dog
   g. Duck

7. Fold one model of your choice from memory from requirement #5 or #6.
8. Illustrate a Bible story using several Origami models.
**Requirements**

1. Name at least three kinds of bases upon which paper models may be shaped.
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.
4. Make, paint, and varnish at least two articles from pulp.
5. Make, paint, and varnish at least two articles from paste and paper strips.
6. Submit articles to examiner and have workmanship approved.

---

**Paper Quilling**

**Requirements**

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
   h. Square
   i. Rectangle
   j. Triangle
   k. Bunny Ear
   l. Half Circle
   m. Rolled Heart (Arrow)
   n. Holly Leaf
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.
Requirements

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.

Requirements

1. Explain the principles of camera construction, what the camera lens does, the effect of light upon the sensitive film, and 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 how prints are made.
   b. Develop and print eight of your own pictures, explaining each step.
**Requirements**

1. Name the four basic components of a Pinewood Derby car.
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” (70 mm)
   c. Length of car shall not exceed 7” (178 mm)
   d. Weight of car shall not exceed 5 oz. (142 grams)
   e. Width between wheels shall be 1-3/4” (44 mm)
   f. Height from bottom of car to bottom of tires shall be 3/8” (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 #5.
7. Define and practice good sportsmanship as it relates to your Christian walk.

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**Pinewood Derby Advanced**

**Requirements**

1. Have the Pinewood Derby Honor.
2. Know the Pinewood Derby race regulations for your district, area, or conference.
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 affect 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.
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, veggie-link, school bus, baby carriage, and 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.

12. Define and practice good sportsmanship as it relates to your Christian walk.

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**Plaster Craft**

**Requirements**

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. What 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. Animal (to show detail)
   c. Religious motto (to show letter highlighting)
   d. Fruit (to show highlighting)
9. Mold and paint two additional items of different designs.
### Plastic Canvas

<table>
<thead>
<tr>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is plastic canvas?</td>
</tr>
<tr>
<td>2. Name four types of plastic canvas and give a brief description of each.</td>
</tr>
<tr>
<td>3. Which type of yarn is best for use on plastic canvas?</td>
</tr>
<tr>
<td>4. Describe the following types of yarn and say on which type of canvas they work best:</td>
</tr>
<tr>
<td>a. Worsted Weight Yarn</td>
</tr>
<tr>
<td>b. Sport Weight Yarn</td>
</tr>
<tr>
<td>c. Tapestry Yarn</td>
</tr>
<tr>
<td>d. Persian Wool</td>
</tr>
<tr>
<td>e. Pearl Cotton</td>
</tr>
<tr>
<td>f. Embroidery Floss</td>
</tr>
<tr>
<td>5. What type of needle is used on plastic canvas? Which size needle is used on each type of plastic canvas?</td>
</tr>
<tr>
<td>6. Which instruments are used for cutting plastic canvas? How do you cut plastic canvas?</td>
</tr>
<tr>
<td>7. Name at least 10 stitches and make a one-inch sample of each.</td>
</tr>
<tr>
<td>8. Make two of the following items using three different stitches:</td>
</tr>
<tr>
<td>a. Coaster</td>
</tr>
<tr>
<td>b. Bookmark</td>
</tr>
<tr>
<td>c. Picture Frame</td>
</tr>
<tr>
<td>d. Refrigerator Magnet</td>
</tr>
<tr>
<td>e. Christmas Ornament</td>
</tr>
<tr>
<td>f. Door Hanger</td>
</tr>
<tr>
<td>9. Make one of the following using four different stitches:</td>
</tr>
<tr>
<td>a. Tissue Box Cover</td>
</tr>
<tr>
<td>b. Tote Bag</td>
</tr>
<tr>
<td>c. Floppy Disk Holder</td>
</tr>
<tr>
<td>d. Trinket/Coaster Box</td>
</tr>
</tbody>
</table>

### Plastics

<table>
<thead>
<tr>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Make a list of the materials and equipment used in making small castings in plastic molds.</td>
</tr>
<tr>
<td>2. Know how to clean and properly take care of plastic molds.</td>
</tr>
<tr>
<td>3. What safety precautions should be used when working with plastics?</td>
</tr>
<tr>
<td>4. Tell how to mix resin for:</td>
</tr>
<tr>
<td>a. Casting</td>
</tr>
<tr>
<td>b. Colored layer</td>
</tr>
<tr>
<td>5. Why are the following used?</td>
</tr>
<tr>
<td>a. Catalyst</td>
</tr>
<tr>
<td>b. Surface hardener</td>
</tr>
<tr>
<td>c. Pigments</td>
</tr>
<tr>
<td>6. What is meant by polymerization?</td>
</tr>
<tr>
<td>7. Make three castings with at least one item embedded in each casting.</td>
</tr>
<tr>
<td>8. Prepare and embed two nature items suitable for embedding. Nature items may be embedded in one or more castings.</td>
</tr>
</tbody>
</table>
Pottery

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1938</td>
<td>General Conference</td>
</tr>
</tbody>
</table>

Requirements

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.
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.

Scrapbooking

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2004</td>
<td>North American Division</td>
</tr>
</tbody>
</table>

Requirements

1. What is the purpose of scrapbooking?
2. Why journal?
3. What is cropping and why is it done?
4. What are the four main types of scrapbooks used?
5. What is the purpose of using acid-free products?
6. What are the four different types of acid-free adhesive?
7. What ‘tool’ is used to sharpen scissors and punches when they get dull?
8. Name five different types of acid-free paper used in scrapbooking.
9. Make a scrapbook of at least 12 pages (8 1/2 x 11 or larger) on one of the following themes, incorporating the use of colored paper, stickers, decorative scissors, matting and journaling:
   a. School Year, Sporting Events, Vacations, Holidays, Building Projects (mission trips, new home, etc.), Wedding, Birthday Party, All About Me (birth to now), Family Reunions
10. Memorize Joel 1:3.
**Scrapbooking Advanced**

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2004</td>
<td>North American Division</td>
</tr>
</tbody>
</table>

**Requirements**

1. Have the Scrapbooking Honor.
2. What is lignin?
3. What plastic is safe to use in scrapbooks?
4. What plastic is not safe 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:
   a. Matting
   b. Double Matting
   c. Border Designs
   d. Journaling Boxes
   e. Colored Paper
   f. Printed Paper
   g. 2 Page Layouts
   h. Die Cuts
   i. Self Designed Die Cuts
   j. Stickers
   k. Punches
   l. Memorabilia Pockets
   m. Decorative Scissors
   n. Templates
   o. Photo Cropped into a circles or ovals

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**Sculpturing**

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1945</td>
<td>General Conference</td>
</tr>
</tbody>
</table>

**Requirements**

1. List the tools and materials used in simple sculpturing.
2. Model two or more examples of toy animals, using a sculpture medium.
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**

**Level** 2  **Year** 1974  **Originating Institution** General Conference

**Requirements**

1. List tools and equipment necessary for screen printing.
2. Name three kinds of inks suitable for screen printing.
3. List at least three industrial uses of the silk screen process.
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 10 greeting cards
   b. At least three posters
   c. Print a design on fabric
   d. Comparable project of your choice

**Silk Screen Printing Advanced**

**Level** 3  **Year** 1974  **Originating Institution** General Conference

**Requirements**

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. 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.
Requirements

1. What ingredients are used to make soap?
2. What is the difference between soap and 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.
6. What is scum?
7. Carve an object from a bar of soap.
8. Decorate a bar of soap for a gift.
9. Make a scene out of whipped soap, using at least three colors.

Requirements

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?
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.
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.
Requirements

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?
5. Know the meaning of the following:
   a. Coil stamp
   b. Booklet stamp
   c. Perforations
   d. Perforation gauge
   e. Definitive stamps
   f. Commemorative stamps
   g. Hinges
   h. Plastic mounts
6. Have 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. According to year and design (in series)
9. Mount your stamps with gummed hinges or plastic mounts. (Plastic mounts are preferred for new 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. Covers or cachets may be included.

Requirements

1. Have the Stamp Honor.
2. Know the meaning of the following:
   a. Cancellation
   b. Perfins
   c. Blocks
   d. Plate blocks
   e. Precanceled
   f. First day covers
   g. Cachets
   h. Souvenir sheets
   i. Watermarks
   j. 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.
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.)
### String Art

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1975</td>
<td>General Conference</td>
</tr>
</tbody>
</table>

**Requirements**

1. Describe the following: string craft, symmography, geometric stitchery.
2. Draw and stitch on cardboard in equally spaced points:
   a. A right angle
   b. An acute angle
   c. An obtuse angle
3. Name three ways to prepare wood for string art.
4. Use stringing methods on wood to do four of the following:
   a. Filled circle
   b. Hollowed circle
   c. Star
   d. Edging
   e. Curve from within
   f. Curve from without
   g. Filler
   h. Wing weave
5. Complete one original string art hanging on wood for display.

### Textile Painting

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1956</td>
<td>General Conference</td>
</tr>
</tbody>
</table>

**Requirements**

1. Know how to prepare material 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 pattern on material.
5. Know how to mix paint and clean brushes after they have been used.
6. Paint one design each of fruit (to learn about highlights); flowers (to develop art of good shading); and figure with face (to learn use of fine-line brush).
7. Using a stencil, paint an item with at least two colors.
**Requirements**

1. Make a list of the various tools needed for thatching, stating their uses, and show a “dekspaam” and a “needle” you have made.
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:
   a. When is the grass cut and how is it stacked for storing?
   b. How is the grass “combed” and made ready for thatching?
   c. How is thatching rope made? What raw materials are used in your locality?
5. Answer the following:
   a. Can any shape of roof be thatched?
   b. Which is the easiest roof to thatch?
   c. What are some of the advantages of a thatched roof?
   d. 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. Answer the following:
   a. How many workers are needed in thatching a rondavel?
   b. Describe how you would start thatching a rondavel.
   c. Tell, if possible demonstrate, how you would finish off: (1) a round roof (2) a gabled roof.

**Tie-Dye**

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.
6. Verbally describe what primary colors of dye will be needed to make the following secondary colors: Orange, Green, and Purple.
7. Verbally describe what the outcome will be if two secondary colors are mixed.
8. Use a Kleenex tissue and 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 and dye an item for yourself. (Bandana, t-shirt, pillow-case, 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.
Requirements

1. Know five of the following terms used in upholstery to describe the tools and give their uses:
   a. Tack Claw
   b. Staple Remover
   c. Regulator, Mattress Needle
   d. Magnetic Hammer
   e. Sharp Knife or “Snap” blade knife
   f. Work Table
   g. Industrial Sewing Machine
   h. Sundry Items
2. Explain the use of the following items:
   a. Webbing
   b. Staples and Tacks
   c. Hessian
   d. Buttoning Cord or Waxed Flax
   e. Calico
   f. Fibre
   g. Flock
   h. Foam Sheetings
   i. Glues
   j. Back Tacking Strip
3. Name two types of material used for upholstery.
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.
7. Complete a or b:
   a. Ottoman
   b. Toybox
8. Complete a Feature Panel.

Requirements

1. Describe the principle involved in most weaving procedures.
2. Define the following: warp, woof, shuttle, yarn beam, heddle, and 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 simple wooden loom on which a jersey looped potholder can be woven.
6. Make a jersey looped pot holder.
Requirements

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 trees that make the best whistles and why. List three other trees that can be used to make whistles.
5. Give a brief description of the following styles of whistles:
   a. Tube Whistles
   b. Pan Whistles
   c. Flute Whistles
6. Name five types of modern whistles and their uses.
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:
   a. Pan (Tubes) whistle
   b. Flute Whistle
18. Learn to play a simple song on each whistle you have made.

Requirements

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:
   a. Willow (sliding bark) whistle
   b. Recorder whistle
6. Demonstrate your ability to correctly use each of the whistles you have made.
### Wood Carving

**Requirements**

1. Explain the qualities of hard and soft woods and the best woods for wood 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.
5. Design and carve two of the following items: a tray, bookends, a clock case, a whistle, a letter opener, or another equivalent item of your choice.

### Wood Handicraft

**Requirements**

1. Identify at least five common kinds of wood, such as pine, walnut, oak, and cedar.
2. Know the characteristics for the woods identified, and know one use for each example.
3. What is the difference between hard and 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.
6. Cut out, assemble, and finish animal bookends or doorstop.
7. Cut out and finish a garden stake or lawn marker, using a design such as a child, bird, flower, or tree.
8. Make a plaque, tray, notebook cover, or some other useful object in which wood burning is used.
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Requirements

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.
4. Know six indications for the need of an immediate rescue.
5. Know six procedures to follow before moving a victim from a life-threatening situation.
6. Know five principles involved in moving a victim from a life-threatening situation.
7. Know the proper ways to help a victim, without assistance, in the following ways:
   a. Pulling the victim
   b. Lifting the victim
   c. Assisting a victim in walking
8. Know the proper way to help a victim, with assistance, in the following ways:
   a. Chair carry
   b. Fore-and-aft carry
   c. Two-handed and four-handed seats
   d. Blanket carry
   e. Three-man hammock carry with victim in supine and prone position
   f. Three or four-man lift
   g. 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
    b. Tie knots for shortening a rope
    c. Tie knots for use around a person for a rescue
    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?
Requirements

1. Have the Microscopic Life Honor.
2. Name the two major constituents of blood. What is the percentage of each in normal blood?
3. Be able to draw pictures of and name the seven types of blood cells and indicate what each type does.
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. 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? 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. 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. Keep a record for three weeks of how often you repeat these 10 habits.
11. Define the following terms relating to the body’s defenses: immunology, pathogen inflammation, antibody, memory cells, immunity, vaccine, allergy, histamine, and antihistamine.
12. Poison ivy and poison oak are plants commonly encountered by active Pathfinders. Be able to identify poison ivy and poison oak and know how to avoid having allergic reactions to them, and 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. Which ones are you now immune to? Explain why or why not.
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.
15. Write or tell about one infectious disease (at least 250 words).
16. What is AIDS? How is it spread? Is there a cure? Why is it so devastating?
17. Find three biblical references that have to do with cleanliness and the control of or spread of disease.
Requirements

1. What’s the difference between exoskeletons and endoskeletons? Which type of skeleton do humans have?
2. List three functions of the skeletal system.
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 blade), coccyx (tail bone), sternum (breast bone), tarsals, tibia, ulna, and vertebrae.
6. What is a joint?
7. List the three types of joints found between bones.
8. Name and describe six types of freely movable joints. Be able to locate an example of each of these in your body.
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 three types of breaks that can occur in bones. Describe how bones heal and how doctors can help this process.
11. What is osteoporosis? Who can get it? List at least five health habits that deal with maintaining healthy bones and muscles.
12. What is the function of the muscular system?
13. Name and describe three types of muscle tissue. Give one example of each.
14. Be able to identify the following muscles on your body: Masseter, Trapezius, Deltoid, Pectoralis, Biceps, Abdominal, Quadriceps, Triceps, Latissimus dorsi, Gluteus maximus, Hamstrings, Gastrocnemius, and Soleus.
15. Describe the process that causes a muscle to contract.
16. Describe the difference between voluntary and involuntary muscles.
17. Using your model in #9, show how muscles, bones, and joints work together to produce movement.
18. Find three texts in the Bible that mention bones and/or muscles. Tell about each one in your own words.

Brain & Behavior

Requirements

1. Be able to label a diagram or a model of a human brain, including the following parts: medulla, pons, cerebellum, midbrain, thalamus, hypothalamus, pituitary gland, and cerebrum. Tell briefly what each part does.
2. What is a neuron? Draw a picture of a typical neuron and label its 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, and 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 adaption?
6. How are the senses of taste and smell similar and how are they different? Draw a map of which part of the tongue responds to the following tastes: sweet, sour, bitter, salt. 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.
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 is 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. Explain why the following activities can be bad for your hearing:
   a. listening to a “walkman”
   b. putting something long in your ear
   c. being in the front row at a loud music concert
   d. not treating an ear infection properly
   e. 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 a local or general anesthetic and explain how an anesthetic works.
   f. Observe a real human brain (fresh or preserved).

10. List at least five things that you can do to protect your brain from damage.

11. Do one of the following:
   a. Visit and help care for someone (minimum of 2 hours) 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, Epilepsy, Major Depression, Down Syndrome, Huntington’s Disease, quadriplegic and paraplegic.

12. Find at least three references from the Bible that refer to your brain and/or to decisions that you make in life.
Requirements

1. Know and understand the location and function of the heart and lungs.
2. Define CPR and tell five conditions under which it would be used.
3. Successfully complete a class sponsored by either the American Heart Association, the 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.
4. Understand Prudent Heart Living. List five things a person can do to maintain a healthy heart.
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 border of gold speaks to the value of the human life.
   d. A heart is formed by the head, shoulders, and arms of the person performing the CPR, signifying compassion for another individual.

Digestion

Requirements

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 is expelled from the anus.
7. Know the difference between food bolus and 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.
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?
14. Know the difference between monosaccharide, disaccharide, and polysaccharide. 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? Why do
we need to breathe oxygen?
17. Know the difference between water and fat soluble vitamins. What are two common vitamins that are fat soluble? What are two vitamins that are water soluble?
18. List four Bible texts that refer to digestion.
19. List five E.G. White references that promote proper digestion. Choose a variety of topics.

First Aid Basic

Requirements

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. (11-14 years of age)
In British countries pass the examination in St. John Ambulance Junior First Aid examination and receive certificate for the same. (15 years and under)

Or complete the following requirements:
1. Know the causes of shock and demonstrate its proper 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.
8. Know the proper procedure to assist a first, second, and third degree burn victim.
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.
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 a heart attack, stroke, epilepsy, and simple fainting, and the treatment for each.
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?
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?
Requirements

(Instructor 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. (20 hours instruction)

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 treat-
   ment for an obstructed airway.
2. What is the difference between a heart attack and a stroke and the
treatment for each?
3. Know the proper procedure for assisting a bleeding victim.
4. Know the pressure points and how to correctly apply pressure at these
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
   b. Figure-eight
   c. Fingertip
   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:
    a. Head injuries
    b. Internal injuries
    c. Gunshot wounds
    d. Injuries to the eye
    e. Animal and insect bites
    f. Fainting and epilepsy
    g. 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
    b. Blanket drag
    c. Two-person carry
    d. Carry by extremities
    e. Improvised litter
    f. Three-person hammock carry
    g. Litter carry
First Aid, Advanced

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

Health and Healing

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Requirements
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. 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. What are some 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:
      i. Observe the areas of operation, such as the business office, laboratory, examining rooms, x-ray rooms, etc.
      ii. Be introduced to the equipment used in the office.
      iii. Learn the steps of an office visit from when a patient comes into the waiting room until the time he leaves the office.
      iv. 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:
      i. Learn the steps of a home visit from when the nurse finds out about the patient to when the nurse reports to a doctor.
      ii. Observe the nurse taking the vital signs.
      iii. 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:
      i. Observe the areas of operation in the department.
      ii. Be introduced to the equipment used in the department and how it works.
      iii. Learn the steps a patient takes when visiting the department.
      iv. How many people does it take to staff the department?
      v. Does the department operate at night?
Requirements

1. Describe the basic function of the following parts of the circulatory system: heart, blood vessels, blood, and 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 (i.e. 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 affect your heart rate?
5. Make a simple stethoscope and listen to 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.
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.

Requirements

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. Explain the following:
   a. What is a chromosome and where are they located?
   b. What is a gene and where is it found?
4. Explain the following:
   a. What is meant by the term “allele”?
   b. How does a dominant allele differ from a recessive allele?
   c. 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.
   d. 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. Explain the following
   a. What does the process of mitosis accomplish?
   b. Draw a sequence of cells that shows the process of mitosis including: prophase, metaphase, anaphase, and telophase.
   c. Briefly explain how the DNA in the chromosomes is copied during this process.
6. Explain the following:
   a. What does the process of meiosis accomplish and how does it differ from mitosis?
   b. 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.
   c. 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 mutation? Using diagrams or models created in question #7, 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.
10. Is biological heredity the only factor contributing to your character, i.e., what makes you who you are?
11. Find three statements from Ellen White’s writings that relate to the previous question.
**Requirements**

1. Have the First Aid Honor.
2. What foods are included in the following diets:
   a. Liquid
   b. Soft
   c. Light
   d. Full
3. Know the symptoms of a fever. Know how to take a person’s temperature. Know how to bring a high temperature down.
4. Know what is a normal pulse rate, respiration rate, and temperature. Practice taking the pulse rate, respiration rate, and temperature of a friend or classmate.
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.
8. Know when and how to wash your hands when caring for a sick person.
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.
13. Demonstrate the application of a healing 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 one spells NEW START.)
   a. Nutrition
   b. Exercise
   c. Water
   d. Sunshine
   e. Temperance
   f. Air
   g. Rest
   h. Trust in God

**Optics**

1. Define and draw a diagram of the following:
   a. Focal length
   b. Positive lens aberration
   c. Negative lens
   d. Two kinds of distortion
   e. Lateral color
   f. Spherical
   g. Achromatic lens
   h. Refraction of light
2. Explain how light behaves when it strikes or traverses water, oil, feldspar, and a mirror.
3. Name and draw diagrams of three kinds of positive lenses and three kinds of negative lenses.
4. What should be the minimum distance of light source from the lenses when testing for focal length?
5. Find the focal length of at least four lenses, one being a negative lens.
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 6 x 35 and 7 x 50 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 18.5 lens faster or slower than an f 18 lens?
Requirements

1. Define the following:
   a. Physics
   b. Mass
   c. Work
   d. Force
   e. Power
   f. Potential energy
   g. Kinetic energy
   h. Weight
   i. Matter
   j. Inertia
   k. Friction
   l. Wave
   m. Center of gravity
   n. Exponential notation
   o. Absolute zero
   p. 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=mc² equation.

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

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.

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.

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.

Red Alert

Requirements

1. Tell what you should do to prevent injury and/or possible loss of life in the following situations:
   a. A fire in your house, a neighbor’s house, and a public building
   b. If you are stranded in a car in a blizzard or desert
   c. Motor vehicle accident
   d. Earthquake
   e. Flood
   f. Tornado
   g. Hurricane
   h. Thunderstorm
   i. Atomic emergency
   j. Rock or snow avalanche
   k. 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 your normal exits are blocked.
   b. Practice a home fire drill with your family.
   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.

