

**Merit Badge  
Reference  
for Camp**

# Archery Merit Badge

Revised January, 2019

## Requirements for the Archery merit badge:

1. Do the following:
  - a. State and explain the Range Safety Rules:
    1. Three safety rules when on the shooting line
    2. Three safety rules when retrieving arrows
    3. The four whistle commands used on a range and their related verbal commands
  - b. State and explain the general safety rules for archery. Demonstrate how to safely carry arrows in your hands.
  - c. Tell about your local and state laws for owning and using archery equipment.
2. Do the following:
  - a. Name and point out the parts of an arrow.
  - b. Describe three or more different types of arrows.
  - c. Name the four principle materials for making arrow shafts.
  - d. Do ONE of the following:
    1. Make a complete arrow from a bare shaft using appropriate equipment available to you.  
OR
    2. To demonstrate arrow repair, inspect the shafts and prepare and replace at least three vanes, one point, and one nock. You may use as many arrows as necessary to accomplish this. The repairs can be done on wood, fiberglass, or aluminum arrows.
  - e. Explain how to properly care for and store arrows.
3. Do the following:
  - a. Explain the proper use, care, and storage of, as well as the reasons for using tabs, arm guards, shooting gloves, and quivers.
  - b. Explain the following terms: cast, draw weight, string height, aiming, spine, mechanical release, and barebow.
  - c. Make a bowstring using appropriate materials.
4. Explain the following:
  - a. The importance of obedience to a range officer or other person in charge of a range
  - b. The difference between an end and a round
  - c. The differences among field, target, and 3-D archery
  - d. How the five-color World Archery Federation target is scored
  - e. How the National Field Archery Association (NFAA) black-and-white field targets and blue indoor targets are scored
5. Do ONE of the following options:  
**Option A - Using a Recurve Bow or Longbow**
  - a. Name and Point to the parts of the recurve bow or longbow you are shooting.
  - b. Explain how to properly care for and store recurve bows and longbows.
  - c. Show the 10 steps of good shooting for the bow you are shooting.
  - d. Demonstrate the proper way to string a recurve bow or longbow.
  - e. Using a bow square, locate and mark with dental floss, crimp-on, or other method, the nocking point on the bowstring of the bow you are using.
  - f. Do ONE of the following:

1. Using a recurve bow or longbow and arrows with a finger release, shoot a single round of ONE of the following BSA, USA Archery, or NFAA rounds: (The indoor rounds may be shot outdoors if this is more convenient.)
  - a. An NFAA field round of 4 targets and make a score of 60 points
  - b. A BSA Scout field round of 14 targets and make a score of 80 points
  - c. A Junior indoor round I and make a score of 180 points
  - d. A World Archery/USA Archery indoor round and make a score of 80 points
  - e. An NFAA indoor round and make a score of 50 points

OR

2. Shooting 30 arrows in five-arrow ends at an 80-centimeter (32-inch) five-color target at 15 yards and using the 10 scoring regions, make a score of 150.

OR

3. As a member of the USA Archery Junior Olympic Archery Development Program (JOAD), earn your indoor or outdoor green, purple, and gray achievement award pins using a recurve bow or longbow.

OR

4. As a member of the NFAA's Junior Division, earn a Cub or Youth 100-score Progression patch.

#### **Option B - Using a Compound Bow**

- a. Name and point to the parts of the compound bow you are shooting.
- b. Explain how to properly care for and store compound bows.
- c. Show the 10 steps of good shooting for the compound bow you are shooting.
- d. Explain why it is necessary to have the string or cable on a compound bow replaced at an archery shop.
- e. Locate and mark with dental floss, crimp-on, or other method, the nocking point on the bowstring of the bow you are using.
- f. Do ONE of the following:
  1. Using a compound bow and arrows with a finger release, shoot a single round of ONE of the following BSA, USA Archery, or NFAA rounds: (The indoor rounds may be shot outdoors if this is more convenient.)
    - a. An NFAA field round of 4 targets and make a score of 70 points
    - b. A BSA Scout field round of 14 targets and make a score of 90 points
    - c. A Junior 900 round and make a score of 200 points
    - d. A World Archery/USA Archery indoor round I and make a score of 90 points
    - e. An NFAA indoor round and make a score of 60 points

OR

2. Shooting at an 80-centimeter (32-inch) five-color target at 15 yards and using the 10 scoring regions, make a minimum score of 160. Accomplish this in the following manner:  
Shoot 15 arrows in five-arrow ends, at a distance of 10 yards.  
AND  
Shoot 15 arrows in five-arrow ends, at a distance of 15 yards.

OR

3. As a member of the USA Archery Junior Olympic Archery Development Program (JOAD), earn your indoor or outdoor green, purple, and gray achievement award pins using a compound bow.

OR

4. As a member of the NFAA's Junior Division, earn a Cub or Youth 100-score Progression patch.

# Wilderness Survival Merit Badge

January, 2018

## Requirements for the Wilderness Survival merit badge:

1. Do the following:
  - a. Explain to your counselor the hazards you are most likely to encounter while participating in wilderness survival activities, and what you should do to anticipate, help prevent, mitigate, or lessen these hazards.
  - b. Show that you know first aid for and how to prevent injuries or illnesses likely to occur in backcountry settings, including hypothermia, heat reactions, frostbite, dehydration, blisters, insect stings, tick bites, and snakebites.
2. From memory, list the seven priorities for survival in a backcountry or wilderness location. Explain the importance of each one with your counselor.
3. Describe ways to avoid panic and maintain a high level of morale when lost, and explain why this is important.
4. Describe the steps you would take to survive in the following exposure conditions:
  - a. Cold and snowy
  - b. Wet
  - c. Hot and dry
  - d. Windy
  - e. At or on the water
5. Put together a personal survival kit and be able to explain how each item in it could be useful. ([Sample Kit](#))
6. Using three different methods (other than matches), build and light three fires.
7. Do the following:
  - a. Show five different ways to attract attention when lost.
  - b. Demonstrate how to use a signal mirror.
  - c. Describe from memory five ground-to-air signals and tell what they mean.
8. Improvise a natural shelter. For the purpose of this demonstration, use techniques that have little negative impact on the environment. Spend a night in your shelter.
9. Explain how to protect yourself from insects, reptiles, bears, and other animals of the local region.
10. Demonstrate three ways to treat water found in the outdoors to prepare it for drinking.
11. Show that you know the proper clothing to wear while in the outdoors during extremely hot and cold weather and during wet conditions.
12. Explain why it usually is not wise to eat edible wild plants or wildlife in a wilderness survival situation.

# Pioneering Merit Badge

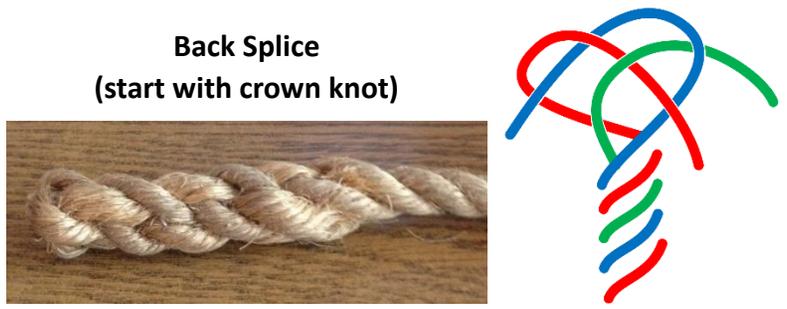
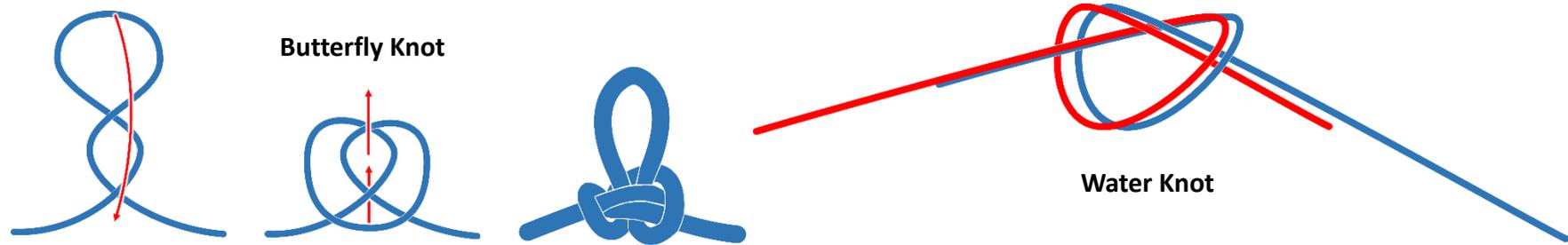
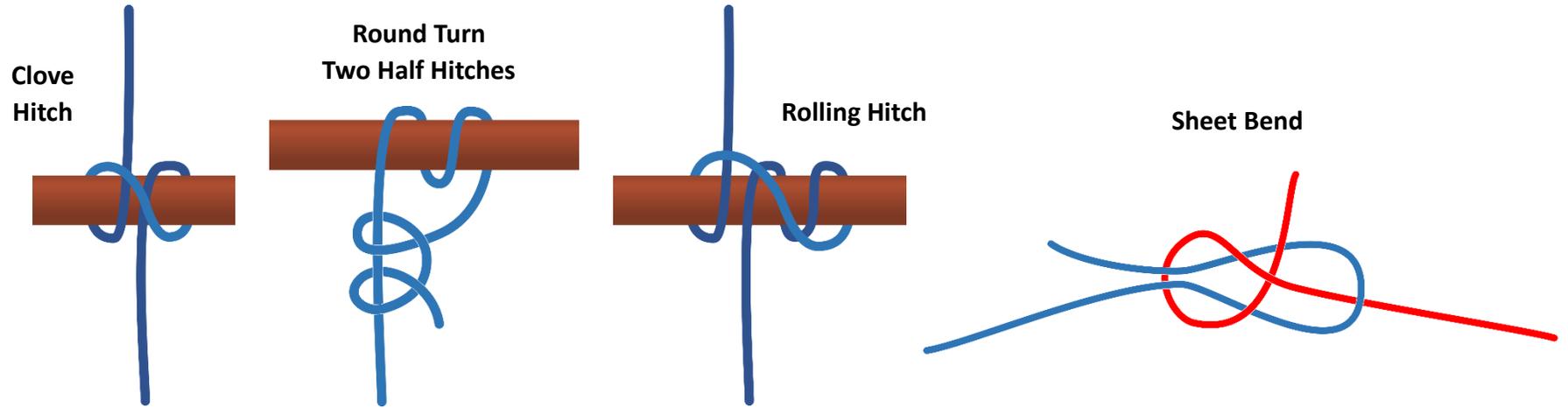
January, 2017

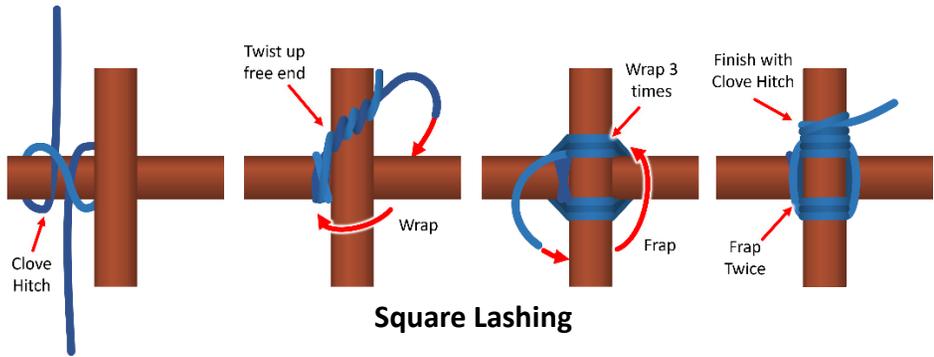
## Requirements for the Pioneering merit badge:

1. Do the following:
  - a. Explain to your counselor the most likely hazards you might encounter while participating in pioneering activities and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.
  - b. Discuss the prevention of, and first aid treatment for, injuries and conditions that could occur while working on pioneering projects, including rope splinters, rope burns, cuts, scratches, insect bites and stings, hypothermia, dehydration, heat exhaustion, heatstroke, sunburn, and falls.
2. Do the following:
  - a. Demonstrate the basic and West Country methods of whipping a rope. Fuse the ends of a rope.
  - b. Demonstrate how to tie the following knots: clove hitch, butterfly knot, roundturn with two half hitches, rolling hitch, water knot, carrick bend, sheepshank, and sheet bend.
  - c. Demonstrate and explain when to use the following lashings: square, diagonal, round, shear, tripod, and floor lashing.
3. Explain why it is useful to be able to throw a rope, then demonstrate how to coil and throw a 40-foot length of 1/4- or 3/8-inch rope. Explain how to improve your throwing distance by adding weight to the end of your rope.
4. Explain the differences between synthetic ropes and natural-fiber ropes. Discuss which types of rope are suitable for pioneering work and why. Include the following in your discussion: breaking strength, safe working loads, and the care and storage of rope.
5. Explain the uses for the back splice, eye splice, and short splice. Using 1/4- or 3/8-inch three-stranded rope, demonstrate how to form each splice.
6. Using a rope-making device or machine, make a rope at least 6 feet long consisting of three strands, each having three yarns. Whip the ends.
7. Explain the importance of effectively anchoring a pioneering project. Describe to your counselor the 1-1-1 anchoring system and the log-and-stake anchoring methods.
8. With the approval of your counselor, demonstrate and use a rope tackle. Be sure the rope tackle is secured properly. Explain the advantages and limitations of using a rope tackle. Describe the potential damage that friction can do to a rope.