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

1. Explain the difference in food value between whole wheat flour and white flour.
2. Describe the effects of yeast in bread making.
4. Prepare whole grain bread (can be wheat, rye, oatmeal, etc.)
5. Prepare two of the following:
   a. Yeast biscuits
   b. Unleavened bread
   c. Bread sticks
   d. Bagels
   e. Vegetable bread
6. Read what Ellen White wrote regarding the use of baking powder and baking soda.
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 cake 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. Make one recipe of refrigerator cookies. It is preferable to use wholesome ingredients such as fruit, oatmeal, nuts, etc.
11. Prepare a recipe file for all the items required above and any others desired. See how many recipes you can find using fruit without large amounts of sugar.
12. Give two examples of counsel by Ellen White regarding nutrition.
### Basic Sewing

#### Requirements

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: balance wheel, thread take-up, pressure foot, pressure foot lifter, needle, feed dogs, bobbin, and control.
3. Demonstrate how to properly thread and run the machine.
4. Hem a towel, showing neat and even stitches.
5. Demonstrate your ability to properly sew on buttons, snaps, hooks and eyes.
6. Tell what is meant by selvage, bias, straight of goods, and crosswise of goods.
7. Make a laundry bag for camping, or a similar simple item.

### Cooking

#### Requirements

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 measuring spoons, measuring cups, an egg beater, flour sifter, and if you have one, an electric mixer.
3. What is meant by boiling, broiling, frying, baking, simmering, waterless cooking? What are the most healthful ways of preparing common foods? Which are most unhealthful?
4. Demonstrate ability to properly prepare: two different kinds of hot cereal, a healthful hot drink, eggs (cooked) in two different ways other than frying.
5. Prepare potatoes healthfully by two different methods. Cook three other vegetables in the most healthful way.
6. Prepare a simple salad. Why do we need fresh salads in our diet?
7. Know the food guide pyramid. Why is it so important that we follow this chart in our diet? Check your meals for a week to be sure you are eating what you should.
8. Set the table properly for your family for an evening meal. Serve a balanced meal that you have planned and prepare as much as possible by yourself. Include a main dish, vegetable, and salad.
9. Follow a recipe correctly in making a vegetarian entree or a vegetable casserole.
10. Start a recipe file of your own. Put in it only recipes that you have tried and that you like.
11. Describe the influence of Ellen White regarding what we know about health and nutrition today. Give two examples of her counsel.
Requirements

1. Have the Cooking Honor.
2. How many cups make a quart? How many mls to make a liter? How many tablespoons to a cup? How many teaspoons to a tablespoon?
3. Prepare two main casserole dishes such as macaroni, rice, beans.
4. Prepare two different vegetables.
5. Prepare two kinds of salad. How are salads kept crisp?
6. Know the difference in food value between whole milk and skim milk.
7. Prepare a balanced breakfast using the food guide pyramid.
8. Prepare a vegetarian entree dish.
9. Plan menus for one week, choosing at least three dishes in which leftovers may be used.
10. Prepare a balanced meal using a vegetarian entree, a vegetable casserole and a salad.
11. What does caffeine do to the body? List five foods that contain caffeine.
12. Have 25 recipes of personally prepared dishes, not more than five of which are candies or desserts.

Cultural Food Preparation

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.
**Requirements**

1. Have the Basic Sewing Honor.
2. Identify samples of different fabrics including cotton, linen, wool, rayon, nylon, Dacron, and burlap.
3. Have a practical sewing box for your sewing supplies. Include in it a pin cushion, tape measure, pins, needles, thread, and scissors.
4. Show how to straighten fabric before use.
5. Demonstrate how to place pattern on fabric according to pattern layout, being sure all pieces are correctly placed on straight of fabric.
6. Know the following terms:
   a. Baste
   b. Bias
   c. Blind hem
   d. Grain of fabric
   e. Overcast
   f. Zigzag
7. Make one of the following:
   a. A skirt, putting in zipper and sewing on waistband. Make sure skirt is hemmed to hang evenly.
   b. A blouse, and explain how you would adjust the shoulders for different body types.

**Requirements**

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 other persons how to measure for length of skirt, length of sleeve, and length from neck to waistline.
5. Make a shirt with set-in sleeve and a collar, and explain how you would adjust the shoulders for different body types.
6. Explain how to make at least four of the following alterations or modifications in patterns:
   a. Shorten waist
   b. Lengthen waist
   c. Lengthen sleeve
   d. Waist size
   e. Lengthen skirt or pants
   f. Lengthen or shorten pants inseam
7. Make a pair of pants or shorts that fits properly.
8. Make a skirt.
9. Select from pictures or draw an outfit for yourself that shows proper color harmony and is complementary to your figure.
**Food Canning**

**Requirements**

1. Define the following:
   a. Botulism
   b. Boiling water bath
   c. Cold Pack
   d. Hot Pack
   e. Jam
   f. Jelly
   g. Marmalade
   h. Open kettle canning
   i. Pectin
   j. Pickles
   k. Scald
   l. Steam canning
   m. Steam pressure canning
   n. Sterilize
2. List the equipment used in the following methods of canning:
   a. Pressure
   b. Boiling water bath
   c. Steam
   d. Open kettle
3. Give directions for sterilizing, filling, sealing, and 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.
6. Can the following items:
   a. One fruit juice using the open kettle method
   b. Two kinds of fruit using the boiling water bath method, one by hot packing and one by cold packing
   c. Two kinds of vegetables using the pressure canning method, one by hot packing and one by cold packing
   d. One jelly or jam

**Food Drying**

**Requirements**

1. List at least three different ways to dry foods.
2. Why and how do you sulphur fruits?
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:
   a. Bread (Make crumbs and use in a recipe for sampling)
   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.
**Food Freezing**

**Requirements**

1. Define the following terms:
   a. Blanching
   b. Quick freeze
   c. 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.
6. Quick freeze a vegetable for easy pouring.
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.
9. 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?
10. Freeze one type of berry without added sweeteners.
11. Make one kind of freezer jam.

**Housekeeping**

**Requirements**

1. Have the Laundering Honor.
2. List utensils 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, and 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.
6. How should rugs, carpets, pillows, upholstered furniture, papered walls, painted walls, floors, and windows be cleaned?
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**

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**Requirements**

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?
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 fabric softeners?
6. What points are to be considered in selecting a washing machine, ironing machine, dryer, iron? How should these laundry implements be cared for?
7. How are woolen garments laundered?
8. Know how to remove stains: ink, fruit, rust, grass, cocoa, grease, blood, chewing gum. Why must stains be removed before laundering?
9. Why is it important to remove garments from dryer immediately when the cycle is completed?
10. What type of materials should be dried only on the lowest heat settings of a dryer?
11. Show a blouse or shirt that you have ironed and folded, or show a skirt and coat that you have pressed.
12. Properly launder and fold clothes for your family for one week.

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**Mat Making**

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**Requirements**

1. Name the materials used for mat making in your culture.
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 dyeing.
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.
Requirements

1. Draw and explain the food pyramid guide in its various forms. List the number of servings required from each group each day. Why is it important to eat a balanced diet?
2. Explain the difference between the following:
   a. Lacto-ovo vegetarian
   b. Ovo vegetarian
   c. Vegan vegetarian
3. Plan a two-day menu containing a balanced lacto-ovo vegetarian diet utilizing the food guide pyramid.
4. What is another name for:
   a. Vitamin B1
   b. Vitamin B2
5. List at least three significant food sources of the following nutrients:
   a. Vitamin C
   b. Vitamin A
   c. Vitamin B1
   d. Vitamin B2
   e. Iron
   f. Calcium
6. Why is it important to drink plenty of water every day?
7. How much water should you drink every day?
8. Name three common diseases that can be controlled by diet.
9. What is the difference between whole wheat flour and white flour, and which one has the higher nutritive value?
10. What does RDA mean?

Requirements

1. Have the Nutrition Honor.
2. Read a book about nutrition.
3. Do the following:
   a. Keep a food diary on yourself for one week.
   b. Calculate the total nutrients for each day of the following: calories, protein, iron, calcium, Vitamin A, Thiamine, Riboflavin, Niacin and Vitamin C or Ascorbic Acid.
4. How does this compare with the Recommended Dietary Daily Allowance chart?
5. Explain why a high fiber diet is important and tell how this can be obtained.
6. Name three diseases due to malnutrition and describe the symptoms of each.
7. What are the symptoms of vitamin B12 deficiency?
8. What advice would you give a person who decided to be a total vegetarian?
9. What is the difference between saturated and unsaturated fats? Which is the most healthful and why?
10. Why is it advisable to use less sugar in our diet and suggest ways in which this may be accomplished?
11. Using the book Counsels on Diet and Foods, write a paragraph on the benefits of a lacto-ovo vegetarian diet.
Quilting

Requirements
1. What is a quilt? How is it used?
2. What are three main fibers used in the interlining (middle layer) of a quilt?
3. What are two common methods of designing in a quilt? Define a "crazy quilt."
4. What is the difference between yarn tying and quilting?
5. What are the steps in making a quilt?
6. Construct and finish a quilt, either as an individual or group project.
7. Develop a file of at least six quilt patterns, including two patchwork and one on a patriotic theme.

Tailoring

Requirements
1. Identify the following materials:
   a. Wool
   b. Worsted
   c. Cotton
   d. Linen
   e. Silk
   f. Artificial silk
2. Identify three of the following weaves:
   a. Basket weave
   b. Plain
   c. Rib
   d. Herringbone
   e. Twill
   f. Pile
3. How are the following used?
   a. Interlining
   b. Tailor tacks
   c. Tailor canvas
   d. Other interfacing
4. Tell the points you should observe when making a garment fit properly and look tailored.
5. Be familiar with the following pressing equipment:
   a. Sleeve board
   b. Press mit
   c. Seam roll
   d. Taylor's ham
   e. Taylor's board
   f. Needle board
6. Be able to make bound and tailored buttonholes and loop buttonholes.
7. Make a slit pocket with a welt or a bound pocket.
8. Demonstrate your skills in tailoring by measuring, cutting out, and properly making a man's or woman's suit that fits properly.
Requirements

1. What are the main uses of Tapa cloth?
2. Know three different ways that Tapa cloth is made in the Pacific Islands.
3. Know the trees used for making Tapa cloth in your area.
4. Explain the following:
   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 dyeing Tapa cloth using natural dyes; 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.
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Requirements

1. What are the characteristics of amphibians?
2. Name the two main orders of Amphibia and tell how to distinguish between them.
3. Distinguish the differences between toads and 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 that you can identify and tell where they are found.
6. Describe the life history of some amphibians.
7. Explain the economic value of amphibians.
8. Where do toads spend the winter or the 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 an amphibian to find out:
      i. where and when it sleeps
      ii. when it leaves its home for food
      iii. how fast it can travel
      iv. how far it can jump, and as many other interesting things as you can find out about it; OR hatch frog eggs in your own aquarium and watch them grow to tadpoles, OR 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.
Amphibians Advanced

Requirements

1. Have the Amphibians Honor.
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, duration of breeding behavior, courtship behavior, rate of dispersal, location of brumation or aestivation 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

Requirements

1. Know 10 kinds of tracks, including two kinds of bird tracks. Make plaster casts of five.
2. Name at least three things that tracks tell us.
3. Trail some animal tracks, identify the animal if possible; tell whether it was running or walking. Measure between the tracks of one animal when running and walking.
4. Maintain a tracking station for at least three days.
   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:
   a. Flatfoots
   b. Toe walkers
   c. Toenail walkers
   d. Bounders or long hindleggers
6. Name four signs of the presence of mammals.
7. Distinguish between rabbit and squirrel tracks and between dog and cat family tracks.
8. Name two groups of animals (mammals, birds, insects, etc.) that leave scent trails that another of their kind can follow.
9. Name two birds for each type of track:
   a. Hopping
   b. Walking
10. Besides tracks, give two other signs of the presence of birds.
11. Name two birds identified by their flying patterns.
12. In your area, observe tracks or trails of one or more of the following:
   a. Toad or frog
   b. Snake
   c. Turtle
   d. Mollusk
   e. Earthworm
   f. Mole
Animal Tracking Advanced

Requirements

1. Have the Animal Tracking Honor.
2. What is the difference between positive and negative casts of animal tracks?
3. Make at least one positive cast from a negative cast or rubber mold.
4. What is scatology and why is it important in the study of animals?
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.
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.

Antelopes

Requirements

1. Give the general characteristics of antelopes.
2. Give three size-groups of these animals, with two examples of each.
3. Be able to identify at least 15 different antelopes.
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.
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:
   a. The largest antelope?
   b. The swiftest runner?
   c. A good fighter?
   d. A good jumper?
   e. Chiefly nocturnal?
   f. Called “the African Chamois”?
   g. The national animal of the Union of South Africa?
10. Say which antelope you like to watch most. Tell five of its habits.
Antelopes Advanced

Requirements

1. Give the order and the scientific name of the family to which the antelope belongs.
2. Give the distinguishing characteristics of the different sub-families, with examples of each.
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:
   a. Bush or reed beds, near water?
   b. Arid regions?
   c. Open plains?
   d. Scrub and forest areas?
   e. The vicinity of rocky kopjes, or on hillsides?
6. Describe the horns, in both sexes of each species, of 15 different antelopes. 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 five of which are in captivity.
8. What is a gazelle? Where would you find this animal?
9. Name some diseases associated with wild bovines. How are they transmitted? Of what economic importance are they to man?
10. Know the game laws of your province.

Bats

Requirements

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?
5. How many different types of bats are there worldwide?
6. Bats are divided into two sub-orders. What are their names?
7. Which sub-order of bats uses echolocation and which sub-order uses 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 mention 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 bat eat in an hour?
15. What are the two 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 three months what kind and how many bats have made it their home.
Bats Advanced

Requirements
1. Earn the Bats Honor.
2. What are caves, attics, bridges, or tunnels where bats hibernate called?
3. Give three examples of colonizing bats.
4. Give three 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?

Bird Pets

Requirements
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.
   b. If you do not have a cage bird now but completed requirement #1 in the past, take care of someone else’s bird for at least one week while they are on vacation, etc., and maintain a record of the required care.
3. Canaries
   a. Give the names of four varieties of canaries.
   b. Give a brief history of the origin and development of canaries.
   c. Name and distinguish five seeds used in canary feeding.
   d. Describe briefly the general care of canaries.
4. Parakeets or Love Birds
   a. To what country are parakeets, or love birds, native?
   b. Describe briefly their habits of feeding, nesting, and general behavior.
5. Pigeons
   a. Name and identify six varieties of pigeons.
   b. 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.
**Requirements**

1. Give two characteristics that set birds apart from all other creatures.
2. Name three flightless birds, tell what their diet consists of, and name the country or continent in which each one lives.
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.
4. Write or give orally three ways in which God’s love and purpose is shown in the creation of birds.
5. Make a list of 30 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.
6. Make a list of five species of wild birds that you personally have positively identified by sound out of doors.
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, identify the species of the 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 two months.
      i. What does man-made nectar consist of?
      ii. Why shouldn’t you use food coloring or honey?
      iii. When should the feeder fluid be changed?
      iv. 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**

**Requirements**

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 beaks of birds variously modified to adapt them to their environment?
   b. On Hummingbirds:
      i. What do hummingbirds eat in the wild and how often?
      ii. Why aren’t hummingbirds afraid of large mammals or birds?
      iii. How do their wings move differently from other birds?
      iv. How fast do they fly?
      v. How fast do the wings and heart beat?
      vi. How is the tongue shaped?
5. Identify on a bird’s wing the primaries, secondaries, coverts, axilars, 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 on your continent.
8. Give the migration routes and terminal destinations for 10 different migratory bird species.
9. Describe at least three different ways that birds are able to orient themselves in their movements across the globe.
10. Make a list of 60 species of wild birds, including birds from at least 10 different families that you personally have observed and positively identified by sight out of doors. For each species on this list note the following:
    a. Name
    b. Date observed
    c. Place observed
    d. Habitat (i.e., field, woods, river, lake, etc.)
    e. Status when 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:
    a. One day (with at least six hours in the field)
    b. One week
    c. Your life list (all birds observed by you since you began birding to date)
12. Make a list of 10 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.
13. Lead a group in a bird observation walk or tell two Bible stories in which a bird was significant.

**Cacti**

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**Requirements**

1. Name the chief characteristics of a cactus.
2. Mention three uses of cacti.
3. In what places are cacti most plentiful? Why?
4. Know and identify from life or pictures 15 species of cacti.
5. Photograph, observe or sketch at least 10 species of cacti and classify them, or grow at least three different species of cacti.
**Requirements**

1. What are succulents?
2. Identify from plants or photos five succulents that are not cacti. How are they different from cacti?
3. Know the definitions of the following terms within a cacti/succulents frame of reference:
   - Areole
   - Cephalium
   - Coalesce
   - Corymmb
   - Diurnal
   - Epiphyte
   - Glochid
   - Nocturnal
   - Offshoot
   - Panicle
   - Scale
   - Stolon
   - Zygomorphic
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?
5. Propagate at least one plant by using one of the following methods: from seed, by cuttings, or grafting.

**Requirements**

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.
8. Of what benefit to man are domesticated cats?
9. Identify from pictures or personal observation seven kinds of wild cats. Tell in what part of the world they are found.
10. What animal is known as the king of beasts? Why does it have that title? What is its temperament really like?
11. Tell the story of Androcles and the lion.
12. Relate four stories in the Bible in which a member of the cat family is mentioned.
Requirements

1. Have the basic Cat Honor.
2. Complete the cats “open-book” quiz, below. (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?
      i. It is too wild to be a proper house cat.
      ii. It is the national pet of Canada.
      iii. 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:
      i. Korat (Thailand)  (a) Goes limp when picked up.
      ii. Ragdoll (USA)   (b) Is traced to wild cats from Kenya.
      iii. 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?
      i. Drain cat
      ii. Fat cat
      iii. 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?
      i. Abyssinian cat
      ii. Havana Brown cat
      iii. 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?
      i. Australian Mist
      ii. Dingo cat
      iii. 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 and how often and with what supplies you care for the litter box. Why should your cat not be allowed to roam the neighborhood freely?
   b. If you do not currently have a cat but you owned one at sometime in the past for at least six 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.
   c. Participate in a cat related project of your choice in support of a local humane society or similar organization.
Cetaceans

Requirements

1. In what way is the Cetaceans family different from most other sea life?
2. Explain the difference between Baleen and Toothed Whales.
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 Antarctic 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
   b. Ezekiel 32:2
   c. Job 7:12
   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 15 Cetaceans.

Dog Care and Training

Requirements

1. Describe the steps you should take in the following areas of dog care:
   a. Selection
   b. Registration
   c. Immunizations
2. Do at least two of the following:
   a. Describe what can be done to remove fleas, ticks, and lice from your dog.
   b. Mention some diseases, pests, and worms that dogs can get.
   c. 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 of 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 you 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 will be acceptable for honor.
**Requirements**

1. Give the scientific name of the dog family.
2. Name five distinctive characteristics of the dog family.
3. Identify from picture, or personal observation, five wild members of the dog family.
4. Identify from picture or personal observation 25 different kinds of pedigree dogs.
5. Name five contributions the dog family has made to man.
6. Give the name of the smallest and largest breed of dogs.
7. Write or describe orally the value of the following dogs to man:
   - Seeing Eye, Saint Bernard, Shepherd, Collie, and 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 classified as “toy” dogs.
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 using pasted-on animal cutouts.
2. Pick one mammal, one bird, one reptile, and one amphibian from your home environment, and for each construct a diagram of its ecological pyramid.
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 conduct a library book study of the habitat of some small animal in your own environment. Write a report, one half from your field observations and one half from your book study, about 700 words.
5. Define ecosystem and state what the basic biological and physical factors are that keep it a balanced system.
6. Investigate the disposal of trash in your community. How much is disposed per family per day? Per week? Per year? How can it be taken better care of?
7. Check the daily paper of the nearest large city for one month for the air pollution level. Plot a curve for this level on graph paper for the month. Find out what caused the peaks in your curve.
8. List 10 ways in which you might actively work to improve the environment in which you live. Put four of these into practice.
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.
Ecology Advanced

**Requirements**

1. Have the Ecology Honor.
2. State the first and second rules of thermodynamics and explain how they are important to ecology.
3. Explain the three basic trophic (feeding) levels and give a good example of a plant or animal for each.
4. Explain or diagram the three types of ecological pyramids in the food web. Give an example of each layer of the pyramid.
5. Define 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.
8. Choose a biological community in your area such as a forest or woods, a swamp, lake, or pond, pasture or meadow grassland, 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.

**Edible Wild Plants**

**Requirements**

1. Photograph, collect pictures of, or sketch 15 edible wild plants. Identify each plant in the wild.
2. Identify in the wild five trees and five shrubs that have edible parts.
3. Identify, prepare, and eat five kinds of wild berries or fruits, three kinds of beverages, three salad plants, three potherbs (greens) and two tubers or roots.
4. Demonstrate the preparation of wild foods in each of the following ways:
   a. Boiling
   b. Roasting
   c. Frying
   d. Baking
5. Demonstrate how to prepare four parts of the common milkweed or daylily for food.
6. Explain how to identify three “odd shaped” edible fungi and how to identify the deadly mushroom amanitas.
7. What root plant can be dried and ground into meal?
8. Know at least eight families that include the poisonous or doubtful plants.
9. What is the cardinal edibility rule?
Requirements

1. Define the following terms:
   a. Endangered
   b. Extinct
   c. Habitat
   d. Biome
   e. Food chain
   f. 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 10 endangered animals. Tell where they live and why they have become endangered.

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.

Environmental Conservation

Requirements

1. What is the difference between ecology and 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? Is there a lake or river in your area or country that 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:

   Signs of Purity
   a. Abundance of small fish present
   b. Water visually clear and fresh smelling
   c. Stream banks covered with vegetation down to water’s edge
   d. Small amounts of green algae in water (light green in color)
   e. Some aquatic plants present such as cattails, arrow leaf, or pickerel weed
   f. Turtles present in the stream
   g. Crayfish under stones in the stream
   h. Sandbars covered with growing weeds indicating relatively stable water level

   Signs of Stream Deterioration and Death
   i. Large masses of blue green algae present (dark green in color)
   j. Scoured banks from high water level during storms
   k. Putrid smell of the water
   l. Detergent foam present
   m. Trash sticking out of mud and sand bars along the stream
   n. Water loaded with silt
   o. No aquatic insects or fish present
   p. Presence of raw sewage
   q. Presence of oil on surface of the water
   r. No salamanders or frogs under rocks along stream bank
   s. 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. Go talk to the people responsible for its contamination or pollution. Most people don’t think about such things and are only too glad to cooperate if made aware of the situation. Organize a group of young people to help you to clean up the trash along your stream. Get businessmen to supply trucks or pick ups to help your campaign.

6. Make a visit to the city or regional trash dump to see how this waste is handled. Find out:
   a. How many tons of trash are dumped daily? Yearly?
b. What attempts are made to recycle any of this trash?
c. Is any of the trash burned or is all of it buried?
d. What is the cost per person, per year, for handling trash in your town?
e. 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. Where possible, visit a 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.