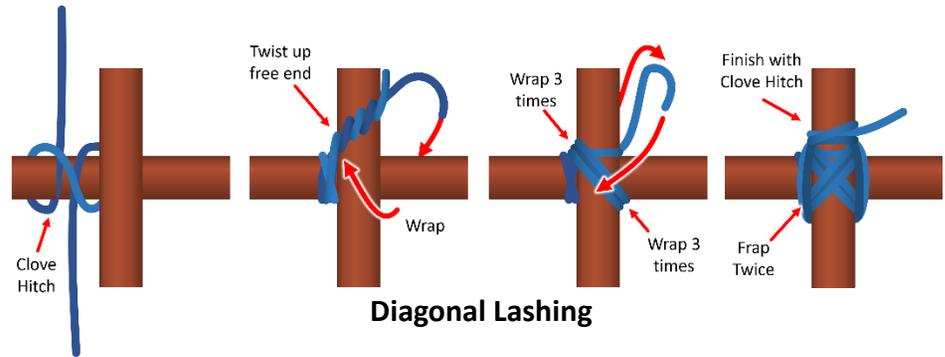
All pioneering projects constructed for this merit badge must comply with height standards as outlined in the Guide to Safe Scouting.

9. By yourself, build a trestle using square and diagonal lashings. Explain why trestles are used when constructing pioneering projects.
10. With the approval of your counselor and using appropriate lashings and pioneering techniques, build and use one full-size pioneering project from either group A or group B. Your project must comply with the requirements of the Guide to Safe Scouting. (Requirement 10 may be done at summer camp, at district or council events, or on a troop camp outing.)
  - a. Tower OR bridge  
Anchor your project as appropriate and necessary. Explain how your anchoring system works.  
Group A projects may be worked on in a group and with others.
  - b. Camp chair OR camp table  
Group B projects must be worked on individually.

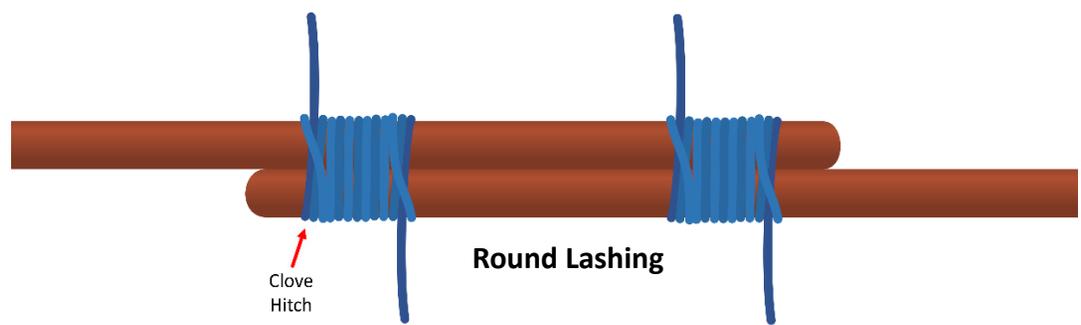




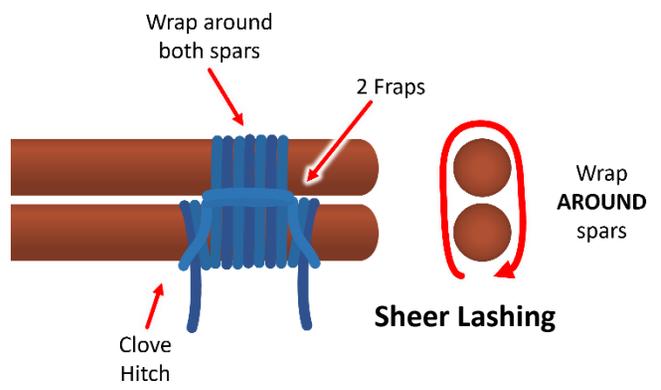
**Square Lashing**



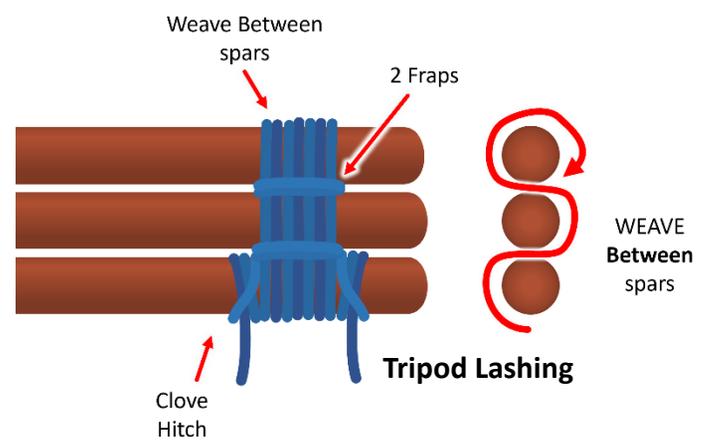
**Diagonal Lashing**



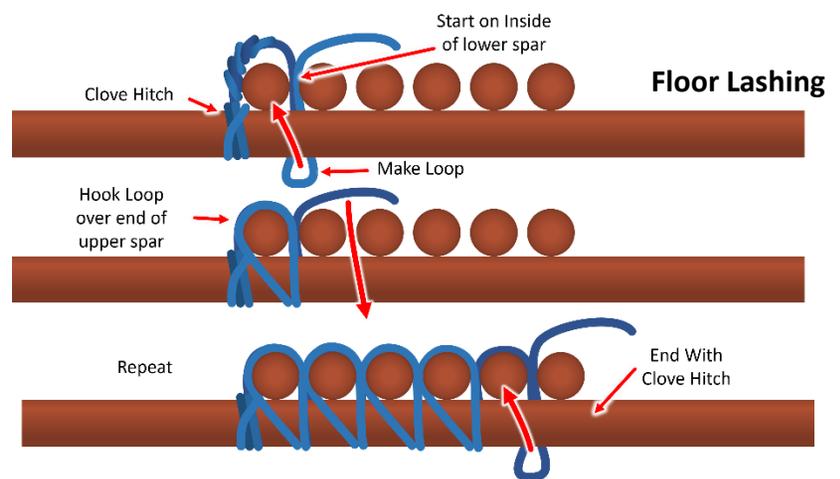
**Round Lashing**



**Sheer Lashing**



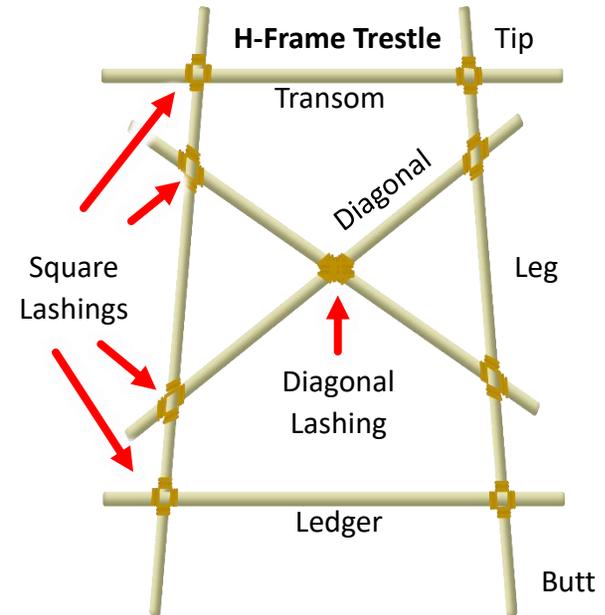
**Tripod Lashing**



**Floor Lashing**

## Rope Materials – Synthetic Rope

- Polyester (usually braided)
  - UV resistant rope
- Nylon (twisted or braided)
  - Stretches but recovers
  - Parachute cord (braided nylon 550lbs breaking strength)
    - Suitable for small projects
- Polypropylene
  - Slippery and not suitable for knots
- Polyethylene
  - Kinks and not suitable for pioneering projects
- Kernmantle
  - Excellent climbing rope



3/8" Rope	Approximate Safe Working Load in Pounds*	Approximate Breaking Strength in Pounds*
Manila	122	1,220
Sisal	108	1,080
Cotton	90	900
Polyester	334	3,340
Nylon	278	3,340
Polypropylene	340	2,440
Polyethylene	410	3,725

# Orienteering Merit Badge

January, 2013

## Requirements for the Orienteering merit badge:

1. Show that you know first aid for the types of injuries that could occur while orienteering, including cuts, scratches, blisters, snakebite, insect stings, tick bites, heat and cold reactions (sunburn, heatstroke, heat exhaustion, hypothermia), and dehydration. Explain to your counselor why you should be able to identify poisonous plants and poisonous animals that are found in your area.
2. Explain what orienteering is.
3. Do the following:
  - a. Explain how a compass works. Describe the features of an orienteering compass.
  - b. In the field, show how to take a compass bearing and follow it.
4. Do the following:
  - a. Explain how a topographic map shows terrain features. Point out and name five terrain features on a map and in the field.
  - b. Point out and name 10 symbols on a topographic map.
  - c. Explain the meaning of *declination*. Tell why you must consider declination when using map and compass together.
  - d. Show a topographic map with magnetic north-south lines.
  - e. Show how to measure distances on a map using an orienteering compass.
  - f. Show how to orient a map using a compass.
5. Set up a 100-meter pace course. Determine your walking and running pace for 100 meters. Tell why it is important to pace-count.
6. Do the following:
  - a. Identify 20 international control description symbols. Tell the meaning of each symbol.
  - b. Show a control description sheet and explain the information provided.
  - c. Explain the following terms and tell when you would use them: attack point, collecting feature, catching feature, aiming off, contouring, reading ahead, handrail, relocation, rough versus fine orienteering.
7. Do the following:
  - a. Take part in three orienteering events. One of these must be a cross-country course.\*
  - b. After each event, write a report with (1) a copy of the master map and control description sheet, (2) a copy of the route you took on the course, (3) a discussion of how you could improve your time between control points, and (4) a list of your major weaknesses on this course. Describe what you could do to improve.
8. Do ONE of the following:
  - a. Set up a cross-country course that is at least 2,000 meters long with at least five control markers. Prepare the master map and control description sheet.
  - b. Set up a score orienteering course with at least 12 control points and a time limit of at least 60 minutes. Set point values for each control. Prepare the master map and control description sheet.
9. Act as an official during an orienteering event. This may be during the running of the course you set up for requirement 8.
10. Teach orienteering techniques to your patrol, troop or crew.

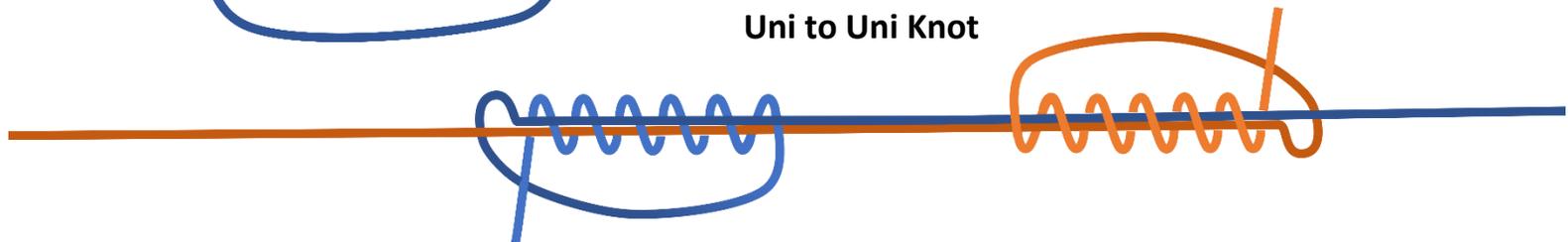
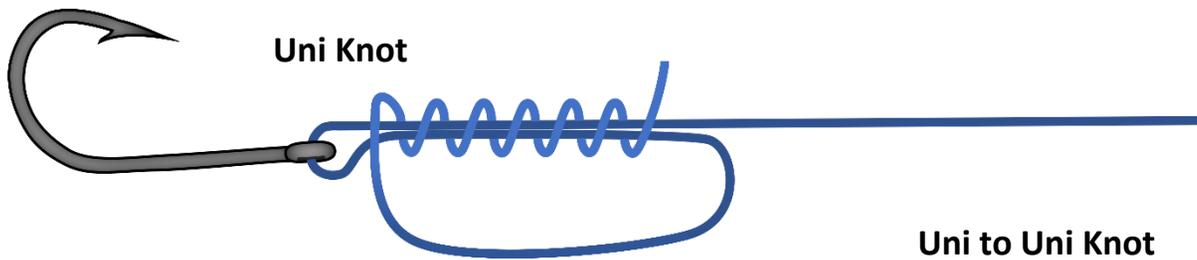
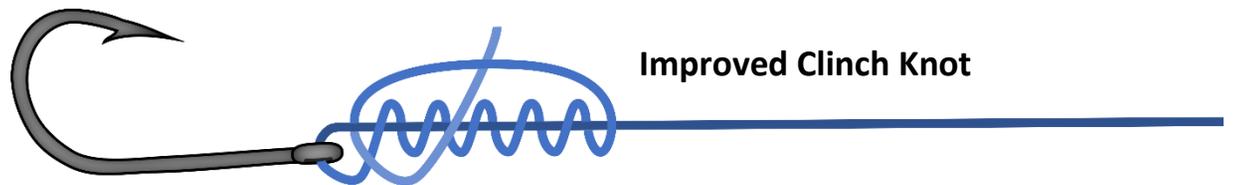
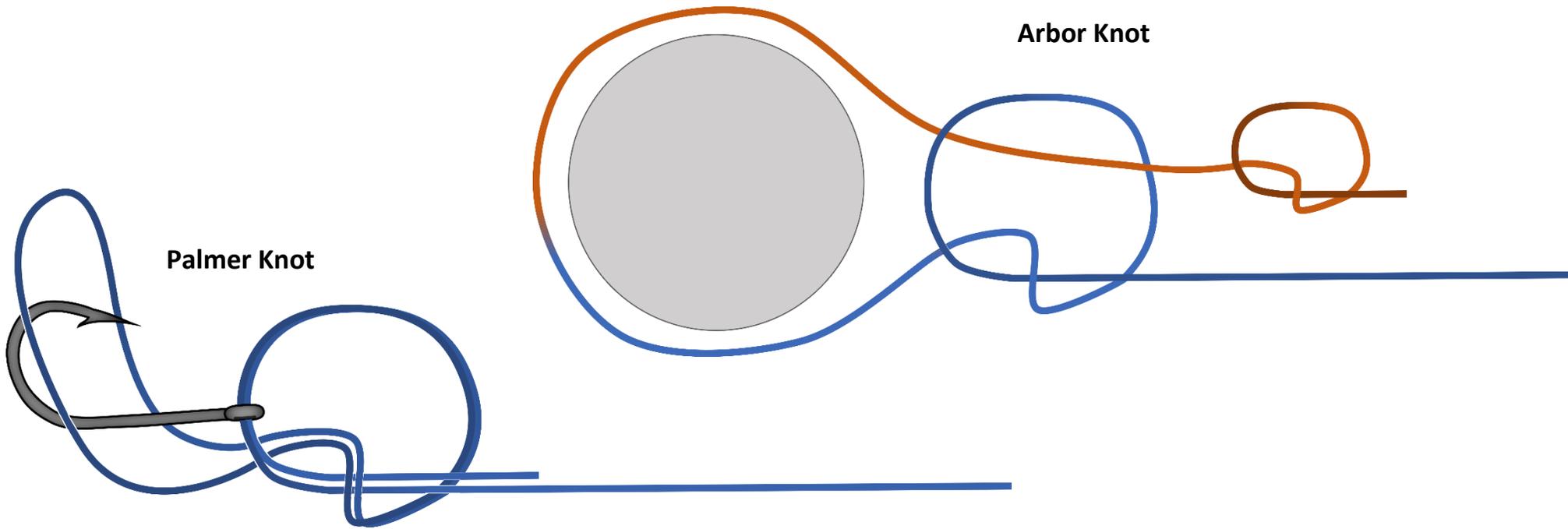
\* **Note to the Counselor:** While orienteering is primarily an individual sport, BSA Youth Protection procedures call for using the buddy system. Requirement 7a can be completed by pairs or groups of Scouts.