9. Read and write a book report on an environmental 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?

11. Write a 300-500 word essay on your ideas.

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**Eucalypts**

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<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
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<tr>
<td>2</td>
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<td>South Pacific Division</td>
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**Requirements**

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:
   a. Frequent bush fires?
   b. 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, trace, or collect the fruit of each showing date and place and name of collector.
**Ferns**

**Requirements**

1. How are ferns different from 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.
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 of young ferns how they differ from adult plants.
5. Know the medicinal uses of three ferns.
6. Draw or photograph 10 kinds of ferns properly identified.
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. How are they similar to ferns?

**Fish**

**Requirements**

1. Name 10 families of fish.
2. Identify 10 tropical fish from pictures or personal observation.
   a. Explain their breeding habits.
   b. Give the habitat or country in which they are found.
3. Name and identify 10 fish native to your own country. Explain their feeding and breeding habits.
4. Define the following parts of a fish:
   a. Dorsal fin
   b. Pectoral fin
   c. Pelvic fin
   d. Anal fin
   e. Caudal fin
   f. Lateral line
   g. Operculum
   h. Barbels
   i. Swim bladder
   j. Gills
5. State briefly the proper care and feeding of fish in:
   a. Tropical zones
   b. Temperate zones
6. Fill at least a five gallon aquarium, well balanced with plants and fish, either tropical or native, and maintain the same for at least six months.
7. Note the effect on the fishes and aquarium in general:
   a. Too much light
   b. Too little light
   c. Overfeeding
   d. Drop in temperature of water
   e. Too few plants and too many fish
Requirements

1. Draw or photograph 35 kinds of wild flowers and identify them correctly.
2. Draw and properly label, or point out the actual parts of a flower: pistil, stamen, petal, sepal.
3. Name six flower families and their distinguishing characteristics. Name at least two flowers in each family.
4. Describe the life story 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.
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, violet.
   b. Submit fresh, pressed, or dried flowers that have: five petals, four petals, three petals, 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:
      i. Birds
      ii. Honeybees
      iii. Bumblebees
      iv. Butterflies
      v. Moths
   e. Watch a flower for at least 10 minutes in the sunshine and at least 10 minutes after dusk, and report on insect visitors. State the number and kind of visitors and name of flower.

Requirements

1. Have the Flower Honor.
2. Photograph, collect pictures of, or sketch 75 species of wild flowers. Make a scrapbook from these and correctly label each flower.
3. Give the distinguishing characteristics of the flowers of each of 12 common plant families.
4. Prove your ability to use plant keys to genus and species.
5. Tell the difference between perfect and imperfect flowers. What is meant by pistillate and staminate flowers?
6. Give an example of monoecious and dioecious plants.
7. Tell the difference between monocotyledons and dicotyledons.
8. From the Bible, point out two spiritual lessons in which writers used flowers for illustrations.
9. Name and describe eight poisonous plants, noting the particular part of the plant that is poisonous.
10. Do one of the following:
    a. Name five plants that are of medicinal value and indicate what part of each plant is used.
    b. Name 10 wild plants that are edible in root, stem, or leaf.
    c. An option from requirement #6 of the Flower Honor not completed for that honor.
Requirements

1. Make a collection of at least 10 different kinds of fossils, with the name and geographic location of each. Adhesive tape may be used for labels.
2. Have a brief definition of each of the following in your notebook: geology, fossils, catastrophism, pelecypod, graptolite, trilobite, dinosaur, mammoth, mastodon, crinoid, lingula, calamite, foraminifera, radiolaria, Paleozoic, Mesozoic, Cenozoic, paleontology, paleobotany, brachiopod.
3. Do one of the following:
   a. Visit a fossil bed to collect specimens. Make a written or oral report of the trip.
   b. Visit a museum where fossils are on display and make a written or oral report of the trip.
4. Describe the process of 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. Describe the process of cleaning up specimens as they come from a field trip to make them ready for the museum. Fully prepare at least one such specimen for display, and display it where others may see it.
6. Explain the difference in the account scientists give for the presence of fossils as related by evolutionists and creationists.
7. What accounts for the existence of frozen animals in the arctic regions? What accounts for their condition, and when did they likely live upon the earth?
8. Cite Bible and Spirit of Prophecy statements to explain the origin of the following:
   a. coal
   b. petroleum
   c. fossils
   d. limestone

Requirements

1. Give the names of five classes of fungi and examples of each.
2. Identify 15 common fungi of your locality. Draw or photograph them from live specimens.
3. Name three valuable fungi. What is the value of each?
4. Tell the life cycle of one example of each: rust, mold, mushroom, yeast
5. Identify five fungus plant diseases.
6. Know what safety precautions to observe when handling fungi.
Requirements

1. Give the geological meaning of the following words:
   a. Delta
   b. Sand spit
   c. Sinkhole
   d. Oxbow lake
   e. Moraine
   f. Cirque
   g. Mesa
   h. Alluvial fan
   i. Anticline
   j. Syncline

2. Describe the following:
   a. A shield volcano as compared to a composite volcano
   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 rock, or igneous) the following rocks are:
   a. Granite
   b. Sandstone
   c. Conglomerate
   d. Slate
   e. Shale
   f. Marble
   g. Lava
   h. Limestone
   i. Basalt
   j. Gneiss

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. A sand bar (Sand bars can be found in streams, rivers or along the ocean.)
## Grasses

### Requirements

1. What characteristics must a plant have to qualify as a grass?
2. What kind of roots do all grasses have?
3. In round numbers, 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 in the bean (a dicotyledon), or does the seed consist of just one part as in 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, then die the same summer.
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.
8. In each of the following cases name a single grass, or more where indicated, from which the product is made:
   a. bread (three grasses)
   b. brooms
   c. fish poles
   d. gluten
   e. grain alcohol (two grasses)
   f. hay
   g. hominy
   h. molasses
   i. oatmeal
   j. starch
   k. sugar
   l. white flour
9. Do one of the following: a) Collect and label 10 cultivated grasses or b) Learn about and discuss the various uses of grasses by different people around the world.
10. Press, 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 10 additional grasses that grow in your neighborhood. This collection may include the plants whose seeds are in your collection of cultivated grasses.

## Herbs

### Requirements

1. List 25 culinary herbs and their uses.
2. List 25 medicinal herbs and their uses.
3. Cook one dish using herbs.
4. Make one of the following herbal products:
   a. Cream
   b. Herb pillow
   c. Jam
   d. Soap
   e. Paper
5. Make one batch of potpourri.
6. Make one pomander.
7. Name and identify five herbs growing wild near you.
8. Name five herbs you can use for dyeing and state the color they give.
9. Name five herbs that can be used in insect control.
10. Grow five culinary herbs for three months.
11. Name five herb plants that particularly attract bees.
12. Name five herbs mentioned in the Bible and give the Bible references for them.
Requirements

1. Name at least five house plants raised for their foliage.
2. Name three house plants raised for their flowers.
3. Name three house plants adapted to:
   a. Direct sunlight
   b. Dry soil
   c. Very moist soil
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) (7 C - 13 C).
5. Prepare a special potting mix soil including at least three different ingredients. Select two house plants and grow them in this soil for three months.
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. Indicate whether they are boy or girl type 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 may be propagated from leaves, stem sections, or divisions. Raise one plant from two of these methods and keep it growing at least six months.
9. What is a bonsai?
10. What is humidity and how is it important to a plant?
11. Grow at least five of the following:
   a. African violet
   b. Aspidistra
   c. Aluminum plant
   d. Daffodil
   e. Gloxinia
   f. Maidenhair fern
   g. Piggy back plant
   h. Tulip
   i. Boston fern
   j. Begonia
   k. Bird’s nest fern
   l. Ficus
   m. Hyacinth
   n. Narcissus
   o. Spider plant
   p. Coleus
   q. Crocus
   r. Caladium
   s. Geranium
   t. Iris
   u. Philodendron
   v. Sanseveria
**Requirements**

1. Mount or photograph a collection of 20 species of insects representing at least six different orders. (No moths or butterflies and no carelessly mounted or broken specimens will be acceptable.)
   a. Place under each specimen a label showing the collector’s name, date caught, locality where caught. Labels should not be larger than 1/4 x 3/4 inch. (6 mm x 20 mm).
   b. Identify insects down to genus or species level on a second label to be mounted below the first, including source authority.
   c. Arrange all specimens neatly in an insect box according to orders and families. Order labels should be pinned to the box rather than attached to the individual insect pins. Common names are valueless.

2. What are the distinguishing characteristics of an insect?

3. Name five species of useful insects.

4. Name five species of injurious insects, and tell how to control them.

5. Tell two Bible stories in which insects played an important role.

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**Requirements**

1. Have the Insects Honor.

2. Add to your current collection 50 insects representing at least 10 different orders (excluding lepidoptera). Labels must include collector’s name, date, locality, order, family, and genus. (No carelessly mounted or broken specimens are acceptable.)

3. How do the special structures and habits of insects fit them so admirably for life?

4. Tell the life cycle of four insects in four different families.

5. Name two kinds of social insects. How do they differ from nonsocial insects?

6. Name at least four insects that carry disease to man, and name at least one disease carried by each.

7. Make one of the following: construct aerial, sweeping, and aquatic nets.

8. Construct a trap for night flying insects and use it.

9. Name at least one insect corresponding to each of the following: aquatic, leaf mining, leaf rolling, wood boring, paper eating, parasites on the body of bird and mammal; or describe the caste of termites and of honey bees; or compare the degrees of intelligence exhibited by a grasshopper or a beetle, and an ant, bee, or wasp.
**Lichens, Liverworts & Mosses**

**Requirements**

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.
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.
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.
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.

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**Livestock**

**Requirements**

1. Distinguish between the draft horse and the 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: Percheron, Belgian, Clydesdale, Arabian, Shetland.
3. List four physical characteristics of the mule.
4. Identify a burro from a picture or personal observation. Give its size, color, and usefulness.
5. Identify from pictures or live animals four kinds of milk cattle and four kinds of beef cattle.
6. Know the milk producing qualities of the Jersey, Guernsey, and Holstein breeds.
7. Differentiate between the Angora and milch goats. Give the distinguishing color of at least three breeds of goats such as Saanen, Toggenburg, Nubian, and British Alpine.
8. Identify from pictures or live sheep: note wool and meat production, size, markings, and general appearance of three breeds of sheep such as Merino, Rambouillet, Shropshire, Hampshire, and Lincoln.
Requirements

1. On what day of creation were mammals created?
2. List four characteristics of a mammal.
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:
   a. Marsupialia  
   b. Insectivora  
   c. Chiroptera  
   d. Carnivora  
   e. Pinnipedia  
   f. Rodentia  
   g. Lagomorpha  
   h. Artiodactyla  
   i. Sirenia  
   j. Cetacea
4. List four beneficial mammals and tell how they are beneficial to man.
5. List four things mammals do that are harmful to man.
6. List four mammals that are completely aquatic and designate their natural range.
7. Name the largest mammal in the world and tell where it lives, how it feeds, and what it eats.
8. List eight species of wild mammals that you personally have observed and identified in the wild.
9. Write or tell a story about “Wild Mammals I Have Observed.”
**Requirements**

1. What part of the world and time of year does the maple sugar industry function and why?
2. Explain how sweet sap is made by the maple tree and how it is stored over the winter.
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?
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 and leaf area) affect the sap flow and sweetness?
11. On 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:
   a. Drill
   b. Bit
   c. Spigot
   d. Bucket
   e. Bucket cover
   f. Evaporator

**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.
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.
8. What is the size of the drill bit? (2 sizes)
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?
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?
**Requirements**

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 for each group whether it is unicellular, multicellular, or both.
6. Is most green algae found in fresh or salt water?
7. What are diatoms?
8. Where does algae grow best—in the polar, temperate, or tropical 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?
12. Describe the two ways that algae reproduce.
13. What are some of the commercial values of algae? Give at least one for each group.
14. Make a collection of at least 20 specimens 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.
15. Be able to identify by generic name at least 10 types of marine algae.

**Marine Invertebrates**

**Requirements**

1. Be able to identify at least one example of 15 of the following seashore animals:
   a. Tunicate (sea squirt)
   b. Anemone (sea flower)
   c. Chitin
   d. Hermit crab
   e. Brittle star or serpent star
   f. Sea urchin
   g. Sea cucumber
   h. Bryoza colony (moss animal)
   i. Barnacle
   j. Ghost crab
   k. Common Starfish
   l. Mussle or clamworm
   m. Limpet
   n. Tube worm
   o. Oyster
   p. Amphipod (sand flea)
   q. Sponge
   r. Sand dollar
   s. Coral

2. Make a collection of at least nine seashore animals, including the following:
   a. Three kinds of crabs
   b. One kind of starfish
   c. Any other five animals listed in requirement #1. Hard bodied animals, such as crabs, starfish, and chitins may be killed in a five percent solution of formaldehyde or a 70 percent solution of alcohol, and then dried by a fire. The sun will cause the color to fade.
   d. Soft bodied animals must be kept in a three percent solution of formaldehyde or a 70 percent 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. Swimming action of a jellyfish
   b. The method of anemone capturing food
   c. The running of a crab
   d. How does a starfish digest a clam or oyster when it has a small mouth opening?

4. Name four low tide animals and two high tide animals.
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 requirement #1 are related to the octopus?
e. Starfish, sea cucumber, and sea urchin all belong to the phylum Echinodermata. Why is that? (Clue: find out what “Echinodermata” means.)

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 thousands of 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 specimens under #1 that are important economically. Explain.

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**Marine Mammals**

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General Conference

**Requirements**

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:
   a. Toothed Whales
   b. Baleen Whales
   c. True Seals
   d. Eared Seals
   e. Dolphins/Porpoises
   f. Walruses (one kind)
   g. Sea Otter (one kind)
   h. Manatees

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:
   a. Breaching
   b. Echolocation
   c. Spyhopping
   d. Baleen
   e. Pod
   f. Harem
   g. 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.
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.
Requirements

1. Distinguish:
   a. Mammals 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.
3. Describe the distribution, habitat (i.e. type of country they live in), diet, breeding behavior, as well as any other interesting information of 12 different groups of marsupials and monotremes.
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.

Microscopic Life

Requirements

1. List four major types of microscopes. 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 that has these microscopes.
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, focus knob, and arm.
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, plankton.
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).
6. Draw and label a cell which includes the following parts: cell membrane, nucleus, and cytoplasm.
7. Give at least one example of how microscopic life is important for: human food, human health, medicine, other organisms.
8. Give at least three health habits that have been established as a direct result of harmful microscopic life. Put these habits into practice.
Moths and Butterflies

Requirements
1. What is the distinction between moths and butterflies?
2. Define the following terms: antennae, cocoon, pupa, larva, and chrysalis.
3. Distinguish between three different cocoons as to species.
4. What causes colored powder to come off on your hands when you handle the wings of a butterfly? Examine the powder of a moth with a magnifying lens and describe your findings.
5. Name a harmful house moth and three harmful tree moths and tell during what stage of their lives they do their damage.
6. What famous butterfly follows the birds southward every winter and comes northward again in spring?
7. Do one of the following:
   a. Make a collection of 25 moths and butterflies, with not more than two specimens of any one variety. Specimens should be anesthetized by using carbon tetrachloride or other chemical in a collecting jar.
   b. Identify in the field, then draw or photograph 25 species of lepidoptera.
   c. In either project, correctly label with name, date observed, location, time of day, and plant type on which it was feeding.
8. Describe the life history of a moth or butterfly. What lesson can be learned in connection with the resurrection of the righteous dead?

Orchids

Requirements
1. Define the characteristics of an orchid.
2. What are the two main groups of orchids according to their growth patterns? Name and show examples of each from a live plant or picture.
3. What are the differences between epiphytic, parasitic, and saprophytic orchids?
4. Discuss the distribution of orchids, making particular reference to the occurrence of these in your area.
5. Name the main cultivated genera of orchids. Identify three from plants or pictures. What is a cultivar?
6. Discuss the main essentials to be observed 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?
**Palm Trees**

**Requirements**

1. Give the general characteristics of the palm tree referring to the following parts:
   a. Stem or trunk
   b. Roots
   c. Leaves
   d. Inflorescence or flowers
   e. Fruits
2. What happens when the crown of a palm is cut out?
3. What happens when the trunk of a palm is damaged?
4. In the Pacific Islands there are several species of palm trees that are helpful to man. Name two of these and list as many ways as you can how each helps man.
5. Identify by sight six different types of palms that grow in your area. Do this in any language.
6. Draw and name the six palm trees you have identified, showing clearly the leaf formation, flowers and seed shape, as well as the fruit.
7. 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.

**Parrots and Cockatoos**

**Requirements**

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.
2. Name two species of parrot that builds its nest in a termite mound and tell where each is found.
3. Tell where in Australia you would find each of the following and describe the natural diet of each:
   a. Long Billed Corella
   b. Great Palm Cockatoo
   c. Gang Gang Cockatoo
4. Which three species of cockatoo are known as the most rare?
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.
10. Be able to describe the nest of any one of the above parrots or cockatoos and also tell the color of the egg.
11. Make a list of all the parrots and cockatoos that are common to your area.
**Requirements**

1. Identify by description or from pictures at least five breeds of chickens such as:
   a. Plymouth Rock (any color)
   b. Wyandotte (any color)
   c. Rhode Island Red
   d. Orpington (any color)
   e. 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 or from pictures three breeds of large domestic fowl such as the following turkeys:
   a. Mammoth Bronze turkey
   b. White Holland turkey
   c. Bourbon Red turkey
5. Identify by description or from pictures two breeds of domestic geese such as:
   a. Toulouse goose
   b. Emden
   c. Chinese Geese
   d. Sebastopol Geese
   e. Cape Barren Goose
6. Visit a poultry farm or agricultural fair and write a brief report on the various types of poultry observed.

**Reptiles**

1. What characteristics must an animal have to be classified as a reptile?
2. Name 15 reptiles found in your locality. Tell where they live, their food habits, and their economic importance.
3. Name five poisonous reptiles of your area describing each as to location of fangs and geographical distribution.
4. Tell what to do if you are bitten by a poisonous snake.
5. Tell what to do if you are bitten by a nonpoisonous 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).
   b. Keep a small reptile in a terrarium and maintain a record of its care for at least three months.
7. Be able to tell two Bible stories in which a reptile played an important part.
**Reptiles Advanced**

**Requirements**

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?
7. Identify at least half of the reptiles from requirement #2 of the basic honor in the wild.
8. Find a reptile in the wild and record your observations of its activity during the daylight hours for one or more days.

**Rocks and Minerals**

**Requirements**

1. Distinguish between rocks and minerals.
2. Have a collection of at least 15 specimens correctly named. Label each specimen with collector’s name, date, and locality in which it was found.
3. Define and name two examples each (from specimens or pictures) of igneous, sedimentary, and metamorphic.
4. What is meant by Mohs’ scale of hardness? Name the minerals in Mohs’ scale.
5. Define cleavage, specific gravity, luster, color, streak, texture, crystal.
6. Name four uses for rocks and four uses for minerals.
7. Tell of four Bible incidents in which a rock was significant.
8. What are the foundation stones of the New Jerusalem?
**Rocks and Minerals Advanced**

**Requirements**

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. Give collector’s name, date, and locality in which specimen was found.
3. Know two minerals that belong to each of the following crystal systems: isometric, hexagonal, tetragonal.
4. Know the 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.
5. Do one of the following:
   a. Know and tell two different processes by which metals are extracted from ores.
   b. Name eight minerals, and tell how each is used.
7. What four metals are frequently found in native or free form?
8. Discuss the contents of at least three statements from the Spirit of Prophecy concerning rocks or minerals.

**Sand**

**Requirements**

1. Make a collection of 30 various colored sands and name of locality where secured. (Note: Have a package of sandwich bags, a pencil, and a small spoon or scoop to gather the sand. Mount in small bottles.)
2. What does the term “sand” mean? Name two kinds of sand.
3. Give the origin of sand and mineral content.
4. What is the difference between sand and soil?
5. What is meant by shape, surface, grain fracture, and grain size?
6. Define the following and give use of each:
   a. Glacial
   b. Calcareous
   c. Quicksand
   d. Glass sand
   e. Molding sand
   f. Polishing sand
   g. Building sand
   h. Filter sand
   i. Furnace sand
   j. Lake shore sand
7. Examine five types of sand specimens under magnification and observe the various characteristics.
Requirements

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, and embryo.
4. Know four different methods by which seeds are scattered by the plant. Name three kinds of plants that scatter their seeds by each method.
5. Know 10 kinds of seeds that we use for food.
6. Know five kinds of seeds that are used as sources of oil.
7. Know five kinds of seeds that are used for spices.
8. What conditions are necessary for a seed to sprout?
9. Make a collection of 30 different kinds of seeds, 20 of which you have collected yourself. Label each kind with its name, the date collected, locality, and the collector. You may glue them on heavy paper or put them in clear vials.

Requirements

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.
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.
5. How does a seed differ from a spore?
6. 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.
7. Write or tell orally two lessons we may learn from seeds. You will find much help in Christ’s Object Lessons, pages 33 to 89.
8. Make a collection of 60 kinds of seeds, 45 of which you have collected yourself. Label each one with its name, the date collected, the locality, and the collector. The seeds may be glued to heavy paper or put in clear vials.
Requirements

1. What is the meaning of the term “mollusk”?
2. Identify the following from shells or drawings:
   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 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.
8. Explain the terms univalve and bivalve as applied to shells.
9. Name in common terms five different classes of shells, and have in your collection a shell for each class.
10. Make a collection of 20 different shells. Tell where each was found when it came into your possession, and classify it.
11. What is the source of pearls? What striking lesson does the pearl teach us? (Read Christ’s Object Lessons, page 115 to 118.)
12. Match the Bible texts that best answer a-j. (Lev. 11:9, 10; Acts 16:14; Isa. 50:2; Rev. 21:21; I Tim. 2:9; I Kings 4:33; Ps. 104:25; Matt. 7:6; 13:45, 46; Job 28:18.)
   a. Water creatures were created the fifth day.
   b. The number of water creatures is innumerable.
   c. Water creatures perish out of water.
   d. Job considered coral of great value.
   e. Solomon was acquainted with marine life.
   f. Jesus twice used a shell product to teach a spiritual lesson.
   g. A businesswoman was engaged in selling the famous purple dyes secured from the shellfish Mediterranean Murex.
   h. Paul condemns the wearing of pearls.
   i. Shell creatures are unfit for food.
   j. The twelve gates of Holy City are twelve pearls.

Requirements

1. Have the Shell Honor.
2. Define the term “mollusca” or “mollusk.”
3. Learn the classification terms of mollusks, know the distinguishing characteristics of each, and become acquainted with several species under each class.
4. Distinguish between univalve and bivalve mollusks from the following considerations:
   a. The shell
   b. The mollusk body
   c. Reproduction
   d. Movements
   e. Securing food
   f. Self preservation
5. Identify from shells or drawings and know the following glossary of Conchological terms:
   a. Valve
   b. Apex
   c. Aperture
   d. Byssus
   e. Foot
   f. Mantle
   g. Operculum
   h. Mother of pearl
   i. Epidermis
   j. Ribs
   k. Teeth
   l. Canal
   m. Spines
   n. Whorls
   o. Lips
   p. Concentric lines
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. Identify and explain the activities of the shipworm.
9. What accounts for the distribution of mollusks?
10. Name two mollusks that have no shells.
11. Find answers to the following interesting questions:
   a. How are bivalve and univalve animals fastened to their shells?
   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.

13. Do one of the following:
   a. Personally find and collect 40 species of shells representing the five classifications. List each shell as to place and date 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 information called for under (a) above; if received or purchased, give name of person from whom shell was received, habitat of shell, date of acquisition, common name, scientific name, and class.

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**Requirements**

1. Note three characteristics of shrubs that distinguish them from trees and herbs. Why is a grape vine sometimes regarded as a shrub?
2. Name three important wild or cultivated food shrubs of your locality. Name a shrub that produces edible nuts.
3. Name two cultivated shrubs and two wild shrubs of your locality that produce showy flowers.
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 that is in bloom and list as many kinds of insects as you can (at least three) that come to its blossoms for pollen or nectar.
8. From what shrubs do birds prefer to eat the fruit or seeds? Name a shrub whose flowers attract 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 10 wild shrubs.
Requirements

1. Earn 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.
   b. If you do not currently have a small mammal pet, but you have kept one in the past for at least six months, “babysit” someone else’s small mammal pet for at least one week. Record the care that was required.
4. Give an oral report (at least three 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 the pet, etc.
5. Do the following:
   a. Be able to distinguish between the following groups of small mammal pets (Note: local mammals may substitute those on this list not known in your area):
      i. Hamsters
      ii. Gerbils
      iii. Rats
      iv. Mice
      v. Guinea Pigs
      vi. Chinchillas
      vii. Rabbits
      viii. Ferrets
   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 first one you selected.
   c. Which of those listed are not rodents?
6. Write a 200-word essay about the history and value of one of the pets listed 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.
8. Why is it not good to make pets out of small mammals taken from the wild?
10. Why should you not handle your small mammal pets when you have a cold?
11. Find three references in the Bible to animals that we now consider to be small mammal pets. According to the Bible, are they considered to be clean or unclean meat?
**Soils**

**Requirements**

1. Define what “soil” means.
2. Where on earth is all soil located?
3. What are five key factors in soil formation?
4. Define the following terms:
   a. A-Horizon
   b. B-Horizon
   c. C-Horizon
   d. Organic layer
   e. Mineral layer
   f. Clay
   g. Leaching
   h. Silica
   i. Humus
   j. Soil Profile
   k. Parent Material
   l. Pedologist
5. Define the term “Soil Classification.” Why are soils classified?
6. Discuss three differences between the following soil types:
   a. Desert
   b. Temperate
   c. Tropical
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 five different soil types.

**Spiders**

**Requirements**

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 locality and date of capture and the spider’s name.)
   b. Make colored drawings of at least 16 species of spiders, life size or larger and in natural color. Label each with its name.
   c. Take color photos of at least 16 species of spiders. Identify each as to locality, date taken, and spider’s name.
2. What is the largest member of the spider family?
3. Write a description (40 words) of a spider that has gained notoriety in your region.
4. Give three ways in which spiders differ from insects.
5. Make a careful drawing (about one fourth natural size) 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.
10. What are the chief enemies of spiders?
11. How do spiders help us, and how do they hurt us and our property?
Requirements

1. Answer the following questions:
   a. What is the earth’s nearest celestial neighbor?
   b. What is its distance from the earth?
   c. What governs the tide?
   d. What causes an eclipse?
   e. What is a shooting star?
   f. How fast does light travel?
2. Make a diagram showing relative positions and movements of the earth, sun, and moon. Show positions and movements for eclipses of the sun and moon.
3. Make a diagram of our solar system and be able to name the planets in order from the sun.
4. Identify eight fixed stars in the sky. What is the difference between planets and fixed stars?
5. What is a constellation? Name and point out six. Name two constellations visible throughout the year.
6. 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.
7. What is the Milky Way? Observe the Milky Way in the night sky.
8. What is the morning and evening star? Why does it carry both names?
9. Explain zenith and nadir.
10. What is the aurora borealis? What causes it?

Requirements

1. Have the Stars Honor.
2. How can you account for the apparent daily motion of the stars?
3. What are each of the following: a planet, satellite, comet, meteor, nebula, constellation, fixed star, sunspot?
4. What is meant by the terms celestial sphere, celestial pole, celestial equator, horizon, right ascension, declination, transit, conjunction, and ecliptic?
5. Explain the major differences between a refractor and reflector type of telescope. 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.
9. 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 the year is the constellation Orion best seen? Name and locate in the sky the three brightest stars of this constellation.
12. How are 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.
13. Locate the 15 first magnitude stars as they appear through 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. Which ones cannot be seen without the aid of a telescope? Which two planets are seen only near the hours of sunrise or sunset?
16. Where and in what way does the Bible refer to Orion, the Pleiades, and Arcturus?
17. Discuss the statement made in Early Writings, page 41, concerning the opening in Orion.
Requirements

1. Describe the ways in which trees and shrubs differ.
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. Know your specimens from memory and upon request be able to identify similar specimens in the field.
4. Name two examples each of trees that have been named for:
   a. Their use
   b. The surroundings or environment in which they grow
   c. Some distinctive feature
   d. The geographic region in which they live
   e. Persons who first found and described them
5. Give the common name and tell the difference between the two great classes of trees.
6. Describe the importance of forest conservation in your area.
7. Name several examples of the kinds of wood used in each of the following:
   a. Flooring for houses
   b. Common plywood
   c. Furniture
   d. Ax handles
   e. Fence posts
   f. Railroad ties
   g. Support beams for construction work
   h. Bows and arrows
   i. Ideal for use as kindling
   j. Burn slowly and leave a bed of hot coals
8. Name two examples of each of trees which:
   a. Grow best in wet or marsh places
   b. Grow best at high levels in mountains

Requirements

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: serrate, doubly serrate, entire, crenate, dentate, lobed, incised, whorled, opposite, alternate, pinnately compound, and (if possible) triple compound.
4. Do the following:
   a. Describe the advantages in using the Latin or scientific names.
   b. Of what use are the two parts of a scientific name?
5. Name six families of trees in the angiosperm class and three families in the gymnosperm class.
6. Know and describe the function of leaves in the life of a tree.
7. Name the families of trees and shrubs in your area that have opposite leaves.
8. Define the following terms: stipule, petiole, blade, pitch, heartwood, sapwood, springwood, summerwood, annual ring, cambium, xylem, and phloem.
9. What families of trees have thorns, catkins, winged seeds, acorns, pods, capsules, nuts, berries?
10. Identify 10 deciduous trees by their “winter” characteristics, (features other than leaves) such as twig and bud, bark, characteristic form and growth habits.
Requirements

1. What is the approximate number of named varieties of wattles in Australia?
2. What are phyllodes?
   a. What work do they do for the plant?
   b. 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 pod help in identification?
5. How many acacias in your state have true leaves (bipinnate) when adults?
6. Know the following:
   a. In seeding acacias, what is seen first, true leaves or phyllodes?
   b. How many have true leaves?
7. What must happen to an acacia seed before it will germinate and grow?
8. What acacias phyllodes 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 phyllodes 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 OR 20 or more close-up photographs you have taken of wattles showing the above details.

Requirements

1. Explain how each of the following is formed: fog, rain, dew, snow, hail, frost.
2. Identify, either in the sky or in 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.
4. Why is it possible to be rainy on one side of a mountain range and dry on the other? Give an illustration for your country or region.
   a. Why is it cooler and more moist in the mountains than in the lowlands?
   b. 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. With the help of a diagram, show what a convection is. What is its relation to wind?
8. Explain how radar, satellites, and computers are used in weather forecasting.
9. Tell how the following can affect our weather:
   a. Jet streams
   b. Volcano eruptions
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:
   a. temperature
   b. moisture (dew, fog, rain, frost, or snow)
   c. cloud formation
   d. wind direction
Requirements

1. Explain cyclonic and anticyclonic weather conditions and show how they bring about weather changes.
2. What are cold fronts and warm fronts? How do they move, and what weather conditions do they produce?
3. Explain the following weather phenomena: chinook winds, trade winds, belt of calms, typhoons, hurricanes, squall line, tornados, and blizzards.
4. Explain the action of a registering thermometer, registering barograph, hygrometer, and an anemometer.
5. Correctly read a daily weather map as published by the Weather Service, explaining the symbols and telling how predictions are made.
6. What is meant by relative humidity and dewpoint?
7. Draw a cross section of the atmosphere showing its five layers and describe them.
8. Keep a weather chart for three weeks. Include the following:
   a. Rainfall (Secure this either from your own home made device or from official records.)
   b. Barometer reading
   c. Cloud formations
   d. Wind direction and speed
   e. Temperature (high and low)
   f. Moisture (dew, fog, rain, frost, or snow)
   g. Weather forecasts and comparison to reality
9. Discuss the effect of sin on weather.

Requirements

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 three major phyla (the next largest category of classification) that contain worms, and describe them.
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:
   a. Where do they live?
   b. What do they eat?
   c. How are they helpful to humans?
   d. How short and how long can worms be?
   e. How many are there in one square meter of soil?
   f. How many species are there?
   g. 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:
    a. Where do they live?
    b. What do they eat?
    c. How are they helpful to humans?
    d. How are they harmful to humans?
11. Find a verse in the Bible where worms are mentioned and demonstrate the story (through music, poem, or drama).
Requirements

1. What are the three major classes of platyhelminthes? Describe them.
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?
4. Answer the following:
   a. Distinguish between the following body structures: coelomates, pseudocoelomates, and acoelomates.
   b. 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:
   a. From what you have learned about worms, why is the availability of fresh water so important to human health, especially in third world countries?
   b. Organize a fundraiser to support organizations that strive to provide freshwater to third world counties.
7. Describe a spiritual lesson about living water from the Bible.
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Requirements

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.
3. Test the germination of three varieties of seeds, 100 seeds of each variety. Record germination percentage after three, four, and five days.
4. Explain how the plants obtain nutrients and convert them to food. Explain the difference between primary, secondary, and micro nutrients.
5. Name and identify 10 common weeds in your community and tell how best to eliminate them using natural or chemical methods.
6. Identify six common insect pests or diseases. Tell what plants they usually affect and how to eliminate or prevent their occurrence.
7. Locate two sources of agricultural weather information. How is this information helpful to the farmer?
8. What is erosion? How can it be prevented?
9. Know the purpose of the following: plowing, cultivating, harrowing, discing, draining, irrigation, and harvesting.
10. Name and identify 10 common birds of your locality and state their value to the farmer.
11. Assist in planting, cultivating, and harvesting at least four different crops. Maintain a log of work done and problems encountered.
12. Visit your local cooperative or government farm service and find out how they help the farmer. Write a report on your visit.
**Beekeeping**

**Requirements**

1. Know a brief history of either beekeeping or honey.
2. List five uses of each of the following:
   a. Honey
   b. Beeswax
   c. Propolis
3. Name 10 foods that would be very difficult to grow if there were no honey bees.
4. List the duties of the drone, the worker, and the queen bees.
5. Describe how bees build combs. Why does the comb turn dark with age?
6. What is meant by the following terms:
   a. Movable-frame hive
   b. Crossed comb
   c. Bee space
   d. 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. Why should swarming be prevented?
12. What three requirements must be met for the colony to successfully weather a winter?
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?

**Cattle Husbandry**

**Requirements**

1. Name at least 25 parts of a steer.
2. What are four characteristics of a good heifer?
3. What is castration, and what is its purpose?
4. Why is dehorning done, and 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.
10. What type of feed is required during the following:
    a. First 90 days
    b. From 90 to 180 days
    c. 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.
**Requirements**

1. What considerations are made when selecting a calf?
2. Know 25 parts of a dairy cow.
3. Know the care, management, and feeding of dairy cows during their following stages:
   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.
7. Know eight parts of a milking machine.
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.
10. Know the meaning of the following terms:
    a. Concentrates
    b. Crude protein
    c. Cull
    d. Dry period
    e. Lactating
    f. Lactation cycle or period
    g. Oxytocin
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.
**Fruit Growing**

**Requirements**

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
4. What is a dwarf fruit tree, and 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.
6. Answer the following questions:
   a. What is pollination?
   b. What is a pollinator?
   c. Which trees need a pollinator?
7. How are young trees protected from rodent damage?
8. Compare the qualities of flavor, texture, and appearance of two different varieties of the same fruit.

**Gardening**

**Requirements**

1. Prepare soil, fertilize, and plant a vegetable plot of not less than 100 square feet. Grow at least six different vegetables, three from seeds and three from seedlings, through harvesting.
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?
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 vegetables for market.
   d. Make and use a storage bin or pit for your vegetables.
Goat Husbandry

Requirements

1. Identify live or from pictures at least two breeds of goat. Tell if they are raised for milk, meat, or wool.
2. What type of housing should be provided for goats?
3. What types of feed are used for the following:
   a. First month
   b. Freshened doe
   c. Second month
   d. Yearling
   e. Pregnancy
4. Name three plants that are poisonous to goats.
5. When are kids weaned?
6. When must the buck kids be removed from the does, and why?
7. How are goat’s hooves trimmed?
8. Why are goats good for clearing brush land?
9. Name at least six items that are made from goat skins.
10. What are wattles?
11. Raise at least two goats for six months.
12. If milch goats are raised, answer the following questions:
   a. What are the points to consider when choosing a good milk goat?
   b. How is pasteurization done and what is its purpose?
13. If milch goats are raised, do the following:
   a. Do the morning or evening milking for one goat for at least three months.
   b. Keep daily milk production records.

Horse Husbandry

Requirements

1. What two lines of profit are 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.
4. What type of training will help colts to grow into gentle, dependable horses?
5. Describe the proper care and feeding of horses.
6. Know the parts of the halter, bridle, and saddle.
7. Know how to properly put a halter, bridle, and saddle on a horse.
8. Know how to properly care for the hooves of a horse.
9. Care for one or more colts or horses for at least one week.
**Island Fishing**

**Requirements**

1. Name five native methods that are used for island fishing.
2. Demonstrate your ability to make at least one type of fishing gear out of native material used in your area.
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.
6. Do the following:
   a. Collect pictures of 10 tropical fish and identify their local names and their habitation.
   b. Name 10 poisonous or dangerous fish in your area.

**Pigeon Raising**

**Requirements**

1. Describe the proper type of pigeon house or loft, perch, trap and nest box to use for pigeon raising. List the needed 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 kms). If fancy or show pigeons, prepare them for exhibition.
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.
### Poultry Raising

**Requirements**

1. Have the Poultry Honor.
2. Describe incubators, hovers, sanitary fowl houses, coops, and runs, and have a practical knowledge of their use.
3. Be able to test and pack eggs for market, describe how to test bad eggs, and tell how eggs are graded.
4. Outline the feeding program for domestic fowl, from hatching to maturity.
5. What is the temperature, humidity, and number of days needed to hatch the following eggs:
   a. Duck
   b. Chicken
   c. Goose
   d. Quail
   e. Turkey
6. Raise to maturity a brood of not less than six poultry of your choice.
7. Write or give orally to the examiners a report on your experiences in working out the above requirements, and on your study of the hen, turkey, duck, and goose.

### Sheep Husbandry

**Requirements**

1. What kind of areas do sheep naturally inhabit?
2. What kind of vegetation furnishes the feed most ideal for sheep?
3. What kind of shelter or barns should be provided for sheep?
4. How much space is needed for each animal in the following conditions:
   a. Loose barn space for adult sheep
   b. Outside lot space for adult sheep
   c. Loose barn space for large lamb
   d. Loose barn space for small lamb
   e. Pasture required for one ewe
   f. Feed trough space for mature sheep
   g. Lambing
5. Which 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:
    a. Castration
    b. Grease weight
    c. Commercial
    d. Heat
    e. Concentrate
    f. Lactation
    g. Cross breed
    h. Polled
    i. Dam
    j. Purebred
    k. Dock
    l. Ram
    m. Drench
    n. Ration
    o. Ewe
    p. Registered
    q. Flushing
    r. Scours
    s. Forages or roughages
    t. Scurred
    u. Gain
11. Care for two or more lambs until marketed or until six months of age.

### Small Fruit Growing

**Requirements**

**NOTE:** This Honor involves the growing of fruits produced on plants, brambles, or vines. Fruits produced on trees are dealt with in the Fruit Growing Honor.

1. Select four different small fruits grown in your area such as strawberries, grapes, raspberries, lingonberries, etc. and determine the soil requirements for each.

2. Write a one page report telling how to grow one of the fruits selected above. Include the following:
   - Variety selection
   - Soil preparation
   - Planting techniques
   - Fertilizing
   - Pruning
   - Watering
   - Pest control
   - Harvesting

3. Name several varieties of each fruit that will grow well in your area.

4. Properly prune at least two bushes or vines of small fruits in the family garden or for a friend or neighbor.

5. What is a perishable crop?

6. How long can the fruits mentioned in requirement #1 be stored?

7. Describe a serious insect pest or disease for each fruit. Include when the problem occurs, damage caused, and natural or chemical treatment needed. Utilize pictures or drawings if possible.

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 30-meter rows.
Requirements

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:
   a. Root crops—e.g. cassave, sweet potatoes, carrots
   b. Grass—e.g. corn, sugar cane
   c. Legumes—e.g. beans, peanuts
   d. Leafy vegetables—e.g. cabbage varieties, aibika
   e. Fruit—e.g. Bananas, pawpaw, tomatoes, eggplant, pumpkins, cucumber
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.
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Requirements

It is essential that you plan to spend at least six months to a year working on this honor. You must choose a date to start this honor, and only projects started after this date will apply toward the honor.

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 devotional time 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 15 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 your 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 Matt. 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
4. Make up your own adventure, which must involve three different times of two hours each.
**Requirements**

1. Do the following:
   a. Name five different methods of Bible marking.
   b. Explain how each method would be used.
   c. List advantages and disadvantages of each.
2. List five guidelines you would consider before starting to mark your Bible.
3. Do the following:
   a. What method would you follow for giving a Bible study and why?
   b. Mark your Bible for two topics/subjects using this method.
4. Do the following:
   a. What methods would you use for ongoing devotional study and why?
   b. Mark your Bible for two topics/subjects using one of these methods, using a minimum of 10 texts each.

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**Bible Marking Advanced**

**Requirements**

1. Mark an additional two Bible studies using a minimum of 20 texts each.
2. Using a concordance, mark 10 texts for devotional study.
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.
**Child Care (Babysitting)**

**Level 1**

**Originating Institution**

Euro-Africa Division

**Requirements**

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, bathe, change and dress the baby.
4. Prepare the baby's bed and put the baby 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.

**Christian Citizenship**

**Level 1**

**Year**

1938

**Originating Institution**

General Conference

**Requirements**

1. Describe the national, state, or provincial AY, Pathfinder, and Christian flags.
2. Know how to display the national flag with two other flags under the following situations:
   a. Campout / camporee
   b. Pathfinder Day Program
   c. Parade
3. Demonstrate how to fold and salute your national flag. Mention when and how it should be displayed.
4. Explain the meaning and reason for the National Anthem and recite the words from memory.
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/her duties.
7. Write a one-page essay or give a two-minute oral report about a famous person in your country. Mention what he/she has done to gain recognition.
8. Do one of the following:
   a. Make a list of 10 famous quotations from leaders of your country.
   b. Make a list of 10 famous historic places in your country.
   c. Make a list of 10 famous historic events in your country.
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.
11. Know how to explain the process of government in your country.
12. Explain the meaning of the 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.
Requirements

1. Memorize and apply 1 Corinthians 10:31 to completing this honor.

2. Describe each of the following categories of drama:
   a. Human Videos
   b. Worship Skits/Drama Sketches
   c. Pantomime
   d. Dramatic Reading/monologue, duet, or group
   e. Musical/Drama

3. Describe how each of these areas of drama can be used to reach people for God.

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 with 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 for 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:
   a. Ad-lib
   b. Backstage
   c. Cross
   d. Cue
   e. Downstage
   f. Exit
   g. Getting up in part
   h. Holding it
   i. Left and Right
   j. Left Center and Right Center
   k. Set
   l. Tempo
   m. Upstage
   n. Upstaging

7. From the categories listed in #2, plan and perform two in a worship setting, church, or youth group.

8. As a group, create one drama presentation and perform it.
Requirements

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? (Isa. 43:1; Ex. 33:17; Isa. 45:4)
4. Demonstrate or discuss proper conversational skills, including:
   a. The proper way to talk to older people in public
   b. How to address people and make proper introductions
   c. Questions to avoid
   d. How to think of pleasant things to say
   e. How to show concern for the feelings of others
   f. What to say when you answer the door
   g. 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. Check your posture and body profile. Demonstrate how to stand and sit correctly. Read Education, 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. Explain the relationship between proper diet, exercise, and weight control.
8. Tell the importance of proper grooming, including bathing, body hygiene, breath, and 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 thought-life clean. Discuss intelligently the “do’s” and “don’ts” of dating.
13. List four reasons why your face is important to you and 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 that 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 host-
15. List 10 principles to help you overcome self-consciousness and social embarrassment.
16. Demonstrate two exercises that will improve your posture and overall health.
17. Know how to choose a hair style that makes you look your best.
18. Tell the proper style of clothes to wear to best suit your body type.
19. Tell why Christians should practice good manners.
For Young Men
20. Demonstrate how to seat a girl or woman at a table and how to properly escort a lady from her home to a social function.
**Requirements**

1. Name one source where you have found material for stories for each of the following categories. Tell a story from each category:
   a. Sacred history
   b. Church history
   c. Nature
   d. Character story
   e. Object lesson with visual aid
2. For the above stories you tell, do the following:
   a. Tell a story to children not over five years of age for at least three minutes.
   b. Tell a story to a group of children ages 10 - 12 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:
   a. Telling the story in first person, second person, and third person
   b. Different audiences, ages, and purposes
   c. Making the story shorter
   d. Making the story longer
5. Tell why a definite aim is necessary in telling a story. Tell how you obtain a good climax for a story.
6. Tell one story of foreign missionaries, not less than five minutes in length.
7. Tell one story teaching health principles.