# Fishing Merit Badge

January, 2021

## Requirements for the Fishing merit badge:

1. Do the following:
  - a. Explain to your counselor the most likely hazards you may encounter while participating in fishing activities, and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.
  - b. Discuss the prevention of and treatment for the following health concerns that could occur while fishing, including cuts, scratches, puncture wounds, insect bites, hypothermia, dehydration, heat exhaustion, heatstroke, and sunburn.
  - c. Explain how to remove a hook that has lodged in your arm.
  - d. Name and explain five safety practices you should always follow while fishing.
2. Discuss the differences between two types of fishing outfits. Point out and identify the parts of several types of rods and reels. Explain how and when each would be used. Review with your counselor how to care for this equipment.
3. Demonstrate the proper use of two different types of fishing equipment.
4. Demonstrate how to tie the following knots: improved clinch knot, palomar knot, uni knot, uni to uni knot, and arbor knot. Explain how and when each knot is used.
5. Name and identify five basic artificial lures and five natural baits and explain how to fish with them. Explain why bait fish are not to be released.
6. Do the following:
  - a. Explain the importance of practicing Leave No Trace techniques. Discuss the positive effects of Leave No Trace on fishing resources.
  - b. Discuss the meaning and importance of catch and release. Describe how to properly release a fish safely to the water.
7. Obtain and review the regulations affecting game fishing where you live. Explain why they were adopted and what is accomplished by following them.
8. Explain what good outdoor sportsmanlike behavior is and how it relates to anglers. Tell how the Outdoor Code of the Boy Scouts of America relates to a fishing sports enthusiast, including the aspects of littering, trespassing, courteous behavior, and obeying fishing regulations.
9. Catch at least one fish and identify it.
10. If regulations and health concerns permit, clean and cook a fish you have caught. If you are unable to catch a fish for eating, acquire a fish, clean the fish you acquired, and cook the fish you acquired. (It is not required that you eat the fish.)



# Swimming Merit Badge

May, 2014

## Requirements for the Swimming merit badge:

1. Do the following:
  - a. Explain to your counselor how Scouting's Safe Swim Defense plan anticipates, helps prevent and mitigate, and provides responses to likely hazards you may encounter during swimming activities.
  - b. Discuss the prevention and treatment of health concerns that could occur while swimming, including hypothermia, dehydration, sunburn, heat exhaustion, heatstroke, muscle cramps, hyperventilation, spinal injury, stings and bites, and cuts and scrapes.
2. Before doing the following requirements, successfully complete the BSA swimmer test: Jump feet first into water over the head in depth. Level off and swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy, resting backstroke. The 100 yards must be completed in one swim without stops and must include at least one sharp turn. After completing the swim, rest by floating.
3. Swim continuously for 150 yards using the following strokes in good form and in a strong manner: front crawl or trudgen for 25 yards, back crawl for 25 yards, sidestroke for 25 yards, breaststroke for 25 yards, and elementary backstroke for 50 yards.
4. Do the following:
  - a. Demonstrate water rescue methods by reaching with your arm or leg, by reaching with a suitable object, and by throwing lines and objects. Explain why swimming rescues should not be attempted when a reaching or throwing rescue is possible, and explain why and how a rescue swimmer should avoid contact with the victim.
  - b. With a helper and a practice victim, show a line rescue both as tender and as rescuer. The practice victim should be approximately 30 feet from shore in deep water.
5. Do the following:
  - a. Float faceup in a resting position for at least one minute.
  - b. Demonstrate survival floating for at least five minutes.
  - c. While wearing a properly fitted U.S. Coast Guard-approved life jacket, demonstrate the HELP and huddle positions. Explain their purposes.
  - d. Explain why swimming or survival floating will hasten the onset of hypothermia in cold water.
6. In water over your head, but not to exceed 10 feet, do each of the following:
  - a. Use the feet first method of surface diving and bring an object up from the bottom.
  - b. Do a headfirst surface dive (pike or tuck), and bring the object up again.
  - c. Do a headfirst surface dive to a depth of at least 5 feet and swim underwater for three strokes. Come to the surface, take a breath, and repeat the sequence twice.
7. Following the guidelines set in the BSA Safe Swim Defense, in water at least 7 feet deep\*, show a standing headfirst dive from a dock or pool deck. Show a long shallow dive, also from the dock or pool deck.

*\*If your state, city, or local community requires a water depth greater than 7 feet, it is important to abide by that mandate.*

8. Explain the health benefits of regular aerobic exercise, and discuss why swimming is favored as both fitness and therapeutic exercise.

# Combined First Aid

## Hazards

- Weather
  - Lightning
  - Rain
  - Sun
  - Wind
- Terrain
  - Drowning
  - Falling
- Flora
- Fauna
- Poisonous plants and poisonous/venomous animals
- Name and explain five safety practices you should always follow while fishing

## First Aid

- Hypothermia
- Cold-water shock
- Frostbite
- Heat reactions
  - Heat exhaustion
  - Heatstroke
  - Sunburn
- Dehydration
- Bites
  - Insect bites and stings
  - Tick bites
  - Snakebites
- Cuts
- Scratches
- Puncture wounds
- How to remove a hook that has lodged in your arm
- Rope splinters
- Rope burns
- Blisters
- Falls
- Spinal Injuries
- When to perform CPR

# Exploration Merit Badge

## 1. **General Knowledge.**

Do the following:

- a. Define exploration and explain how it differs from adventure travel, trekking or hiking, tour-group trips, or recreational outdoor adventure trips.
- b. Explain how approaches to exploration may differ if it occurs in the ocean, in space, in a jungle, or in a science lab in a city.