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**Cultural Diversity Appreciation**

**Objectives:** To develop an awareness and appreciation for the cultural diversity within our church and society.

1. Define culture and cultural diversity.
2. Define stereotype and identify how you may have stereotyped people in the past.
3. Study the following Bible texts and answer the questions:
   a. 1 Corinthians 9:20. How does this text explain the importance of a Christian to have a cultural diversity awareness?
   b. Galatians 3:27. What does this text say about all who are in the family of Christ?
   c. 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 answer the following questions:
   a. Where did the culture originate?
   b. What language is spoken?
   c. What religions are prominent in that society?
   d. What foods are typically eaten for:
      i. Breakfast
      ii. Lunch
      iii. Supper
   e. How are eating habits influenced by the food available in that country?
   f. Are there cultural traditions that are different from yours? What are they?
   g. Do people of this culture celebrate the holidays that we celebrate? What customs do they have for celebrating the different holidays?
   h. What customs or traditions from the original culture have been continued by the family in this country?
   i. Is the dress different from dress in your culture?
   j. Identify at least five ways in which you are similar and five things that make you different and tell how your attitude or feelings toward people of different cultural backgrounds has affected you. How do you feel about your differences?
   k. Attend church with your friend if it is a different church than yours, or attend a church service of a different cultural group. Identify three similarities and three differences you observe in the church services.
**Family Life**

**Requirements**

1. Explain the roles of the father, mother, sister, and brother as given in the Bible and the Spirit of Prophecy.
2. What is the difference between self-respect and 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. Properly dispose of garbage
   b. Wash the dishes
   c. Wash the clothes
   d. Dust and keep the floors clean
4. Show that you can care for younger members of your family or neighbor’s for at least a couple of hours.
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. Plan and conduct a family worship period and give a complete report.
8. Know what to do under the following circumstances in your home: accident, fire, loss of a relative, financial crisis, bad storm.
9. Plan and conduct a fire drill in your home.
10. Mention five ways you can show concern for or interest in your neighbors.
11. Study the recreational activities of your family and explain how they can be improved.

**Junior Witness**

**Requirements**

1. Be a member of a Pathfinder Club or AY Society.
2. Participate in at least five Share Your Faith activities of that organization during one year.
3. Enroll at least two people in Bible correspondence courses.
4. Know from memory at least two key texts for each of the following Bible teachings:
   a. Second Coming of Christ
   b. Seventh-day Sabbath
   c. State of the dead
   d. Law and grace
   e. Conversion
   f. Judgment
   g. Inspiration of the Bible
   h. Spirit of Prophecy
   i. The saints’ reward
5. Give at least two Bible studies using the open-Bible method or visual aids.
6. Make at least 50 one-to-one contacts using Share Your Faith literature, Ingathering solicitation, etc.
Requirements

NOTE – In as much as the Master Guide requirements themselves prepare a person for leadership, it is intended that this honor shall tie the interests of the Master Guide more definitely into the Adventist Youth activities of the church, so that the church may have the fullest possible benefit of his training in this field of endeavor.

1. Be a Master Guide.
2. Read two books on adolescent development or leadership.
3. Serve in any one of the following offices for one year:
   a. AY leader or associate leader
   b. Primary, Junior, Earliteen, or Youth Sabbath School leader
   c. Staff member in an active Pathfinder Club
   d. Staff member at a summer youth camp for a full summer program
4. Prepare a group to be invested in one of the Pathfinder Classes during the current year and assist in conducting the Investiture service.
5. Know at least 10 qualities of a good youth leader.
6. Know the difference between juniors (10-12 year olds) and teens (13-15 year olds) in the following areas:
   a. Physical
   b. Emotional
   c. Mental
   d. Spiritual
7. Know principles in the proper administration of discipline to youth. Learn the following areas of discipline:
   a. Internal discipline
   b. External discipline
   c. Ten ways to prevent need for external discipline
   d. Five types of discipline procedures

Language Study

Requirements

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.
2. Carry on a simple but sustained conversation in a modern foreign language for a period of not less than five minutes.
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.
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.
Requirements

NOTE: Get in touch with the conference publishing director. He will assist you in selecting a book or magazine to sell and will assign territory to you.

1. From the Bible and the Spirit of Prophecy, 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 literature evangelist.

3. How is the literature evangelist supported?

4. What four steps are taken in the sale of a book or a magazine?

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 10 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, for at least 20 hours each.
   d. Do a project of distributing religious literature to local government officials. Spend at least 10 hours on your project.
   e. Do a project of supplying religious literature to patients in a hospital or nursing home. Spend at least 10 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/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.

Personal Evangelism

Requirements

1. Through Bible and Spirit of Prophecy study, learn 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:
      i. Evangelistic meetings
      ii. Voice of Junior Youth meetings
      iii. Community Service van activities
      iv. Cooking school seminars
      v. Stop Smoking seminars
      vi. Weight loss seminars
      vii. Stress management seminars
   b. Assist in the organization and planning of one of the following outreach projects and participate in the project at least 10 hours:
      i. Community beautification project, such as landscaping or improving a public area
      ii. Story hour
      iii. Clown ministry
      iv. Puppet ministry
      v. Prepare Christmas stockings for underprivileged children
      vi. Food and/or clothing distribution to the needy
      vii. Programs and visits to a nursing home, orphanage, or pediatrics ward of a hospital
      viii. Similar project approved by a Master Guide or AY leader
   c. Do all of the planning and organization and participate for at least 15 hours in one of the following outreach projects:
      i. Free yard care or housework for the elderly
      ii. Teach in a lower division Sabbath School department
      iii. Temperance talks
      iv. Tutoring of younger students
      v. Volunteer work in a hospital or nursing home
      vi. Supplying books and games to a hospital
vii. Help with the rehabilitation of a physically handicapped person
viii. Make posters and art projects for a hospital, nursing home, or orphanage
ix. Adopt a Grandparent Program
x. Similar project approved by a Master Guide or AY leader

**Requirements**

1. Make at least one puppet, and make or buy two other puppets.
2. Develop at least three puppet characters with their own voices.
3. Write three two-to-three minute scripts.
4. Perform for any audience (not family or immediate friends) at least three times.
5. Obtain an assessment of each performance by someone not related to the puppeteer.
Requirements

1. Prerequisite: Puppetry Honor
2. Make at least two or more additional puppets.
3. Develop characters and voices for these puppets.
4. Write a 10-minute script.
5. Construct your own staging.
6. Give at least one church or public performance.

Sanctuary

Requirements

1. Name the three parts of the sanctuary and the court yard:
   a. Tell what was in each part
   b. Tell what each piece of furniture represents
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?
   a. List the type of covering in the order from inside to outside.
   b. Tell what each covering represented.
4. The following colors were used in the sanctuary and in the priests clothing. Tell what each color represented:
   a. Red
   b. Blue
   c. Purple
   d. White
   e. Black
   f. Gold
   g. Silver
   h. 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:
   a. The common priest
   b. 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 court yard?
10. Write a paragraph or tell how you see Christ represented in the sanctuary and its services.
### Sign Language

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<td>1</td>
<td>1978</td>
<td>General Conference</td>
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**Requirements**

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.
4. Learn at least 100 signs from one or more reference books on signing.
5. Learn and present in sign language (not finger spelling) at least two simple songs.
6. Do one of the following:
   a. Explain the difference between Ameslam and sign English and demonstrate the use of both.
   b. Read and give an oral or written report on a school in your country or state specializing in deaf education.

### Sign Language Advanced

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**Requirements**

1. Have the Sign Language Honor.
2. Have a minimum of five 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.
4. Learn at least 350 signs.
5. Sign at least six songs to a hearing impaired friend.
6. Be able to sign to a hearing impaired friend:
   b. Beatitudes - Matthew 5:3-12.
Requirements

1. Discover the biblical principles of stewardship by answering the following questions:
   a. What does 1 Corinthians 6:19, 20 say about the stewardship of the body?
   b. What does Matthew 25:15 tell us about the stewardship of talents?
   c. What does Colossians 4:5 say about the stewardship of time?
   d. What does John 3:16 tell us that God gave?
   e. What does Psalm 24:1 tell us about who owns the earth?
   f. What does Genesis 1:26 say about who is the steward over the earth?
   g. What does Proverbs 3:9 say about who is always first?
   h. How do we know that tithe means a tenth? Genesis 28:22.
   i. Who does Leviticus 27:30 say tithe belongs to?
   j. How does Malachi 3:8 say that God is robbed?
   k. What does 1 Corinthians 9:13, 14 say about the use of tithe?
   l. How do we know that tithe is different from offerings? Malachi 3:8.
   m. What does 1 Corinthians 16:12 say about how we are to give our offerings?
   n. What does Matthew 6:20 say about where to keep our treasures?
   o. What does 2 Corinthians 9:7 say about our attitude in giving?
   p. What promised blessing is given in Malachi 3:10?

2. Read and discuss with your counselor or pastor the following: Section IV (pp 111 to 130); par. 1 and 2, p. 14; and par. 1, p. 66 of Counsels on Stewardship.

3. Learn what is done with the tithe in your local church, your local conference, your union, and the 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:
   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:
   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:
      i. Clothes
      ii. Entertainment
      iii. Personal items (toiletries)
      iv. Gifts
      v. School supplies
      vi. Tithe and offerings
      vii. Eating out
      viii. 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 Spirit of Prophecy determine what instruction has been given concerning the variety and use of God-given talents.

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 your 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. Make a written or oral report to your counselor about your project.
Requirements

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.”

2. Memorize three Bible verses and three Spirit of Prophecy quotations from the following:

Bible Verses
   a. Romans 12:1, 2
   b. 1 Cor. 10:31
   c. 1 Cor. 6:19, 20
   d. Proverbs 20: 1
   e. Galatians 5:22, 23
   f. 3 John 2

Spirit of Prophecy
   g. “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.
   h. 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.
   i. “...Temperance alone is the foundation of all the graces that come from God, the foundation of all victories to be gained.” Temperance, p. 201.
   j. “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.
   k. “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, pp. 327, 328.

3. Do four of the following: You should refer to the AYBL (Adventist Youth for Better Living) Manual for details.
   a. Write and deliver a five- to eight-minute speech.
   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” that tells about the harmful effects of drugs, 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 Drug Prevention advertisements.
   g. Share with at least five other persons what you have accomplished from the above list and obtain their signed Temperance Pledges (immediate relatives not included).

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:
      i. Nicotine
      ii. Arsenic
      iii. Formaldehyde
      iv. Carbon monoxide
      v. Cyanide
      vi. Phenolbenzophyrine
      vii. Amonia
   c. Emphysema, cirrhosis, addiction
   d. The effects of tobacco, alcohol, and drugs on pregnancy

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 p.139 paragraph 1
   b. Counsels on Diet and Foods, p. 406 paragraph 1
   c. Temperance, p.140 paragraph 2
   d. Temperance, p.143 paragraph 3
   e. Counsels on Health, p. 127 paragraph 4
   f. Temperance, p. 148 paragraph 2

7. Discuss and role play. What would you 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 invites you to smoke marijuana?
   f. You are at a party with a friend, he gets drunk and insists on driving you home?
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Requirements

SECTION ONE

Safety

1. Do the following:
   a. List and explain the safety rules.
   b. Explain the “dangers of falling” chart.

2. Explain the uses of the following knots:
   a. Tape
   b. Alpine butterfly
   c. Figure of eight loop
   d. Double fishermans
   e. Prussik
   f. Bowline

Setup

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, e.g. trees, boulders, bollards.

Belaying

5. Explain the various verbal calls.

6. Explain the principle of belaying and the three methods used, and give the advantages and disadvantages of each method:
   a. Body belay
   b. Mechanical belay
   c. Base belay

Care of Equipment

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.

Descenders

11. Know which descending device to use in different abseils.
   a. Give reasons why you chose that device, e.g. on/off time, security, heat, versatility, etc.

First Aid

12. Know about how to treat a patient for the following injuries:
   a. Sprains
   b. Concussion
   c. Hypothermia
   d. Broken bone
13. Explain how to perform the following rescues:
   a. The pulley system
   b. The change-over method

SECTION TWO-PRACTICAL
14. Pass the abseiling exam with a pass mark of 60%. The exam is available from the conference youth ministries office or through the instructor.

Verbal Testing
15. Answer the questions on the following topics:
   a. Uses of the six abseiling knots
   b. Specify and give the meaning of the standard climbing calls
   c. Uses of various descenders
   d. Give seven rules for care 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

Practical Testing
16. 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

Abseiling
17. 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
   e. Piton-brake bar
   f. Rappel-rack
   g. Harpoon (conventional)
   h. Cross karabiner

18. Explain how to do the classic abseil, and over the shoulder abseil, for emergency use.
19. Be able to prussik a 10-meter cliff.

Requirements
1. Repeat the theory and practical requirements for the Abseiling Honor.
2. Pass the exam with an 80% pass mark.
3. Abseil over a knot in the rope.
4. Abseil over an overhang or cave.
5. Demonstrate the pulley method of cliff rescue.
**Abseiling Instructor**

**Requirements**

1. Instruct how to abseil, being confident in every aspect of the Abseiling Honor.
2. Demonstrate all the theory to a class.
3. Teach abseiling first aid to a class.
4. Lead at least two abseiling expeditions, checking the safety of each individual.

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**Archery**

**Requirements**

1. Know and explain the archery safety rules.
2. Identify the parts of an arrow.
3. Identify the parts of a bow.
4. Correctly and safely string a bow.
5. Describe and show how to use: arm guard, finger tab and quiver, bow sling, 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 18 meters score 50 points on a 60 cm. target
   b. Outdoors: 30 arrows (5 rounds) at 25 meters score points on a 122 cm. target
Archery Advanced

Requirements

1. Have the Archery Honor.
2. Explain the advantages to be found by the target archer in making use of the following equipment:
   a. Bow square
   b. Bow sight
   c. Bow stabilizer(s)
   d. Clicker
   e. String Peep
   f. “Kisser Button”
   g. Bow Level
   h. Aluminum Shaft Target Arrows
   i. Plastic Arrow Fletching
   j. Bow Sling
   k. Flexible Arrow Plate
3. Explain what is meant by arrow spine.
4. Where possible, the archer should study carefully from an Archery Instructor’s Manual on the following topics:
   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 18 meters score 200 points on a 60 cm. target
   b. Outdoors: 30 arrows (5 rounds) at 50 meters score 200 points on a 122 cm. target

Backpacking

Requirements

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.
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.
5. What kind of sleeping bag and pad are best for your camping area? Know at least three kinds of each that are available.
6. Know how to pack a backpack 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.
   b. Learn the techniques of measuring, packaging, and labeling backpack foods for your trip.
   c. Make a trail snack.
8. Know the prevention, symptoms, and first aid for:
   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.
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 and cook your own meals.
Requirements

1. Know the basic rules of basketball.
2. What is the meaning of “good sportsmanship”?
3. Define the following terms:
   a. Air ball
   b. Backboard
   c. Back court
   d. Front court
   e. Baseline
   f. Block
   g. Bounce pass
   h. Double dribble
   i. Dribbling
   j. Fake
   k. Fast break
   l. Field Goal
   m. Fouled out
   n. Give and go
   o. Inbound
   p. Intentional Foul
   q. Jump ball
   r. The Key
   s. Loose ball foul
   t. Man to man
   u. One and one
   v. Perimeter
   w. Pick
   x. Press
   y. Rebound
   z. Shot
   aa. Steal
   ab. Team Fouls
   ac. Trap
   ad. Traveling
   ae. Turnover
   af. Zone Defense
   ag. Center
   ah. Forwards
   ai. Guards
   aj. Jump shot
   ak. Lay up
   al. Bank shot
   am. Dunk
   an. Hook shot
   ao. Free throw
   ap. Personal foul
   aq. Charging
   ar. Blocking
   as. Technical foul
   at. Three second violation
   au. Five second rule
   av. Ten second rule
   aw. Back court violation
   ax. Inbound violation
   ay. League
   az. 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 four hours helping a less skilled or younger player improve their skills.
7. Play at least five games with family or friends. Show good sportsmanship during your practice and 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 allow for continued activity in sports?
10. Make a scale drawing of a basketball court properly laid out.
Requirements

1. Explain how and why weather, season, and water supply are considered when choosing a campsite.
2. Prepare a list of clothing you would need for an overnight camp in warm and cold weather.
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.
6. Prepare balanced menus for one cooked breakfast, lunch, and supper.
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 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.
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.
10. Considering the things learned in this honor and the camping done, what is the meaning and the reason of the Pathfinder Camping Code?
### Camping Skills II

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**Requirements**

1. Be in (at least) the 6th grade or 11 years old.
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:
   a. Wind
   b. Water
   c. Wild things
   d. Wood
   e. Weather
   f. Willingness
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.
6. Take part in a camp worship service to include one of the following:
   a. Sabbath School lesson study
   b. Story
   c. Worship thought
   d. Leading song service
7. Know how to safely light and use a camp stove and lantern.
8. Know safety rules and demonstrate your ability to properly cut firewood.
9. Demonstrate how to break dead wood properly.
10. Using fuzz sticks or shaved sticks, build and know the use of a council or crisscross fire and one type of cooking fire. Review fire building safety rules.
11. Explain two ways to keep camp food cool.
12. Build two different camp cranes.
13. Prepare camp meals using boiling, frying, and baking.
15. 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.

### Camping Skills III

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**Requirements**

1. Be in (at least) the 7th grade or 12 years old.
2. Work for three hours on a wilderness beautification project, such as making or clearing a trail.
3. Review six points in the selection of a good campsite. Review the safety rules of fire building.
4. Go on a weekend campout.
5. Lay the following three fires and tell their uses:
   a. Star fire
   b. Hunter’s fire
   c. Reflector fire
6. Know six ways to start a fire without a match. Build a campfire using one of the following:
   a. Flint
   b. Friction
   c. Spark
   d. Curved glass
   e. Metal match
   f. Compressed air
7. Know how to properly sharpen a hatchet and knife.
8. Cook a one-pot meal using fresh or dried food.
9. Describe the various types of tents and their uses.
10. How does condensation occur in a tent, and how can it be prevented?
11. Demonstrate your ability to anchor a tent down, using the taut-line hitch and two half hitches.
12. While camping, plan and give a 10-minute devotional or organize and lead a nature Bible game or lead out in Sabbath School or camp church or vespers.
13. Properly locate and build one of the following and describe its importance to the individual and the environment:
   a. Latrine
   b. Shower
   c. Camp sink and dish washing area
14. Demonstrate four basic lashings and construct a simple object using these lashings.
15. 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.
**Requirements**

1. Be in (at least) the 8th grade or 12 years old.
2. Plan and execute a one-hour Sabbath camping activity other than worship to make the Sabbath a meaningful experience.
3. Write a 200-word essay on the preservation of the wilderness, discussing etiquette and conservation.
4. Plan your menu for a two-day camping trip and estimate the cost.
5. Participate in two weekend campouts.
6. Start a fire in wet weather, knowing where to get tinder and how to keep your fire 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.
12. Bake your food in a reflector oven.
13. Purify water by three different methods.

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**Canoe Building**

**Requirements**

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.
7. Assist in the making of paddles, seats, poles and fittings for the canoe.
8. Assist in the construction of decking, outrigger, mast, and sail if the canoe is of a double hull or outrigger type.
9. Make a tree model of the type of canoe used in your district.
### Canoeing

**Level** 2  
**Year** 1945  
**Originating Institution** General Conference

#### Requirements

1. **Prerequisite:** AY Honor in Intermediate Swimming.
2. Demonstrate, first alone and then with 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 of a canoe (1) from a beach, (2) from a landing dock or pier.
3. Accompanied by examining counselor, demonstrate correctly from both front and rear:
   a. The following strokes: (l) bow, (2) diagonal draw, (3) half sweep, (4) J stroke, (5) reverse half sweep, (6) push over, (7) full sweep, (8) combination draw and J stroke.
   b. Make both right and left pivot turns without headway.
4. Alone in a canoe, paddle a straight course for one hundred yards; turn rightabout and left about, keeping paddle always on the same side of the canoe. Demonstrate two kneeling positions for cruising.
5. Demonstrate with 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 rescue canoe,
   b. Then launching it again,
   c. Finally, steady it 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 a lifeboat.)
7. With clothes on (if possible):
   a. Capsize a canoe in deep water.
   b. Right it and stow paddles and kneeling pad.
   c. Get in canoe while filled with water and paddle with hands or paddle for 25 yards (24 mts.).
   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, land it. (Candidate must be accompanied by lifeguard in an equipped lifeboat.)
8. Fully satisfy the examiner of a thorough knowledge of safety rules that will make the candidate a safe canoeist and competent to take others out in a canoe. Promise to observe these rules at all times.
9. Explain how to do emergency repair work such as repairing a one inch hole through the canvas or fiberglass or repairing a broken paddle shaft.

### Caving

**Level** 2  
**Year** 1973  
**Originating Institution** General Conference

#### Requirements

1. Know at least three light sources for caving and 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 10 hours of actual caving time.
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.
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 speleotherms and three cave dwelling animals. Be sure to include any of those you have observed in your report for requirement #10.
10. Write a paper of at least 500 words on your caving experience so far (through the 10 hours); include all you have learned while carrying out the previous nine requirements of the honor.
**Caving Advanced**

<table>
<thead>
<tr>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Obtain geological survey maps of the area where you go caving. Map out on them the location of all known caves you have explored.</td>
</tr>
<tr>
<td>2. 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 such as types and extent of formations, effects of prior water activity, presence and nature of fossils, presence and nature of life forms (including bats).</td>
</tr>
<tr>
<td>3. Obtain proper rappelling equipment and learn how to use it either by studying a book on mountain climbing techniques or locating a person or club group already experienced who is willing to instruct you. Plan and execute a cave trip where it is necessary to rappel at least 40 feet (12 meters) and climb back out.</td>
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<tr>
<td>4. Conduct a biological survey of the 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 troglobytic zones. Compare pictures with the nearest natural history museum for help in identification. Publications on cave flora and fauna of the National Speleological Society will help also. Remember the slogan, “Take nothing but photographs, leave nothing but footprints.”</td>
</tr>
<tr>
<td>5. Log 100 hours of caving experience. Keep accurate records of each caving trip.</td>
</tr>
<tr>
<td>6. Conduct a caving course, to be climaxed by several field trips for a group of young people in your community or church.</td>
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<tr>
<td>7. 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.</td>
</tr>
</tbody>
</table>

**Community Water Safety**

<table>
<thead>
<tr>
<th>Requirements</th>
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<tbody>
<tr>
<td>(Instructor Required)</td>
</tr>
<tr>
<td>NOTE: Complete the Red Cross Community Water Safety Course OR Have The Swimming Honor and at least six hours’ preparation and practice.</td>
</tr>
<tr>
<td>1. In deep water, disrobe and swim 100 yards (100 meters).</td>
</tr>
<tr>
<td>2. Surface dive in six to eight feet (2 meters) of water, recovering various objects three times, and a 10 pound weight (4kg weight once).</td>
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<tr>
<td>3. Correct approach 30 feet (9 meters), and cross chest carry 30 feet (9 meters).</td>
</tr>
<tr>
<td>4. Correct approach, surface dive, underwater approach and carry 30 feet (9 meters).</td>
</tr>
<tr>
<td>5. Correct approach 30 feet (9 meters), and hair or arm lock carry 30 feet (9 meters).</td>
</tr>
<tr>
<td>6. Tired swimmer’s carry 30 feet (9 meters, preceded by 30 foot (9 meters) approach.</td>
</tr>
<tr>
<td>7. Release double grip on one wrist. Left and right.</td>
</tr>
<tr>
<td>8. Release front strangle hold. Left and right.</td>
</tr>
<tr>
<td>9. Demonstrate artificial respiration.</td>
</tr>
</tbody>
</table>
**Community Water Safety Advanced**

**Requirements**

(Instructor Required)
Satisfactorily pass the Red Cross examination for Water Safety Instructor’s Aid and receive your certificate.

OR

Obtain the Bronze Cross or an equivalent Advance Lifesaving Award from the Royal Life Saving Society or equivalent body in your country.

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**Cycling**

**Requirements**

1. Know by name and explain the purpose of the various parts of a bicycle.
2. Repair a punctured bicycle tire.
3. Take apart and clean a bicycle and put it together again properly.
4. Adjust the brakes and front and rear derailier properly.
5. Know and practice courtesy and safety rules in bicycling.
6. What are the advantages of wearing a cycling helmet?
7. Ride a bicycle 50 consecutive miles (80 kilometers) in 10 hours or less.
8. Know how to read a road map by routing out your 80 kilometer course and following it accurately on the ride.
Requirements

1. Have the Cycling Honor.
2. Describe how to select the correct frame size, handle bar, and saddle height to fit one’s body size.
3. Describe briefly the features of a bicycle used for long distance touring.
4. Take apart, clean, and put back together 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:
   a. Riding in hilly terrain
   b. Touring with packs on the bicycle
   c. Riding in level country

7. Explain how the riding characteristics of a bicycle are affected by:
   a. The geometry of the bicycle frame, including:
      i. head and seat tub angles
      ii. fork rate
      iii. chain stay length
      iv. bottom bracket height
      v. wheel base length
   b. The kind of wheels used, including:
      i. clincher or tubular tires
      ii. small or large frame hubs
      iii. number of spokes used on each wheel
      iv. number of spokes each spoke crosses

8. Make a list of desirable equipment items to be taken on a multi-day tour.
9. Review safety precautions to observe while bicycling.
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.
12. Have the following riding record while working on this honor:
    a. Make three 20 mile (35 kilometers) rides in different locations.
    b. Ride 100 consecutive miles (160 kilometers) in less than 15 hours.
       OR
    c. Ride a three day tour of at least 125 miles (200 km) and write a 500-word report on the tour.

Drilling and Marching

Requirements

1. Explain five or more objectives of drill.
2. Define:
   a. formation
   b. line
   c. rank
   d. interval
   e. column
   f. file
   g. distance
   h. cover
   i. flank
   j. cadence

3. Explain the actions in each of the following groups:
   a. At Ease, Stand At Ease, and Parade Rest
   b. Mark Time, Quick Time, and Double Time
   c. Hand Salute and Present Arms
   d. 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 column of threes or fours)
   f. Column Left
   g. Rear March
   h. Halt

6. Explain and demonstrate how to use, display, and care for the national flag, including how to properly fold it.
### Drilling and Marching Advanced

**Requirements**

1. Have the Drilling and Marching Honor.
2. With a unit guidon, demonstrate the six 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.
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.
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 10 basic drill movements.
9. 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 flags.

### Drumming and Percussion

**Requirements**

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?
3. Be able to name five rudiments from each of the four families of rudiments.
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?
7. What is the difference between playing open vs. 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? 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 are used for drum practice sessions.
Requirements

1. Earn the AY Cooking 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.
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:
   a. Soup/Stew
   b. Casserole
   c. Vegetable
   d. Bread
   e. Dessert
16. Cook with the lid only as a griddle.
17. Name the six different ways to cook in a Dutch oven.
18. What is meant by stack cooking?

Requirements

1. Lay five different kinds of fires and know their uses. Two of these fires must be cooking fires.
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 10 minutes.
5. Know and practice fire safety rules.
6. Show how to correctly and safely cut and split fire wood.
7. Demonstrate ability to start fire on a rainy day or in the snow.
8. Demonstrate simmering, boiling, frying, baking bread on a stick, aluminum foil baking, reflector oven baking.
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:
   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.
14. Know how to properly and safely handle food, dispose of trash and garbage, and wash your gear.
Requirements

1. Define geocaching.
2. What is a GPS receiver?
3. Demonstrate two ways of finding the location of a geocache in your area on the 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:
   a. Traditional cache
   b. Micro-cache
   c. Virtual cache
   d. Multi-level cache
   e. Travel bug
6. What items may be left in a geocache? Which items may not?
7. Know and practice good Travel Bug Etiquette.
8. Know and practice good Travel Bug Etiquette.
9. Find three geocaches in your area, at least one of which must be a regular (traditional) cache.
10. Write about your geocache find in your logbook on the 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.

Geocaching Advanced

Requirements

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 and 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 six months.
   b. Send out and follow a TB (travel bug) for six months.
   c. Find two travel bugs and follow them for six 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?
   a. State Parks National Park Service
   b. Roads and Railroad Right-of-Ways
   c. Placing caches while traveling
   d. Wilderness Areas in National Forest Areas
   e. USDA Forest Service
6. Find and record at least 18 geocaches; include:
   a. Traditional cache with 3-star difficulty
   b. One Multi-level
   c. One virtual
   d. One micro
Requirements

1. Create a list of equipment used for gold panning. Describe each item and tell what it is used for.

2. Define the following:
   a. Pay dirt
   b. Quartz
   c. Pyrite
   d. Blond sands
   e. Black sands
   f. Placer
   g. Lode
   h. Nugget
   i. Flake
   j. Dust
   k. Specific gravity
   l. Wet and Dry panning
   m. Mercury (historical use) DO NOT USE TODAY
   n. Troy pound
   o. Troy ounce
   p. Pennyweight (dwt)
   q. Grain
   r. Gold fever

3. What are the following identifying characteristics of gold:
   a. Specific gravity
   b. Color of streak
   c. 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:
   a. Matthew 13:44-46
   b. Matthew 6:19-21
Requirements

1. Explain and demonstrate the main points of good hiking practice, such as pacing, speed, resting, and etiquette.
2. Explain the importance and method of proper foot care with regard to cleanliness, care of nails, socks, shoe selection, and 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.
4. Make a list of needed gear for a long day hike in the wilderness and a short country hike.
5. List five safety and courtesy rules to be used in wilderness trail hiking and road hiking.
6. Explain the importance of drinking water and list three signs of contaminated water.
7. Explain the importance of proper eating while hiking.
8. Describe proper clothing and foot gear for cold and hot wet weather hiking.
9. Submit a written plan for a 10-mile hike that includes: map route, clothing list, equipment list, and water and/or food.
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
   b. One five-mile (8 km) hike on a wilderness trail
   c. Two 10-mile (16.1 km) day hikes on different routes
   d. One 15-mile (24.2 km) hike on a wilderness trail
   e. Within a month of each hike, write a short report, giving dates, routes covered, weather, and any interesting things you saw.

Horsemanship

Requirements

(Instructor Required)

1. Label an outline drawing of a horse or point out on a live horse a minimum of 30 different parts of a horse.
2. Label on an outline drawing or point out on a real saddle, a minimum of 10 parts of a Western saddle and nine parts of an English saddle. Label on an outline drawing, or point out on a real bridle, a minimum of six parts of a Western bridle and seven parts of an English bridle. Explain how to take care of your tack.
3. Describe the purpose of and wear a riding helmet and boots (or hard soled shoes with a heel) while working around horses and riding.
4. Describe and demonstrate three rules of safety in approaching and catching a horse.
5. Describe and demonstrate three rules of safety in leading a horse and show where the safest place is to stand around a horse.
6. Choose a safe place to tie a gentle horse, then demonstrate how to tie a gentle horse with a quick release manger knot, or bowline knot, demonstrating and explaining correct length of rope and height from the ground to tie.
7. Demonstrate and explain how to correctly groom a gentle horse.
8. Demonstrate and explain how to safely and correctly saddle and bridle a gentle horse.
9. Demonstrate and explain how to safely and correctly mount and dismount a gentle horse, and demonstrate a safe, well-balanced seat on a horse that is standing still.
10. Demonstrate and explain how to safely start, stop, and turn a gentle horse at walk, using leg, weight, voice, and rein aids.
11. Demonstrate and explain a correct leg-up mounting procedure on a bareback gentle horse that is standing quietly. Ride a gentle bareback horse for a minimum of 30 cumulative minutes at the walk with good balance.
12. Demonstrate and explain group safety consciousness while riding a gentle horse with a minimum of one other rider. Demonstrate correct spacing, reversing direction, and passing other riders in an arena setting at the walk.
13. Negotiate a simple three element trail obstacle course set up on level ground riding a gentle horse at the walk. Choose from:
   a. Step over log or pole, maximum height of 16 inches (42 cm).
   b. Pass between tow barrels or bales of hay spaced 45 inches (120 cm) apart.
c. Zig-Zag between poles set at 12-foot (3.6 m) intervals.

d. Walk into a large key-hole (15-foot > 4.5 m) circle,) turn and exit without stepping on or crossing any borderline.

14. Trail ride a gentle horse at the walk for a minimum of four cumulative hours.

15. Demonstrate and explain a minimum of three safety rules that apply to group trail rides.

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**Horsemanship Advanced**

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
<td>General Conference</td>
</tr>
</tbody>
</table>

**Requirements**

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.
**Kayaking**

**Level** 1  
**Year** 1  
**Originating Institution** South Pacific Division

**Requirements**

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, flotation in kayak).
2. Demonstrate an ability to enter and exit a kayak.
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.
6. After completing a minimum of two training sessions, complete either:
   a. An overnight kayak trip
   b. Two day trips (one including some white water)

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**Kites**

**Level** 1  
**Year** 1986  
**Originating Institution** General Conference

**Requirements**

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. 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:
   a. Spine
   b. Spar
   c. Vent
   d. Bowstring
   e. Cover
   f. Frame
   g. Trail
   h. Keel
   i. Flying line
   j. Bridle
   k. 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.
9. Know how to correctly wind line on a stick. Know how to tie broken ends together 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. Fox kite
   g. Tetrahedral kite
Requirements

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.

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?

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 rope from native materials or twine.

8. From memory tie at least 20 of the following knots and know their common uses and limitations. Demonstrate how they are used.
   a. Anchor bend
   b. Bindertwine Bend
   c. Blackwall Hitch
   d. Bow or Shoestring
   e. Bowline
   f. Bowline on a bight
   g. Butterfly loop knot or Alpine Slip knot
   h. Carrick bend
   i. Clove hitch
   j. Double Bowline
   k. Double Carrick Bend
   l. Figure eight
   m. Fisherman’s knot
   n. Halter hitch
   o. Hunter’s bend
   p. Lariat or Bowstring knot
   q. Lark’s head
   r. Man harness knot
   s. Miller’s Knot
   t. Packer’s knot
   u. Pipe hitch
   v. Prusik knot
   w. Running bowline
   x. Sheepshank
   y. Sheet bend
   z. Slipped half hitch
   aa. Slipped sheet bend
   ab. Square knot
   ac. Stevedore’s knot
   ad. Strangle knot
   ae. Surgeon’s knot
   af. Tautline hitch
   ag. Timber hitch
   ah. Two half hitch
   ai. Wall knot

9. Make a knot board showing 25 or more knots.
**Letterboxing**

**Requirements**

1. Define the following:
   a. Cache
   b. Letterbox
   c. Trail name
   d. Personal log book
   e. Stamp in
   f. Hitchhiker
   g. Hybrid box
   h. Bonus box
   i. Exchange

2. List at least five behaviors you should practice while letterboxing.

3. Know the basic orienteering skills of:
   a. Pacing
   b. Compass use
   c. 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 10 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 website.

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**Letterboxing Advanced**

**Requirements**

1. Complete the Letterboxing Honor.

2. Create a letterbox stamp, post clues on a website, establish and maintain a letterbox for six months.

3. As a unit, club, or family, find the clues and then locate an additional 20 letterboxes 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 website.

4. Design, create, and carve your own hitchhiker stamp. Hide in a letterbox, post on a website, 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.
Requirements

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.
5. Explain differences between single track, double track, and 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.
7. Describe the basic rules of courtesy that should be followed when doing off road riding.
8. List three basic pieces of safety equipment that should be worn when mountain biking.
9. Know the three most commonly broken bones in mountain biking accidents and how to prevent these injuries from occurring.
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.
   b. Two 10 mile rides.
   c. One 20 mile ride.

Requirements

1. Know at least 20 nautical terms used in navigation.
2. Name at least three aids to navigation and their functions. By whom are these maintained?
3. Name six types of buoys. What do they mean and how are they used? Give the colors of the six you named. How are buoys numbered? How do they mark channels?
4. Box a compass with eight cardinal points. Why is it so important in navigation? Where is it mounted in the vessel and why?
5. Name four of the most useful knots in seamanship. Know how to tie them and give their principal uses.
6. 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.
7. When you are taking an active part in navigation, what are three of the best safety rules to follow?
8. What does it mean to be properly equipped? Illustrate.
9. What do we mean by “rules of the road” and by “proper water etiquette”? 
Requirements

1. Explain what a topographic map is, what you can expect to find on it, and three uses for it.
2. Identify at least 20 signs and symbols used on topographic maps.
3. Give the nomenclature of an orienteering compass.
4. Know and explain the following:
   a. Elevation
   b. Azimuth
   c. Back azimuth
   d. Contour interval
   e. Magnetic North
   f. Declination
   g. Scale
   h. Measuring
   i. True North
   j. Distance
   k. Ground forms
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 and when correction is necessary.
8. Be able to orient yourself with a map by inspection and by compass.
10. Prove your ability in the use of map and compass by following a two-mile (3 kilometers) cross-country orienteering course with at least five given compass readings or control points.

Requirements

1. Earn four of the following honors. Honors earned more than two years ago should be restudied so that you can answer any of the knowledge questions included in their requirements.
   a. Camping Skills IV
   b. Fire Building and Camp Cookery
   c. Winter Camping
   d. Hiking
   e. Backpacking
   f. Orienteering
   g. Pioneering
2. Have the First Aid Honor.
3. Know what to do to overcome fear when lost. Know at least four ways to signal for help if lost in the wilderness.
4. Know at least four secular activities and four Sabbath activities to use in an outdoor setting if you have a rainy day.
5. Do the following in an outdoor setting:
   a. Plan, organize, and do the teaching of one nature honor to a group of youth.
   b. Assist in teaching camping skills required in any camping honor and/or Pathfinder Class requirements to a group of youth.
   c. Determine where the nearest hospital is located.
   d. Determine where the nearest assistance from the police or a park ranger can be obtained.
6. Through Bible and/or Spirit of Prophecy study, learn how the outdoors influenced the following Bible characters:
   a. Moses
   b. David
   c. Elijah
   d. John the Baptist
   e. Jesus
7. Know what considerations should be given in an outdoor setting with a group of youth in the following areas:
   a. Camping safety
   b. Fire safety
   c. Sanitation
   d. Swimming safety rules
   e. Rules for conduct
   f. Proper Sabbath observance
8. List at least six ways you can keep the out-of-doors beautiful for others to enjoy.
9. Know at least 10 qualities of a good youth leader.
Requirements

1. Have the Outdoor Leadership Honor.
2. Earn three honors from the Wilderness Master Award.
3. Have the First Aid and CPR Honors, which must be earned or retaken within two years of receiving the Advanced Outdoor Leadership Honor. In addition to these honors, know the prevention, symptoms of, and first aid treatment for the following:
   a. Hypothermia
   b. Venomous snake bite
   c. Heat and sun stroke
   d. Heat exhaustion
   e. Poisonous plant skin reactions
   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.
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.
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 or more, in your area. This plan should utilize at least 10 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.
8. Outline your philosophy for wilderness etiquette. Participate in one to three hours of a wilderness conservation project.
9. Teach at least one honor found in the Wilderness Master group.
10. Know at least four objectives for outdoor leadership in each of the following categories:
    a. Physical
    b. Social
    c. Personal
    d. Spiritual
11. Know the difference between juniors (10-12 years old) and teens (13-15 years old) in the following areas:
    a. Physical
    b. Emotional
    c. Mental
    d. Spiritual
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
Requirements

1. List 10 benefits of being physically fit.
2. Know how the following help to achieve a balance for your body:
   a. Exercise
   b. Proper eating
   c. Emotional stability
3. Define the following exercises:
   a. Isometric
   b. Isotonic
   c. Isokinetic
   d. Anaerobic
   e. Aerobic
4. Know the meaning of the principles involved in the following exercises:
   a. Warm up
   b. Aerobic exercises
   c. Cool down
   d. Calisthenics
5. Know how to determine your heart rate at rest and 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:
   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.

Pioneering

Requirements

1. Describe in writing, orally, or with pictures how the early pioneers met the following basic living needs:
   a. Housing and furnishings
   b. Clothing
   c. Food
   d. Cooking
   e. Warmth and light
   f. Tools and Handiwork
   g. Sanitation
   h. Transportation
2. Construct a piece of useful furniture by lashing. Learn the following lashings:
   a. Square
   b. Diagonal
   c. Sheer
   d. Continuous
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.
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 it:
   a. Flint and steel
   b. Friction
   c. Curved glass
   d. Compressed air
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 thick.
   f. Properly split wood that is at least eight-inches in diameter and one-foot long.
7. Do two of the following:
   a. Make a 10-foot rope from natural material or twine.
   b. Tie 10 knots useful to the pioneer and tell how they were used.
   c. Using rope and natural materials, make one device for moving heavy objects.
d. Construct an adequate and comfortable latrine.
8. Explain the need for proper sanitation relating to solid and human waste and the washing of body, clothes, and dishes.
9. Assist in the construction of a 10-foot long log or rope bridge using lashings.
10. Know four ways to keep the wilderness beautiful.
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.
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.

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**Power Boating**

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1975</td>
<td>North American Division</td>
</tr>
</tbody>
</table>

**Requirements**

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.
5. Know what safety equipment, signaling devices, and lights are required on Class A and Class 1 boats.
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:
   a. Abaft
   b. Abeam
   c. Aboard
   d. Aft or After
   e. Amidships
   f. Astern
   g. Beam
   h. Below
   i. Bend
   j. Bilge
   k. Bow
   l. Bulkhead
   m. Cleats
   n. Draft
   o. Freeboard
   p. Keel
   q. Leeward
   r. Port
   s. Starboard
   t. Stern
   u. Trim
   v. Windward
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.
**Requirements**

(Instructor Required)

1. Have a Rock Climbing and a Basic First Aid Honor.
2. Know and demonstrate the use of special rock climbing equipment such as: bongs, RURPS, knife blades, bolt equipment, hero loops, runners, etriets, and mechanical ascenders (jumars).
3. Demonstrate ability to use all free climbing moves and climb at 5.6 (F6) difficulty using an upper belay.
4. Demonstrate ability to belay a lead climber. Show that you can catch a falling lead climber during a practice fall.
5. Be able to place soundly and correctly in all types of cracks, all types of anchors (pitons, jam nuts, etc.). Discuss the ethics of anchor placement as to crack and rock defacing.
6. Demonstrate ability to lead 5.5 (F5) pitches using anchors correctly for leader protection.
7. Demonstrate ability to climb by direct aid (Class 6) to at least A2 difficulty.
8. Formulate a plan to evacuate an injured climber.
9. Participate in at least a two-pitch climb of 5.4 (F5) difficulty, leading one of the pitches.

**Requirements**

1. Have the Intermediate Swimming Honor.
2. With your counselor in stern and without assistance, row properly:
   a. A quarter of a mile (0.5 kilometer) on a straight course, stop, make a pivot turn, and return to starting point.
   b. Back water in a straight line 220 yards (200 meters). Make a turn under way, still backing water and return to the starting point. (Feather after each stroke. Pin row locks must not be used.)
3. Be able to demonstrate how to:
   a. Properly launch and land a rowboat from and to shore
   b. Safely assist a person to and from rowboat alongside a pier
   c. Tie a rowboat to a pier, using a clove hitch, two half hitches, and a bowline
4. Alone or with the assistance of one person who is a swimmer, turn a swamped rowboat right side up, get in, and with your hands or an oar, paddle it for 30 feet (10 meters). Tell why you should hang on or get in a swamped boat.
5. Shove off shore or pier, alone in rowboat, approach a swimmer and maneuver so that the swimmer can be safely towed ashore.
6. Name and identify five different types of boats that may be used with oars. Give uses of each.
7. Identify and describe two of the following types of row locks: tholepin, box rowlock, ring rowlock, open-top rowlock. Give one or more reasons why pintype row locks are not recommended.
8. Explain the advantages gained by feathering oars while rowing.
9. How would you handle a rowboat in a sudden storm or high wind?
10. How would you calculate the number of persons who may be safely carried in any given lifeboat under oars?
11. What lights are required on a rowboat at night, both with and without outboard motor?
12. How would you haul out and stowaway a rowboat that is not to be used during the winter, and how would you prepare it for use in the spring?
**Requirements**

*(Instructor Required)*

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. Do the following:
   a. Get a sailboat underway from dock, mooring, or beach.
   b. Know how to adjust your sails for the following situations:
      i. Beating the wind
      ii. Beam reach
      iii. Broad reach
      iv. Close reach
      v. Downwind
   c. Change tack by coming about and by jibing.
   d. Approach a dock mooring, or beach, stop and prepare the boat for being unattended.
6. Know how to tie and use the following knots in sailing:
   a. Square
   b. Bowline
   c. Clove hitch
   d. Figure-eight
   e. Two half-hitches
7. List several ways to care for your sailing equipment through the year.
8. Know the meaning of at least 20 terms used in sailing.
9. Be able to identify at least 15 parts of a sailboat.
10. Demonstrate the rescue of a person overboard.*
11. Demonstrate what to do when a sailboat capsizes.*

* These requirements should be done under the supervision of an adult. A rescue boat should be ready to give assistance.

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**Scuba Diving**

*(Instructor Required)*

Satisfactorily pass a standard SCUBA diving course taught by a certified SCUBA diving instructor.