## 2. **History of Exploration.**

Discuss with your counselor the history of exploration. Select a field of study with a history of exploration to illustrate the importance of exploration in the development of that field (for example, aerospace, oil industry, paleontology, oceanography, etc.).

## 3. **Importance of Exploration.**

Explain to your counselor why it is important to explore. Discuss the following:

- a. Why it is important for exploration to have a scientific basis
- b. How explorers have aided in our understanding of our world
- c. What you think it takes to be an explorer

## 4. **Real-Life Exploration.**

Do ONE of the following:

- a. Learn about a living explorer. Create a short report or presentation (verbal, written, or multimedia slide presentation) on this individual's objectives and the achievements of one of the explorer's expeditions. Share what you have learned with your counselor and unit.
- b. Learn about an actual scientific exploration expedition. Gather information about the mission objectives and the expedition's most interesting or important discoveries. Share what you have learned with your counselor and unit. Tell how the information gained from this expedition helped scientists answer important questions.
- c. Learn about types of exploration that may take place in a laboratory or scientific research facility (medicine, biology, chemistry, physics, astronomy, etc.). Explain to your counselor how laboratory research and exploration are similar to field research and exploration.

## 5. **Exploration in Lab and Field.**

Do ONE of the following, and share what you learn with your counselor:

- a. With your parent's permission and counselor's approval, visit either in person or via the internet an exploration sponsoring organization (such as The Explorers Club, National Geographic Society, Smithsonian Institution, Alpine Club, World Wildlife Fund, or similar organization). Find out what type(s) of exploration the organization supports.
- b. With permission and approval, visit either in person or via the internet a science lab, astronomical observatory, medical research facility, or similar site. Learn what exploration is done in this facility.

## 6. Expedition Planning.

Discuss with your counselor each of the following steps for conducting a successful exploration activity. Explain the need for each step.

- a. Identify the objectives (establish goals).
- b. Plan the mission. Create an expedition agenda or schedule. List potential documents or permits needed.
- c. Budget and plan for adequate financial resources. Estimate costs for travel, equipment, accommodations, meals, permits or licenses, and other expedition expenses.
- d. Determine equipment and supplies required for personal and mission needs for the length of the expedition.
- e. Determine communication and transportation needs. Plan how to keep in contact with your base or the outside world, and determine how you will communicate with each other on-site.
- f. Establish safety and first aid procedures (including planning for medical evacuation). Identify the hazards that explorers could encounter on the expedition, and establish procedures to prevent or avoid those hazards.
- g. Determine team selection. Identify who is essential for the expedition to be successful and what skills are required by the expedition leader.
- h. Establish detailed recordkeeping (documentation) procedures. Plan the interpretation and sharing of information at the conclusion of the expedition.

## 7. Prepare for an Expedition.

With your parent's permission and counselor's approval, prepare for an actual expedition to an area you have not previously explored; the place may be nearby or far away. Do the following:

- a. Make your preparations under the supervision of a trained expedition leader, expedition planner, or other qualified adult experienced in exploration (such as a school science teacher, museum representative, or qualified instructor).
- b. Use the steps listed in requirement 6 to guide your preparations. List the items of equipment and supplies you will need. Discuss with your counselor why you chose each item and how it will be of value on the expedition. Determine who should go on the expedition.
- c. Conduct a pre-expedition check, covering the steps in requirement 6, and share the results with your counselor. With your counselor, walk through the Sweet Sixteen of BSA Safety for your expedition. Ensure that all foreseeable hazards for your expedition are adequately addressed.

## 8. Go on an Expedition.

Complete the following:

- a. With your parent's permission and under the supervision of your merit badge counselor or a counselor-approved qualified person, use the planning steps you learned in requirement 6 and the preparations you completed in requirement 7 to personally undertake an actual expedition to an area you have not previously explored.
- b. Discuss with your counselor what is outdoor ethics and its role in exploration and enjoying the outdoors responsibly.
- c. After you return, compile a report on the results of your expedition and how you accomplished your objective(s). Include a statement of the objectives, note your findings and observations, include photos, note any discoveries, report any problems or adverse events, and have a conclusion (whether you reached your objective or not). The post-expedition report must be at least one page and no more than three; one page can be photos, graphs, or figures.

## 9. Career Opportunities.

Identify three career opportunities in exploration. Pick one and explain to your counselor how to prepare for such a career. Discuss what education and training are required, and why this profession might interest you.

## First Aid Merit Badge

1. Demonstrate to your counselor that you have current knowledge of all first aid requirements for [Tenderfoot](#), [Second Class](#), and [First Class](#) ranks.
2. Explain how you would obtain emergency medical assistance from:
  - a. Your home
  - b. A remote location on a wilderness camping trip
  - c. An activity on open water
3. Define the term **triage**. Explain the steps necessary to assess and handle a medical emergency until help arrives.
4. Explain the universal precautions as applied to the transmission of infections. Discuss the ways you should protect yourself and the victim while administering first aid.
5. Do the following:
  - a. Prepare a first-aid kit for your home. Display and discuss its contents with your counselor.
  - b. <>With an adult leader. Inspect your troop's first-aid kit. Evaluate it for completeness. Report your findings to your counselor and Scout leader.
6. Describe the early signs and symptoms of each of the following and explain what actions you should take:
  - a. Shock
  - b. Heart attack
  - c. Stroke
7. Do the following:
  - a. Describe the conditions that must exist before performing CPR on a person. Then demonstrate proper CPR technique using a training device approved by your counselor.
  - b. Explain the use of an automated external defibrillator (AED). Identify the location of the AED at your school, place of worship, and troop meeting place, if one is present.
8. Do the following:
  - a. Show the steps that need to be taken for someone who has a large open wound or cut that is not bleeding severely.
  - b. Show the steps that need to be taken for someone who has a large open wound or cut that is severely bleeding.
  - c. Tell the dangers in the use of a tourniquet and the conditions under which its use is justified.
9. Explain when a bee sting could be life threatening and what action should be taken for prevention and for first aid.
10. Describe the signs and symptoms and demonstrate the proper procedures for handling and immobilizing suspected closed and open fractures or dislocations of the
  - a. Forearm
  - b. Wrist
  - c. Upper leg
  - d. Lower leg
  - e. Ankle
11. Describe the signs, symptoms, and possible complications and demonstrate care for someone with a suspected injury to the head, neck, or back.
12. Describe the symptoms, proper first-aid procedures, and possible prevention measures for the following conditions:
  - a. Anaphylaxis/allergic reactions
  - b. Bruises
  - c. Sprains or strains
  - d. Hypothermia
  - e. Frostbite
  - f. Burns—first, second, and third degree
  - g. Convulsions/seizures
  - h. Dehydration
  - i. Muscle cramps
  - j. Heat exhaustion
  - k. Heat stroke
  - l. Abdominal pain
  - m. Broken, chipped, or loosened tooth
13. Do the following:
  - a. Describe the conditions under which an injured person should be moved.
  - b. If a sick or an injured person must be moved, tell how you would determine the best method. Demonstrate this method.
  - c. With helpers under your supervision, improvise a stretcher and move a presumably unconscious person.
14. Teach another Scout a first-aid skill selected by your counselor.

## Tenderfoot First Aid Requirements

4a. Show first aid for the following:

- Simple cuts and scrapes
- Blisters on the hand and foot
- Minor (thermal/heat) burns or scalds (superficial, or first-degree)
- Bites or stings of insects and ticks
- Venomous snakebite
- Nosebleed
- Frostbite and sunburn
- Choking

4b. Describe common poisonous or hazardous plants; identify any that grow in your local area or campsite location. Tell how to treat for exposure to them.

4c. Tell what you can do while on a campout or other outdoor activity to prevent or reduce the occurrence of injuries or exposure listed in Tenderfoot requirements 4a and 4b.

4d. Assemble a personal first-aid kit to carry with you on future campouts and hikes. Tell how each item in the kit would be used.

## Second Class First Aid Requirements

6a. Demonstrate first aid for the following:

- Object in the eye
- Bite of a warm-blooded animal
- Puncture wounds from a splinter, nail, and fishhook
- Serious burns (partial thickness, or second-degree)
- , and hyperventilation
- Heat exhaustion
- Shock
- Heatstroke, dehydration, hypothermia

6b. Show what to do for “hurry” cases of stopped breathing, stroke, severe bleeding, and ingested poisoning.

6c. Tell what you can do while on a campout or hike to prevent or reduce the occurrence of the injuries listed in Second Class requirements 6a and 6b.

6d. Explain what to do in case of accidents that require emergency response in the home and backcountry. Explain what constitutes an emergency and what information you will need to provide to a responder.

6e. Tell how you should respond if you come upon the scene of a vehicular accident.

## First Class First Aid Requirements

7a. Demonstrate bandages for a sprained ankle and for injuries on the head, the upper arm, and the collarbone.

7b. By yourself and with a partner, show how to:

- Transport a person from a smoke-filled room.
- Transport for at least 25 yards a person with a sprained ankle.

7c. Tell the five most common signals of a heart attack. Explain the steps (procedures) in cardiopulmonary resuscitation (CPR).

7d. Tell what utility services exist in your home or meeting place. Describe potential hazards associated with these utilities and tell how to respond in emergency situations.

7e. Develop an emergency action plan for your home that includes what to do in case of fire, storm, power outage, and water outage.

7f. Explain how to obtain potable water in an emergency.

# Rifle Shooting Notes

January 1, 2019

## Requirement 1

- a. Explain why BB and pellet air guns must always be treated with the same respect as firearms.  
BB and Pellet guns are dangerous -  
30,000 ER visits per year  
4 deaths per year
- b. Describe how you would react if a friend visiting your home asked to see your or your family's firearm(s).  
Explain that you are not allowed to get guns out without your parents around
- c. Explain the need for, and use and types of, eye and hearing protection. Demonstrate their proper use.  
**Eye Protection**  
Should have polycarbonate lens  
Should wrap around the eyes  
**Ear Protection**  
Provides protection against loud noises  
Guns can produce sounds from 140 – 170 dB  
A single shot from a .22 can cause hearing damage
- d. Give the main points of the laws for owning and using guns in your community and state.  
Must be 21 to purchase a pistol or semiautomatic rifle  
Open carry is lawful in Washington without any permit  
Open carry of a loaded handgun in a vehicle is legal only with a concealed pistol license  
Open carry of a loaded long gun in a vehicle is illegal, regardless of CPL possession  
Machine guns and short-barreled shotguns—unless purchased before July 1, 1994—are illegal for non-law-enforcement possession  
Suppressors, destructive devices and any other weapons are lawful to possess and use if registered properly with ATF. Short barreled rifles are lawful to possess and use if registered properly with the ATF, as of June 12, 2014.  
Private party firearm transfers must be conducted through a licensed dealer, who is required by federal law to conduct a background check and keep a record of the sale
- e. Explain how hunting is related to the wise use of renewable wildlife resources.  
If populations exceed **Carrying Capacity** of a habitat  
Animal population will suffer starvation and disease  
Habitat may be damaged  
It may take many years for a habitat to recover  
Wildlife management experts try to maintain healthy wild populations  
Balance between  
Arranging hunting seasons  
Setting bag limits

- f. Successfully complete a state hunter education course or obtain a copy of the hunting laws for your state, then do the following:
- Explain the main points of hunting laws in your state and give any special laws on the use of guns and ammunition.  
**Illegal [Washington State]:**  
Hunting with artificial lights  
hunt deer or elk with the aid of infrared night vision equipment or with laser sights  
Shooting at wild animals or wild birds while they are on any utility line, pole, its crossarm or insulator  
Use aircraft or drones to track game  
Case game in vehicles or boats  
Shoot across a highway or from moving vehicle  
Party hunting – hunt in groups to use other hunter’s tag  
not properly tagging game  
hunt wildlife at night during the months of October and November  
Hunt any big game with a fully automatic firearm
  - List the kinds of wildlife that can be legally hunted in your state.  
**[Washington State]:** deer, elk, black bear, cougar, mountain goat, bighorn sheep, or moose.
- g. Identify and explain how you can join or be a part of shooting sports activities.  
Junior USA Shooting  
NRA Marksmanship Qualification Program  
National 4-H Shooting Sports
- h. Explain to your counselor the proper hygienic guidelines used in shooting.  
**What are we concerned about?**  
Oils, solvents, and residue on the firearm  
Gunshot residue contains nasty chemicals  
Ammunition may contain lead  
**What we do**  
Do not Eat while shooting  
Do not Drink while shooting  
Wash hands and face after shooting  
Change clothes after shooting
- i. Give your counselor a list of sources that you could contact for information on firearms and their uses.  
National Rifle Association ([www.nra.org](http://www.nra.org))  
National Shooting Sports Foundation ([www.nssf.org](http://www.nssf.org))  
Midway USA ([www.midwayusa.com](http://www.midwayusa.com))  
Boy Scouts of America ([www.scouting.org](http://www.scouting.org))

## Requirement 2 Option A—Rifle Shooting (Modern cartridge type)

- a. Identify the three main parts of a rifle, and tell how they function.

Stock

Action

Barrel

- b. Identify and demonstrate the three fundamental rules for safe gun handling.

**ALWAYS** keep your gun pointed in a safe direction

**ALWAYS** keep your finger off the trigger until ready to shoot

**ALWAYS** keep your gun unloaded until ready to use

- c. Identify the two types of cartridges, their parts, and how they function.

Rimfire (.22 caliber)

Centerfire (basically everything else)

Bullet, Case, Powder, Primer

- d. Explain to your counselor what a misfire, hangfire, and squib fire are, and explain the procedures to follow in response to each.

**Misfire** – cartridge does not fire when the firing pin hits the primer

Keep the gun pointed in a safe direction

Wait for at least 30 seconds before opening the bolt

**Hangfire** – late ignition of the round

Delay in ignition

Keep rifle pointed in safe direction for 30 seconds

Afterward, open bolt and remove misfired cartridge or empty case

**Squib Round** – not enough gas to force bullet out of barrel

Did not sound right when fired

Nothing hit target

**Do not attempt to shoot another shot!**

Bullet may be lodged in barrel

Raise your hand at firing line

Wait for direction from Range Safety Officer

May need to rod and clean out barrel

- e. Identify and demonstrate the five fundamentals of shooting a rifle safely.