NOTE: The following are prerequisites. Be at least 15 years old. Have the Skin Diving Honor. Be able to swim 50 feet under water. Be able to swim and float continuously for 30 minutes, covering a minimum of 330 yards in this time.
## Scuba Diving Advanced

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1967</td>
<td>General Conference</td>
</tr>
</tbody>
</table>

### Requirements

(Instructor Required)

1. Have the Scuba Diving Honor and log a minimum of 10 dives of 35 feet.
2. Satisfactorily pass an advanced SCUBA diving course taught by a certified SCUBA diving instructor.

## Skateboarding

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1986</td>
<td>South Pacific Division</td>
</tr>
</tbody>
</table>

### Requirements

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.
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.
   a. Tick Tack—from a standing start to a minimum of 10 meters on level ground
   b. Ollie—minimum of 10 centimeters
   c. Rail Slide—minimum of 1 meter
   d. Drop In—off a ramp 2-3 meters high
   e. Gurreo Slide
   f. 4-Wheel Look Up
   g. Pump on a ramp up to the Coping
   h. Acid Drop
   i. Kick Flip
   j. Ollie up a Gutter
   k. Front-Back side grind
   l. Carve
   m. Pump
Requirements

1. List and describe the principle characteristics, qualities, and sizing of the following cross-country skiing equipment:
   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.
3. What consideration should be made when selecting clothing to be worn while cross-country skiing? What features would you look for when selecting a pack for cross-country ski touring?
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.
   b. Take a 10-mile tour over varying terrain.
   c. During all tours carry necessary gear (safely) and wear proper clothing for conditions demonstrating ability to maintain proper body temperature, dryness, and condition.
Requirements

1. Have the Intermediate Swimming Honor.
2. Name three prerequisites for a person who wishes to engage in skin diving.
3. What equipment is essential for skin diving?
4. Discuss the effect of the following factors on skin diving:
   a. Types of beaches
   b. Surf and currents
   c. 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’s, and mask clearing.
8. Demonstrate a practical test in a pool and a qualifying dive in open water.

Requirements

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 10 softball playing positions.
4. Identify the following:
   a. Bat
   b. On deck circle
   c. Batter’s box
   d. Outfield
   e. Coaches’ box
   f. Pitcher’s mound
   g. Diamond Bags
   h. Pitching rubber
   i. Glove
   j. Right field
   k. Home base
   l. Left field
   m. Infield
   n. Softball
5. Define or explain the following game terms:
   a. Bases Loaded
   b. Home team
   c. Bunt
   d. Innings
   e. Fielder’s choice
   f. Lineup
   g. Fly Ball
   h. Popup
   i. Force Play
   j. Run
   k. Foul tip
   l. Score
   m. Grand Slam
   n. Strike zone
   o. Grounder
   p. The count
   q. Home run
   r. Walk
6. Explain the following official’s calls or rules:
   a. Double Play
   b. Ground rule double
   c. Error
7. Demonstrate the ability to read a basic scorecard that was scored in a game you participated in.

8. List and describe five responsibilities of an umpire.

9. Name five mental and physical attributes to be gained from slow-pitch softball.

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 three 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 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, or college. What alternatives are there to allow for continued activity in sports?

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**Requirements**

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.
6. Know the meaning of and the referee signals for the following:
   a. Off sides
   b. Holding
   c. Corner kick
   d. Indirect kick
   e. Direct kick
   f. Goal
7. Define the following terms:
   a. Advantage
   b. Booking
   c. Clearing
   d. Corner Arcs
   e. Cross
   f. Dribble
   g. Drop ball
   h. Drop kick
   i. Dummy
   j. Half volley
   k. Touch
   l. Volley
   m. Heading
   n. Juggling
   o. Marking
   p. Nutmeg
   q. Out-of-bounds
   r. Pass back
   s. Penalty area
   t. Slide tackle
   u. Tackle
   v. Throw
   w. Trapping
   x. Wall
8. Spend at least four hours helping less skilled or younger players improve their skills.
9. Play at least five games with family or friends. Show good sportsmanship during your practice and 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 allow for continued activity in sports?

**Springboard Diving**

<table>
<thead>
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<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
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<tbody>
<tr>
<td>2</td>
<td>1964</td>
<td>General Conference</td>
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</table>

**Requirements**

1. Demonstrate the following dives:
   a. Swan
   b. Front somersault (tuck)
   c. Half twist

2. Choose two optional dives from the following: half gainer (tuck, pike, or lay-out), cutaway, somersault front one and one-half, sailor dive, half twist, back dive, back knife, back jack.

3. State the safety depths of water under a one-meter board, a three-meter board, and a tower. How far should the board project over the pool? What boards are recommended?

In the test each candidate will announce the dive type and be judged accordingly.

Basis of Judging: Attention position for running dives; attention position on end or board for standing dives based on (a) approach, (b) spring, (c) way body is carried through the air, lay-out, tuck, or pike, (d) entry into water.
**Swimming**

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>1929</td>
<td>General Conference</td>
</tr>
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</table>

**Requirements**

Complete the Red Cross Swim level VI -- Skills Proficiency or the following:

1. Demonstrate approach and hurdle on the diving board.
2. Demonstrate jump tuck from diving board.
3. Swim front crawl stroke—100 yards.
4. Swim back crawl stroke—100 yards.
5. Swim breaststroke—25 yards.
7. Swim butterfly—10 yards.
9. Demonstrate breaststroke turn.
10. Demonstrate speed turn and pull-out for breaststroke.
11. Demonstrate speed turn for front crawl.
12. Demonstrate flip turn for front crawl.
13. Demonstrate pike surface dive.
14. Demonstrate tuck surface dive.
15. Tread water for three minutes (one minute with no hands).
16. Demonstrate throwing rescue.
17. Demonstrate rolling spinal injury victim to face up.

**Swimming Advanced**

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<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
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<tbody>
<tr>
<td>2</td>
<td>1961</td>
<td>General Conference</td>
</tr>
</tbody>
</table>

**Requirements**

Complete the Red Cross Swim level VII -- Advanced Skills or the following:

1. Springboard dive in tuck and pike positions in suitable depth water.
2. Swim continuously any combination of strokes for 500 yards.
3. Swim front crawl—200 yards.
5. Swim back crawl—100 yards.
7. Swim side stroke—50 yards.
8. Swim butterfly—25 yards
9. Demonstrate backstroke flip turn.
10. Do in-water rescues using equipment.
11. Discuss conditioning principles and demonstrate checking your heart rate.
12. Retrieve a diving brick (10-lb) from 8-10 feet of water.
13. Review water safety skills.
14. Tread water for five minutes.
15. Assist with a backboard rescue.
**Swimming Beginners**

**Level** 1  **Year** 1944  **Originating Institution** South Pacific Division

**Requirements**

Complete the Red Cross Swim level III—Stroke Readiness or the following:

1. Retrieve an object from the bottom in chest-deep water, unsupported and with eyes open.
2. Bob submerging head completely 15 times in chest-deep water.
3. Bob in deep water (slightly over head) to travel to safe area or side of pool.
4. Jump into deep water from side of pool.
5. Dive from side of pool in kneeling and compact position.
6. Prone glide with push-off for two body lengths.
7. Supine glide with push-off for two body lengths.
8. Swim front crawl—10 yards.
10. Demonstrate elementary backstroke kick—10 yards.
11. Reverse direction while swimming on front.
12. Reverse direction while swimming on back.
13. Discuss safety diving rules.
14. Tread water.
15. Jump into deep water with life jacket.
17. Demonstrate huddle position for one minute.
18. Demonstrate correct technique for opening the airway for rescue breathing.

Reference: Red Cross Water Safety Instructor’s Manual

**Swimming Beginners Advanced**

**Level** 1  **Year** 1963  **Originating Institution** General Conference

**Requirements**

Complete the Red Cross Swim level IV—Stroke Development or the following:

1. Demonstrate deep-water bobbing.
2. Demonstrate floating positions.
3. Demonstrate rotary breathing in chest-deep water.
4. Dive from the side of the pool from stride and standing positions.
5. Perform elementary backstroke—10 yards.
6. Demonstrate sculling on back for five yards or 15 seconds.
7. Swim front crawl for 25 yards with rotary breathing.
8. Swim back crawl for 25 yards.
9. Demonstrate breaststroke kick with or without kickboard for 10 yards.
10. Demonstrate scissors kick with or without kickboard for 10 yards.
11. Demonstrate change of direction at wall.
12. Tread water with any kick for two minutes.
13. Demonstrate rescue breathing.
14. Watch CPR demonstration.

Reference: Red Cross Water Safety Instructor’s Manual
Swimming Intermediate

<table>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>1929</td>
<td>General Conference</td>
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</tbody>
</table>

**Requirements**

Complete the Red Cross Swimming level V - Stroke Refinement or the following:

1. Demonstrate alternate breathing.
2. Demonstrate stride jump entry.
3. Demonstrate standing dive from board.
4. Demonstrate long shallow dive.
5. Swim breaststroke—10 yards.
7. Swim underwater—15 yards.
10. Swim front crawl—50 yards.
11. Swim back crawl—10 yards.
12. Demonstrate open turn on front.
13. Demonstrate open turn on back.
14. Discuss safe rules for diving from a board.
15. Discuss recognition of spinal injury.
17. Demonstrate feet-first surface dive.
18. Tread water for two minutes total with two different kicks.

Reference: Red Cross Water Safety Instructor’s Manual

Track and Field

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**Requirements**

1. Know the basic rules, safety considerations, and warm-up exercises for the six track and field events listed below.

**Run the 50-yard dash in the time for your sex and age as follows:**

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<thead>
<tr>
<th>Age</th>
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<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
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</thead>
<tbody>
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<td>8.2</td>
<td>8.0</td>
<td>7.8</td>
<td>7.5</td>
<td>7.1</td>
<td>6.9</td>
<td>6.7</td>
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<tr>
<td>Girls</td>
<td>8.5</td>
<td>8.4</td>
<td>8.2</td>
<td>8.1</td>
<td>8.0</td>
<td>8.1</td>
<td>8.3</td>
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</table>

2. In sprinting, which part of the foot should touch first during the stride? What are the proper arm and head positions?

3. Run the 600-yard run-walk in the time for your sex and age as follows:

<table>
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<tr>
<th>Age</th>
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<th>12</th>
<th>13</th>
<th>14</th>
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<tr>
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<td>2'49</td>
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<td>2'52</td>
<td>2'46</td>
<td>2'46</td>
<td>2'49</td>
</tr>
</tbody>
</table>

4. Answer the following questions about distance running:
   a. What are two Bible stories that mention distance runners?
   b. What are the proper clothes, including shoes, for distance running in your area?
   c. How long is the average track?
   d. How far is a marathon race?
   e. Which part of the foot should touch first during the stride?
   f. What are the proper arm and head positions while distance running?
   g. What is the proper way to breathe?
   h. How does cross-country running differ from running on a track?

5. Run one of the following events at least twice and record the best time:
   a. 50-yard dash with four hurdles
   b. 70-yard dash with six hurdles

6. Do the high jump with good form at least five times and record the highest jump.

7. Do a running broad jump three times and record the best length.

8. Run the following relays:
   a. Visual pass relay
   b. Blind pass relay
Requirements

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. Do the following:
   a. Climb a tree using any one of four common methods.
   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.)
5. Demonstrate how you would safely carry a bush knife and an axe up a tree.
6. Do the following:
   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.

Requirements

1. Give three biblical principles and two Spirit of Prophecy principles to support exercise.
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 pre-competition, and in-competition food intake.
3. Do the following:
   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 and 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.
**Triathlon Advanced**

**Requirements**

1. Have the Triathlon Honor.
2. Developing a training schedule for yourself.
3. Keep a training log for two months.
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.

**Tumbling and Balancing**

**Requirements**

(Instructor Required)

1. List safety precautions each performer and spotter should follow.
2. Describe the basic positions:
   a. Tuck
   b. Pike
   c. Lay-out
   d. Hyper-extension (arch)
   e. Squat
   f. Straddle
   g. 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. One handed 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. High planche
   g. Low knee support
   h. Thigh balance
   i. Front angel straddling waist
Tumbling and Balancing Advanced

Level 2 1976 General Conference

Requirements

(Instructor Required)
1. Have the Tumbling and Balancing Honor.
2. Perform the following individual tumbling stunts with form and poise:
   a. Kip
   b. 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. Tinselca
   f. Front walkover
   g. Back walkover
   h. Aerial walkover
   i. Borani
   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 in headstand
   c. Pirouette
   d. Straight arm 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 leg press to handstand
5. Perform any three of the following partner stunts and balances with form and poise: (Male should be base on stunts, with girl as top person).
   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 anyone of the following combination stunts with form and poise:
   a. Roundoff-back handspring-backward somersault
   b. Roundoff-two back handsprings
   c. Borani-back handspring
   d. Roundoff-backward somersault-back hand spring
   e. Tinselca-front somersault
   f. Backward somersault-back hand spring
**Unicycling**

**Requirements**

1. Know the name and purpose of the various parts of a unicycle.
2. Define these basic unicycle terms:
   a. free mount
   b. idle
   c. UPD
3. Know what safety gear one should use while unicycling and why one should use it.
4. Name five different types of unicycles and explain what makes them unique.
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.

**Wakeboarding**

**Requirements**

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.
Requirements

1. Prerequisite: 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. Disk ski
   e. Hydroslide

*NOTE: All Skiers in AY-sponsored water skiing shall wear life jackets.

Requirements

1. Have the Water Skiing Honor.
2. Take off in deep water on slalom ski, and ski successfully.
3. Cross both wakes on a slalom ski.
4. Make a full 360-degree turn around on one of the following:
   a. Hydroslide
   b. Trick ski
   c. Disk ski
**Wilderness Leadership**

**Level** 2  **Year** 1976  **Originating Institution** General Conference

**Requirements**

(Instructor Required)

1. Have the following Honors:
   a. Hiking
   b. Orienteering
   c. Camping Skills I-IV
   d. First Aid
   e. Fire Building and Camp Cookery

2. Know and practice the principles of health, safety, and rules of conduct to be used when in the wilderness with a youth group.

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 wilderness. Assist in planning and participate as a leader in a search and rescue operation involving a hidden “injured” person.

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

6. Understand and demonstrate wilderness and camping etiquette regarding the preservation of the outdoors.

7. Identify in the wild, prepare, and eat 10 varieties of wild plants.

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

9. Lead a group in a weekend wilderness camping experience, applying the principles and skills learned in this honor.

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**Wilderness Leadership Advanced**

**Level** 3  **Year** 1976  **Originating Institution** General Conference

**Requirements**

1. Have the Wilderness Leadership Honor.

2. Have the following honors:
   a. Edible Wild Plants
   b. Wilderness Living
   c. Outdoor Leadership

3. Know and practice the principles of camouflage and tracking.

4. What physical and mental preparations are necessary before a wilderness experience?

5. Demonstrate some skills necessary for wilderness leadership in two of the following areas not completed for the Wilderness Leadership Honor.
   a. Tropical
   b. Desert
   c. Swamp
   d. Mountain (rocks, ice, high altitude)
   e. Temperate forest
   f. Plain and tundra

6. Demonstrate the construction and operation of two types of snares or traps.

7. Know the points of consideration in the following types of travel:
   a. Mountain
   b. Water
   c. Glacial
   d. Snow

8. Understand the principles of developing a faith in divine leadership as outlined in Psalms 91.

9. Understand what steps should be taken for the survival of the wilderness.

10. Assist in instructing one honor from requirement #1 of the Wilderness Leadership Honor.

11. Build a shelter from non-living but natural materials (such as a debris hut).

12. Plan and participate in a week’s wilderness camping experience, applying the principles and skills learned in this honor.
**Wilderness Living**

**Requirements**

1. Go on at least two weekend campouts during which you learn the skills called for in this honor.
2. Tell five things to do if lost in the wilderness. Know three methods of determining directions without a compass.
3. Demonstrate three ways to purify drinking water.
4. Know three ways to collect drinking water in the wilderness and demonstrate two of these methods.
5. Demonstrate two methods of judging the height of a tree and the width of a stream.
6. Identify four wild animal or bird tracks.
7. Using a compass, follow a course for more than 100 yards with three different headings and less than 5% error.
8. Identify in the wild, prepare, and eat 10 varieties of wild plants.
9. Have a personal survival kit of 15 items and know how to use each item.
10. Explain the necessity in wilderness living of adequate sleep, proper diet, personal hygiene, and 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:
   a. Hypothermia
   b. Venomous snake bite
   c. Heat and sunstroke
   d. Heat exhaustion
   e. Poison ivy and poison oak
   f. Open wound infection
   g. Altitude sickness
   h. Dehydration
12. Demonstrate two ways to signal for help.
13. Demonstrate the principles of stalking and concealment.
14. Explain how to prepare and provide shelter on the following:
   a. Snow slopes
   b. Rocky areas
   c. Swamps and marshes
   d. 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.
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:
   a. Bowline
   b. Bowline on a bight
   c. Clove hitch
   d. Double fisherman’s
   e. Figure eight
   f. Prusik
   g. Taut-line hitch
   h. Two half hitches
   i. Square
Requirements

1. Have the Intermediate Swimming Honor.
2. Learn the meaning of the following terms:
   a. Across the wind
   b. Backhand
   c. Basic starting position
   d. Beginner’s checklist
   e. Board control
   f. Centerboard
   g. Center line
   h. Center plane
   i. Clew
   j. Forward
   k. Forward hand
   l. In
   m. Jibe
   n. Mast position
   o. Out
   p. Points of the clock
   q. Sail trim
   r. Self rescue
   s. Scissor technique
   t. Tack
   u. Uphaul
   v. 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.
7. Define and demonstrate the four steps to jibing.
8. List the seven starting sequence steps used to start a sailboard moving through the water.
9. Answer the following questions about safety:
   a. What safety equipment should be worn while windsurfing?
   b. Why is it important to know the local weather forecast before going out on the water?
   c. When first learning to windsurf, why is it important to be in an enclosed or protected area?
   d. 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.
Requirements

1. Have the Campcraft Honor.
2. Make up a complete list of necessary camping equipment for winter conditions, such as possible subzero (-180 °C) temperatures, storms, or snow.
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.
4. List and explain the characteristics of a good winter campsite.
5. Describe, or show where possible, the preparation of a level tent site in snow. Pitch a tent in winter conditions.
6. Prepare a balanced three-day menu to be used in your winter camping experience.
7. Know how to get water from snow.
8. Know five safety rules of winter camping.
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.
11. Spend a total of six days and nights in cold weather camping.
   a. All nights should have temperature lows below 50° F (10° C).
   b. Two nights should have temperature lows below freezing.
   c. All nights should be spent in tents, tarps, or the open.
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<th>Creator</th>
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<td>Video</td>
<td>unknown</td>
<td>SPD</td>
<td>446</td>
</tr>
<tr>
<td>Welding</td>
<td>1978</td>
<td>GC</td>
<td>447</td>
</tr>
<tr>
<td>Woodworking</td>
<td>1934</td>
<td>GC</td>
<td>448</td>
</tr>
</tbody>
</table>
Requirements

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. Show transactions necessary to close income and expense accounts at year end.

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.

3. Be able to write an income statement from a trial balance.

4. Be able to reconcile bank balance to book balance in checking accounts, including deposit in transit, service charge, returned HSF, interest on account, and checks in transit.
Requirements

1. Demonstrate ability to start an automobile motor. Explain why it is necessary to periodically check on oil, water, fuel, air in tires, brake action, and electric (battery) current.
2. Remove and replace tire (or wheel) properly and demonstrate how to mend a puncture.
3. Explain the principles of four- and two-cycle engines and the difference between gasoline and diesel engines. Explain the major differences between carburetor fuel systems and fuel-injection systems.
4. Describe the construction of a typical gasoline engine and explain briefly the function of these units:
   a. Engine: crankshaft, connecting rods, pistons, camshaft, valves, oil pump, carburetor, fuel injectors, ignition distributor, fuel distributor, electrical system including alternator, battery, and regulator
   b. Difference between standard transmission and automatic transmission and how the engine torque is transmitted to both kinds of transmissions; the purpose of overdrive
   c. Difference between rear wheel drive and front wheel drive
   d. Difference between drum brakes and disk brakes, standard brakes and power brakes, and parking brake
5. Perform typical automotive maintenance as listed below:
   a. Check engine and transmission oil level.
   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.
6. How often should the engine oil, transmission oil, and cooling fluid be changed?
7. Give some pointers on proper care of the vehicle and its finish, both interior and exterior.

Requirements

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, points, and condenser (if applicable), adjusting the timing, and setting the proper ignition dwell (if applicable).
Barbering/Hairstyling

**Requirements**

1. Spend a minimum of five hours observing a licensed master barber/hairstylist while at work.
2. Name three essentials in the care of hair.
3. Demonstrate the ability to hone and strop a razor properly.
4. Demonstrate the ability to give a shampoo correctly.
5. Be able to explain and demonstrate at least two methods of cutting hair.
6. Explain and demonstrate the purpose of at least two different kinds of combs used in cutting hair.
7. Explain and demonstrate the purpose of two different kinds of scissors.
8. Explain and demonstrate at least two purposes for the use of a clipper.
9. Write 500 words on what you learned during your apprenticeship at the barber shop.

Bible Evangelism

**Requirements**

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.
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.
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.
6. Write a report of an interview with your pastor using 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?
   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 Voice of Junior Youth series of meetings.
   b. Utilizing one of the several Bible Study programs, give a series of Bible Studies to another person in preparation for baptism.
   c. Make four hospital visits, presenting a devotional thought and prayer at each one.
   d. Give a sermon of at least 20 minutes in length.
   e. Give two evening and two morning devotionals for a campout.
   f. Give devotional worships for five days at a school.
   g. Attend 75% of the meetings of an evangelistic series. Obtain the following information each night:
      i. How the attendance compared to the topics presented
      ii. How the attendance compared to the night of the week

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 Spirit of Prophecy study, learn how Jesus treated crowds of people in ministering to them.
9. Show that you have a personal daily devotional life for at least six months.

**Requirements**

1. Be able to identify the following terms:
   a. Foredge
   b. Gutter
   c. Endsheet
   d. Flysheet
e. Signatureding
f. Mull
g. Backbone
h. Head
i. Foot
j. Deckle edge
k. Guarding sheets
l. Headban
m. Casing-in
n. Buchram

2. Describe the difference between the following binding methods:
   a. Perfect binding
   b. Hard bound
c. Single signature
d. Spiral (metal and plastic)
e. 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:
   a. Bone folder
   b. Kick press
c. Folding needle
d. Awls
e. Sewing frame
f. Squared card
g. Punch

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:
   a. Hot melt animal glue
   b. Casing-in paste
c. Resin glues
7. Know and list the five principle stages of hand binding:
   a. Preparing the signatures
   b. Sewing up the signatures
   c. Gluing up the back
   d. Attaching the boards (covers)
   e. Finishing

<table>
<thead>
<tr>
<th>Requirements</th>
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</thead>
<tbody>
<tr>
<td>Bookkeeping</td>
</tr>
<tr>
<td><strong>Level</strong></td>
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<tr>
<td>2</td>
</tr>
</tbody>
</table>

1. Make out a household budget and keep an accurate cash and expense record for six months (junior youth can do this in cooperation with parents), or boys and girls living on a farm may keep an accurate expense and income record in connection with crops, dairy products, or livestock.

2. Keep a personal cash record and budget for at least six months.

3. Demonstrate ability to write and endorse checks, fill out receipts, make bills and monthly statements, report expenses, keep auto mileage and expense records, and figure simple interest. (Inexpensive manuals of general business methods are obtainable everywhere.)

NOTE - Arrangements with a businessman may be made for a demonstration of a bookkeeping and accounting system. One may also accompany an instructor on field trips, which may include visits to banks, industrial firms, and factories. If you have opportunity to do one of these things, write a theme describing the visit and points observed.
**Carpentry**

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1929</td>
<td>General Conference</td>
</tr>
</tbody>
</table>

**Requirements**

1. Demonstrate the proper way to drive, set, and clinch a nail, and draw a spike with a claw hammer.
2. Demonstrate how to use the following tools:
   a. Miter and miter box
   b. Circular saw (cut a straight line)
   c. Hand Saw (cut a straight line)
   d. Block plane
   e. Framing Square
   f. Nail set
   g. Wood chisel
   h. Level
   i. Plumb bob
3. Layout a rectangle by the use of 6,8,10, and prove it by its diagonal.
4. Demonstrate how to lay shingles.
5. Describe the use of and distinguish between six different types of nails.
6. Build one of the following no smaller than 4’ x 4’:
   a. Tool shed
   b. Dog house
   c. Play room
7. When building the above project, use these features:
   a. Floor joist
   b. Shoe plate
   c. Double plate
   d. Felt roof
   e. Sub floor
   f. Top plate
   g. Conventional roof
   h. Shingles
   i. Window with weight-bearing header
   j. Door with weight-bearing header
   k. Fascia on eaves
   l. Siding
   m. Use plumb cat at top and seat out on bottom

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**Christian Salesmanship**

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
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<tbody>
<tr>
<td>2</td>
<td>2001</td>
<td>General Conference</td>
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</tbody>
</table>

**Requirements**

1. Explain the responsibilities of a Christian salesman as related to how he treats his 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 salesman?
   a. Researching the market to see how an item or service will sell
   b. Proper training and knowledge about the item or service to be sold
   c. A visit to the plant or home office that produces the item or service
   d. Follow-up visits with first-time customers
5. Using actual or hypothetical education and experience, write a resume that 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 salesman?
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.
9. Interview a Christian salesman and a Christian retailer who buys from salesmen with regard to the following:
   **For the Salesman**
   a. Is a lot of traveling involved in the profession of selling?
   b. What other ways does the job of a salesman affect family life?
   c. How are salesmen paid?
   d. What opportunities for advancement are there in salesmanship?
   e. What does the future hold for a career in sales?
   f. How do you get customers?
   g. What do you like the most about your job? The least?
   h. Does being a Christian make a difference in the way you do your job?
   **For the Retailer**
   a. What type of education and training is helpful for a retail sales career?
   b. What advancement opportunities are available in retail sales?
   c. When you place an order, which do you rely on most, service of the salesman, price, market characteristics, or the quality of the product?
   d. 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?
   e. What do you like the most about your job? The least?
### Communications

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1953</td>
<td>General Conference</td>
</tr>
</tbody>
</table>

**Requirements**

1. Do one of the following:
   a. Send and receive by International Morse Code at the rate of three words per minute using a key, flashlight, whistle, mirror, or buzzer. (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.)

### Communications Advanced

<table>
<thead>
<tr>
<th>Level</th>
<th>Year</th>
<th>Originating Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1956</td>
<td>General Conference</td>
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</tbody>
</table>

**Requirements**

1. 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 flag. (Five-letter words, minimum of 20 words)
Requirements

1. Write 200 words or give a three-minute oral report about the history of computers.
2. Define the following terms:
   a. Hardware
   b. Software
   c. Floppy Disk
   d. Hard Drive
   e. Mainframe
   f. Desktop Computer
   g. Laptop Computer
   h. ROM
   i. RAM
   j. Alphanumeric
   k. CPU
   l. Circuit Board
   m. Cursor
   n. Port
   o. Program
   p. DOS or OS
   q. CD Rom
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:
   a. Keyboard
   b. Monitor
   c. Printer
   d. System Unit or Central Processing Unit
   e. Disk Drive
5. Know the difference between and the uses for the following printers:
   a. Letter Quality
   b. Dot Matrix
   c. Laser
   d. Plotter
   e. Ink Jet
   f. Thermal
6. Show or describe how to protect a computer system from dust, dirt, static electricity, power surges and outages, or other potentially dangerous factors that could hamper or hurt a computer system.
7. Name at least four input devices for computers.
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.
Requirements

1. Have the Computer Honor.
2. What is the definition of the following terms:
   a. Baud rate
   b. Dip switch
   c. Database
   d. Word processing
   e. Nanosecond
   f. DOS
   g. Internal modem
   h. External modem
   i. Peripheral
   j. Default disk drive
   k. A “K” of memory
   l. Screen saver
   m. Byte
   n. Scanner
   o. E-mail
   p. Font
3. What is the work of the following people associated with computers:
   a. Operator
   b. Data-entry
   c. Programmer
   d. Systems Analyst
   e. Consultant
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?
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, and 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 disk on the computer screen.
   c. Prepare a diskette for use in a 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 disk or hard drive.
   f. Rename a file on the disk to a different name.
   g. Copy the entire contents of one diskette to another in a perfect “mirror image.”
   h. Show that you have successfully completed the previous by having the computer “compare” the two diskettes 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 to find out why they were developed and for what type of application they are used. Write a 200-word report on your findings or give a three-minute oral report.
10. Show proficiency in the use and operation of three of the following:
   a. A Word Processing program by doing the following: Write 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:
      i. Right justify
      ii. Center title
      iii. Change margins and page length
      iv. Move paragraph
      v. Save
   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 that 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:
      i. Perform invoice entry and bill printing of accounts receivable.
      ii. Perform invoicing and check printing of accounts payable.
      iii. 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 his 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:
   a. What type of computers are used?
   b. For what applications are the computers used in the business?
   c. Do the computers communicate with each other and how?
   d. How does the business service, maintain, change, and upgrade their hardware and software?
   e. What percentage or amount is budgeted for the computer purchases and maintenance?
   f. What kind of backup procedures and other precautionary measures are used?
g. What kind of education is needed and/or useful for a career with computers?

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<th>Requirements</th>
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<td>(Instructor Required)</td>
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<tr>
<td>1. Be able to explain and illustrate an experiment by which the laws of electrical attraction and repulsion are shown.</td>
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<tr>
<td>2. Explain the difference between a direct and an alternating current, and demonstrate the uses to which each is adapted. Give a method of determining which kind flows in a given circuit.</td>
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<tr>
<td>3. Make a simple electromagnet or connect a bell or light with a battery using an in-line switch.</td>
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<tr>
<td>4. Make and run a simple electric motor from a kit or take apart an electric motor and identify the parts and explain how it works.</td>
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<tr>
<td>5. Be able to make a simple battery cell.</td>
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<tr>
<td>6. Demonstrate ability to replace fuses or reset breakers, and show the proper way to splice wires.</td>
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<tr>
<td>7. Show how to rescue a person in contact with a live electric wire, and have knowledge of the method of reviving a person insensible from shock.</td>
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<tr>
<td>8. Make a diagram of a lighting system of an automobile.</td>
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<tr>
<td>9. Make a diagram properly showing the lights, switches, and convenience outlets controlled by each fuse or breaker in a house.</td>
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<tr>
<td>10. Read an electric meter correctly, and compute a residence bill at the rate charged in your community.</td>
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</tbody>
</table>
**House Painting Exterior**

**Requirements**

1. Know and explain the difference in composition of exterior paints versus interior paints.
2. Tell how to prepare a house for outside painting by doing such items as preparation for new and old work, paint removal, priming, puttying, finishing, etc.
3. List 10 proper color schemes for house painting (if possible, use color charts from a paint shop in making the display).
4. Tell how to prepare and paint metal properly.
5. Name at least three paint thinners and give their specific uses.
6. Show ability to properly use brush, roller, or 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).

**House Painting Interior**

**Requirements**

1. Tell how to prepare new work for varnishing.
2. Explain and demonstrate how to prepare and finish woodwork in the following ways:
   a. Staining
   b. Varnishing
   c. Painting
4. When should a paint spray gun be used?
5. Describe the proper methods for cleaning and care of paint and varnish brushes.
6. Show how to use putty properly.
7. Explain the difference between exterior and interior paints.
8. Make a list of 10 proper color schemes for interior house painting using color swatches from a paint shop. Why are bright/loud colors not preferred?
9. Explain the composition of and when to use the following paints:
   a. Glossy
   b. Flat
   c. Water
10. Paint the woodwork of at least four rooms.
11. Paint at least one room, showing skill in keeping paint where it belongs.
Requirements

1. Describe the elements of a good lead paragraph and the use and importance of headlines.
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.
3. What are the essentials for writing a good story?
4. Know the difference between passive and active verbs, and give three comparative examples.
5. Write to a publisher, requesting story-writing guidelines.*
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
7. Submit a story or article to a Seventh-day Adventist publication.*
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: Good foundation work in grammar is a fundamental must for this honor.

Story-writing guidelines are available free from the Review and Herald Publishing Assn., 55 West Oak Ridge Drive, Hagerstown, Maryland 21740. Phone: 301791-7000. Stories may also be submitted to them for consideration.

Requirements

1. Name at least six materials commonly used by masons in the erection of walls or buildings.
2. Demonstrate ability to use properly a plumb line, spirit level, trowel, speed leg, 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 4-feet high and 10-feet 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.

References: Working with a master mason will help tremendously in fulfilling the requirements of this honor.
**Requirements**

1. Show proper wall preparation for paper hanging.
2. Explain how to hang wallpaper. Describe at least two methods. Use one method to paper at least two walls of a home, such as in bedrooms, living rooms, etc. Show proper pattern matching.
3. State how to properly choose designs and combinations of wallpaper for the following:
   a. Living room
   b. Dining room
   c. Bedroom
   d. Bathroom
   e. Kitchen
   f. Children’s play room
   g. Storage room
   h. Church

**Requirements**

1. Make a diagram showing the plumbing system of a four-room house that includes fixtures for the kitchen, bathroom, and laundry.
2. Submit two pieces of iron pipe that you have threaded and connected with proper fitting.
3. Submit a repaired plastic (PVC), iron, or copper pipe, and tell how to repair all three.
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.
Requirements

1. Know the principles of how the following printing devices work:
   a. Web press machine
   b. Offset press
   c. Photocopy
   d. Letterpress

2. Know what the reference of pound means in determining the weight of paper. Know what the following paper types are used for:
   a. Offset
   b. Bond
   c. Cover weight
   d. Index

3. Tour a print shop or newspaper company. 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.

6. Know the meaning of the following terms:
   a. Backing up
   b. Blanket
   c. Bleed
   d. Boldface
   e. Camera ready art
   f. Caption
   g. Clipart
   h. Collate
   i. Color separations
   j. Contact print
   k. Debossing
   l. Embossing
   m. Engraving
   n. Font
   o. Ghosting
   p. Intaglio
   q. Job
   r. Matte
   s. Negative
   t. Paste-up
   u. Register
   v. Set-off
   w. Show through
   x. Thermography
   y. Water mark
   z. Work and turn

7. Know the difference between half-tones, duo-tones, and the four-color process.

8. Interview a printer to find out the following:
   a. What education is needed to get into the printing field?
   b. What advancement opportunities are available in printing?
   c. What does the future hold for the printing industry?
   d. What do you do in your business to keep customers happy?
   e. What career opportunities related to printing are available?
Requirements

Pass a test and receive your license for the Novice Class Amateur Radio License or Technician Class A.R.L. or complete the following 14 requirements.

1. Receive and send correctly no less than five words a minute for five minutes, using code (25 five-letter words, 25 consecutive letters must be accurate).
2. Explain at least eight regulations that govern radio operators holding a novice license.
3. What instrument is used to measure electrical energy? electrical current? electrical potential? electric power?
4. What are the proper abbreviations for: Greenwich Mean Time, megacycles, continuous wave, amplitude modulation, frequency modulation, kilocycles, Eastern Standard Time?
5. State Ohm’s Law and give algebraic formula.
7. What is the relationship between a fundamental frequency and its second, third, or fourth harmonic.
8. May any transmission be made without identification of the station?
9. At what intervals should an amateur station transmit its call sign?
10. What is the purpose of: a filter choke? An audio frequency choke? A radio frequency choke?
12. Explain parasitic oscillation (feed back).
13. How is the power input to the tubes supplying energy to the antenna of an amateur transmitter determined?
14. Explain the term “solid state.”
15. Why are a rectifier and filter required in the plate power supply system when operated from alternating current? What are the regulations in your area that govern C.B. operators?

NOTE: The Novice License is good for one year only and cannot be renewed. The holder of a Novice License who is not prepared by the end of the year to take the “sending and receiving” test of the General Class (or conditional) License (13 words per minute) may secure the Technician License that is granted when one passes successfully the written or technical portion of the General Class License examination. There is no increase in expedition of receiving or sending required. The Technician License is good for five years.
Radio Electronics

Level 2  Year 1938  Originating Institution General Conference

Requirements

1. Explain with diagrams, where helpful, the input devices for radio, such as antenna, ground; or for electronic devices, such as phono pickup, FM tuner, photocell, microphone.
2. Construct a suitable radio receiving antenna that would work properly in connection with a broadcast or short wave receiver, or construct a phono pickup, photocell, or microphone.
3. Explain the use and operation of various important components of a simple receiving set (coils, variable capacitors, fixed capacitors, resistors, transistors or tubes, diodes, and transformers).
4. Identify the value of resistors by the color code.
5. Know Ohm’s Law and how it is applied.
6. Construct a simple radio (either tube or transistor) including power supply, which will satisfactorily receive stations 100 miles away, or construct a high-fidelity amplifier, photocell guard or counter, control device.
7. Draw from memory, using proper symbols, the complete wiring diagram of the device constructed under #4.
8. Show proficiency in trouble shooting on simple receivers or electronic devices of three to six tubes or transistors, being able to follow routine tests, such as removing tubes or transistors and testing them, replacing them correctly, testing for sensitivity, shorted capacitors, and more outstanding common ailments.

Shoe Repair

Level 3  Year 1928  Originating Institution General Conference

Requirements

1. Name at least five essential parts of a shoe and explain their uses.
2. What is the difference between hand-turned soles, Goodyear welt soles, and 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. Make a paper pattern for a half sole and use it in cutting leather or rubber composition half soles for a pair of shoes.
5. Satisfactorily half-sole a pair of shoes by nailing the soles on. Make sure the nails are of the proper length.
6. Fit and attach a pair of rubber heels.
7. What kind of leather should be used in repairing the soles of shoes? How is such leather generally tanned?
8. Specify at least three factors that should be taken into account in the selection of shoes.
9. Write or tell the examiners the proper methods of cleaning and caring for shoes.
Requirements

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 a shorthand dictionary available (usually provided by course publishers).

References: There are numerous different shorthand courses on the market today such as the Anniversary, Simplified, Diamond Jubilee, Series 90, Century 21, etc.

Requirements

1. Describe the design and operation of the 2-cycle engine and the 4-cycle engine.
2. Name the parts of the 2-cycle engine and tell what each part does.
3. List the fuel types used in small engines and explain their use.
4. Show care and safety in fuel handling and storage.
5. Describe two types of ignition systems.
6. List two acceptable cleaning fluids for small engines. (Why is gasoline an improper cleaning fluid?)
7. List and tell how three basic lubrication systems operate.
8. List in order a general trouble-shooting procedure.
9. Demonstrate that you can overhaul, clean, inspect, reassemble, and properly tune any small engine.
10. Demonstrate that you know how to test and clean spark plugs and glow plugs.
**Requirements**

1. What education is needed for teaching the following:
   a. Elementary school
   b. Secondary school
   c. College

2. What is recertification?

3. Interview at least two teachers with the following questions:
   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?

4. Explore the Bible and the book Education to learn what teaching methods Jesus used.
   a. Present a three-minute oral report on what you learned.

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.

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 department of Vacation Bible School for each day.
   c. Teach two honors.
   d. Assist in teaching requirements for one of the Pathfinder classes, culminating in investiture.
   e. Teach at least one year in an elementary or secondary school or in a college.

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**Requirements**

1. Show how to clean, type properly, and change ribbon on a typewriter.
2. Know the difference between a fabric and a carbon ribbon.
3. Identify the following parts of the typewriter and know their function:
   a. Frame
   b. Keyboard
   c. Space bar
   d. Backspace key
   e. Shift keys and lock
   f. Platen
   g. Impression control
   h. Margin stops
   i. Paper release
   j. Leverline-space lever
   k. Line-finder control
   l. Paper centering scale
   m. Cardholder
   n. Paper bail lever
   o. Pitch selection lever
   p. 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 40 words a minute (minimum) on new material for five minutes with no more than five errors.
Requirements

1. Be familiar with the type of videos available. Know the difference between VHS-C and Video 8 tapes.
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, then 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
7. Demonstrate how to set up and use a tripod.
8. Demonstrate how to edit video using a VCR by editing segment taken for requirement #6.
9. Demonstrate your ability to use titles and design your own by hand or computer.
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.

Welding

Requirements

(Instructor Required)

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 same.
4. As per your instructor’s directions, weld two mild steel test plates (118” x 1” 8”)(3 x 25 x 200mm) horizontal, vertical and overhead positions.
5. Use a cutting torch and demonstrate your skill by making one 12” (30cm) straight-line cut, one circle cut of at least 3” (7.5cm) in diameter and one 3” (7.5cm) star cut. The cuts are to be made on mild steel plate at least 114” (6mm) thick.
6. Demonstrate your ability to braze a cast-iron object with at least 114” (6mm) double bevel butt weld 2” (5cm) 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 tank valves never be oiled?
8. Explain the difference between oxyacetylene and electric arc welding.
9. Demonstrate ability to select from an electrode guide the proper amperage and electrode for various types and thicknesses of metal.
10. Demonstrate your ability to weld flat, vertical, horizontal and overhead an 1/8” x 2” x 8” (3 x 25 x 200 mm) mild steel test plates.

*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 strain of pull or weight is an invitation to disaster.

**This requirement demonstrates one’s skill in working in darkness, such as in an emergency. All acetylene connection threads are left handed and all oxygen connection threads are right handed.
Woodworking

Level | Year | Originating Institution
--- | --- | ---
2 | 1934 | General Conference

Requirements

1. Tell how the following processes are related to lumber and how each process is done:
   a. Growing trees
   b. Harvesting of trees
   c. Milling
   d. Curing
   e. Seasoning
   f. Grading

2. Collect and label five different kinds of wood used in woodworking. Tell the advantages and disadvantages of each.

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:
   a. Butt
   b. Rabbet
   c. Dado and groove
   d. Lap
   e. Miter
   f. Mortise and tenon
   g. Dovetail
   h. Dowel

5. Know the characteristics of and how to work with the following:
   a. Plywood
   b. Hardboard
   c. Particleboard

6. Know at least two ways to finish the edges of plywood.

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.

9. Know and use the proper steps in finishing a wood project with either natural finish or a stain.

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.
Aquatic Master Award

Requirements

Earn seven of the following honors:

- Canoeing
- Intermediate Swimming
- Navigation
- Power Boating
- Rowing
- Sailing
- Scuba Diving and/or Advanced Skin Diving
- Springboard Diving
- Swimming and/or Advanced Water Safety
- Water Skiing
- Windsurfing
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| Earn seven Arts & Crafts honors. | Earn seven of the following honors: 
- Ecology and/or Advanced 
- Environmental Conservation 
- Fossils 
- Geology and/or Advanced 
- Rocks & Minerals and/or Advanced 
- Sand |
**Farming Master Award**

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**Requirements**

Earn seven Outdoor Industries honors.

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**Health Master Award**

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**Requirements**

Earn seven of the following honors:

- Basic Rescue
- Blood & the Body’s Defenses
- Bones Muscles and Movement
- Brain and Behavior
- CPR
- Chemistry
- Childcare/Babysitting
- Digestion
- First Aid Basic
- First Aid Standard and/or Advanced
- Health & Healing
- Heart & Circulation
- Heredity
- Home Nursing
- Optics
- Physics
- Red Alert
**Homemaking Master Award**

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**Requirements**

Earn seven of the following honors:

- Baking
- Cooking and/or Advanced
- Dressmaking
- Food - Canning
- Food Freezing
- Housekeeping
- Laundering
- Nutrition
- Tailoring

**Naturalist Master Award**

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**Requirements**

Earn six of the following honors:

- Amphibians
- Birds and/or Advanced
- Ferns
- Fungi
- Insects
- Mammals
- Moths and Butterflies
- Shrubs
- Stars
- Trees
- Weather

And one of the following:

- Bird Pets
- Cats
- Dogs
- Fishes
- Poultry
- Small Mammal Pets
**Recreation Master Award**

**Level** 1986  
**Year**  
**Originating Institution** General Conference

**Requirements**

Earn seven of the following honors:

- Backpacking
- Basketball
- Cycling
- Drilling and Marching
- Hiking
- Knot Tying
- Orienteering
- Outdoor Leadership
- Physical Fitness
- Softball
- Soccer
- Track and Field
- Tumbling and Balancing
- Volleyball

---

**Sportsman Master Award**

**Level** 1976  
**Year**  
**Originating Institution** General Conference

**Requirements**

Earn seven of the following honors:

- Archery
- Basketball
- Caving
- Cross Country Skiing
- Cycling
- Downhill Skiing
- Horsemanship
- Physical Fitness
- Rock Climbing
- Soccer
- Track and Field
- Tumbling and Balancing
### Technician Master Award

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**Requirements**

Earn seven Vocational honors.

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### Wilderness Master Award

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**Requirements**

Earn seven of the following honors:

- Backpacking
- Campcraft
- Camping Skills IV
- Edible Wild Plants
- Fire Building & Camp Cookery
- Hiking
- Knot Tying
- Orienteering
- Outdoor Leadership
- Pioneering
- Wilderness Leadership
- Wilderness Living
- Winter Camping
Witnessing Master Award

Requirements
Earn seven Outreach Ministries honors.

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