**Aiming** (Sight Alignment & Sight Picture)

**Breath Control**

**Hold Control**

**Trigger Control**

**Follow-Through**

- f. Explain to your counselor the fundamental rules for safe gun handling. Explain each rule for using and storing a gun. Identify and explain each rule for safe shooting.

**ALWAYS keep your gun pointed in a safe direction**

**ALWAYS keep your finger off the trigger until ready to shoot**

**ALWAYS keep your gun unloaded until ready to use**

### Right Ammo

The caliber is stamped onto the **Barrel**

The caliber is on the **Box** of ammunition

The caliber is stamped on the bottom of each cartridge (aka **Brass**)

### Storage

What are some rules for safely storing your gun?

Double check it is unloaded

If possible, leave the action open

Turn on the safety

Store it in a locked gun cabinet or safe

Store ammunition in a separate place

- g. Explain the range commands and range procedures.
- h. Demonstrate the knowledge, skills, and attitude necessary to safely shoot a rifle from the bench rest position or supported prone position while using the five fundamentals of rifle shooting.
- i. Identify the basic safety rules for cleaning a rifle, and identify the materials needed  
Before you begin to clean the rifle, point it in a safe direction, open the action, and **be absolutely sure that:**  
**The gun is empty**  
**All ammunition is removed from the area**  
To assure safety, the action should be open during cleaning.  
Ideally, the bolt should be removed from the rifle during cleaning.
- j. Demonstrate how to clean a rifle properly and safely.
- k. Discuss what points you would consider in selecting a rifle  
**Purpose, Fit, Action Type, Price**
- l. Using a .22 caliber rimfire rifle and shooting from a bench rest or supported prone position at 50 feet, fire **five groups (three shots per group)** that can be **covered by a quarter**. Using these targets, explain how to adjust sights to zero a rifle.
- m. Adjust sights to center the group on the target\* and **fire five groups (five shots per group)**. According to the target used, each shot in the group must meet the following minimum score:
1. A-32 targets - 9
  2. A-17 or TQ-1 targets - 7,
  3. A-36 targets - 5.

\*Note: It is not always practical to adjust the sights (i.e. when using a borrowed fixed-sight rifle). For requirement 2l **{2m}**, you may demonstrate your ability to use the shooting fundamentals by shooting five shot groups (five shots per group) in which all shots can be **covered by or touch a quarter** and then explain how to adjust the sights to zero the rifle used.

## Climbing Merit Badge

1. Do the following:
  - a. Explain to your counselor the most likely hazards you may encounter while participating in climbing and rappelling activities and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.
  - b. Show that you know first aid for and how to prevent injuries or illnesses that could occur during climbing activities, including heat and cold reactions, dehydration, stopped breathing, sprains, abrasions, fractures, rope burns, blisters, snakebite, and insect bites or stings.
  - c. Identify the conditions that must exist before performing CPR on a person.
2. Learn the Leave No Trace principles and Outdoor Code, and explain what they mean.  
[Trails; respect vegetation; care for eggs/nests; no graffiti, avoid chalk or use stone colored; Take out trash](#)
3. Present yourself properly dressed for belaying, climbing, and rappelling (i.e., appropriate clothing, footwear, and a helmet; rappellers and can also wear gloves).

4. **Location.** Do the following:

- a. Explain how the difficulty of climbs is classified, and apply classifications to the rock faces or walls where you will demonstrate your climbing skills.

<a href="#">Class 1 – Hiking</a> <a href="#">Class 2 – Simple Scramble</a> <a href="#">Class 3 – Scrambling</a>	<a href="#">Class 4 – Climbing with Belay</a> <a href="#">Class 5 – Roped Climb</a> <a href="#">Class 5.1 to 5.14</a>	<a href="#">5.9 – Hard – technical or vertical</a> <a href="#">5.11 – Difficult – may have overhangs</a> <a href="#">5.13 Very Difficult – strenuous – small holds</a>
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- b. Explain the following: top-rope climbing, lead climbing, and bouldering.  
[For BSA anything above shoulder height needs to be roped in](#)
- c. Evaluate the safety of a particular climbing area. Consider weather, visibility, the condition of the climbing surface, and any other environmental hazards.
- d. Determine how to summon aid to the climbing area in case of an emergency.

5. **Verbal signals.** Explain the importance of using verbal signals during every climb and rappel, and while bouldering. With the help of the merit badge counselor or another Scout, demonstrate the verbal signals used by each of the following:

<b>a. Climbers</b> <a href="#">On Belay [Belay on]</a> <a href="#">Climbing [Climb on]</a> <a href="#">Slack</a> <a href="#">Up Rope</a> <a href="#">Falling</a> <a href="#">Tension [Got You]</a> <a href="#">ROCK! [ROCK!]</a> <a href="#">ROPE! [ROPE!]</a> <a href="#">Off Belay [Belay Off]</a>	<b>b. Rappellers</b> <a href="#">On Belay [Belay on]</a> <a href="#">Rappelling [Rappel on]</a> <a href="#">Falling</a> <a href="#">ROCK! [ROCK!]</a> <a href="#">Off Belay [Belay Off]</a>	<b>c. Belayers</b>  <b>d. Boulderers and their spotters</b>
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6. **Rope.** Do the following:
  - a. Describe the kinds of rope acceptable for use in climbing and rappelling.  
kernmantle
  - b. Show how to examine a rope for signs of wear or damage.
  - c. Discuss ways to prevent a rope from being damaged.
  - d. Explain when and how a rope should be retired.  
Cut into 15' sections for non-climbing use
  - e. Properly coil a rope.
7. **Knots.** Demonstrate the ability to tie each of the following knots. Give at least one example of how each knot is used in belaying, climbing, or rappelling.
  - a. Figure eight on a bight
  - b. Figure eight follow-through
  - c. Water knot
  - d. Double fisherman's knot (Grapevine knot)
8. **Harnesses.** Correctly put on a commercially made climbing harness.
9. **Belaying.** Do the following:
  - a. Explain the importance of belaying climbers and rappellers and when it is necessary.
  - b. Belay three different climbers ascending a rock face or climbing wall.
  - c. Belay three different rappellers descending a rock face or climbing wall using a top rope.
10. **Climbing.**
  - a. Show the correct way to tie into a belay rope.
  - b. Climb at least three different routes on a rock face or climbing wall, demonstrating good technique and using verbal signals with belayer.
11. **Rappelling.**
  - a. Using a carabiner and a rappel device, secure your climbing harness to a rappel rope.
  - b. Tie in to a belay rope set up to protect rappellers.
  - c. Rappel down three different rock faces or three rappel routes on a climbing wall. Use verbal signals to communicate with a belayer, and demonstrate good rappelling technique.
12. Demonstrate ways to store rope, hardware, and other gear used for climbing, rappelling, and belaying.

## Canoeing Merit Badge

1. Do the following:
  - a. Explain to your counselor the most likely hazards you may encounter while participating in canoeing activities and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.
  - b. Review prevention, symptoms, and first-aid treatment for the following injuries or illnesses that could occur while canoeing: blisters, cold-water shock and hypothermia, dehydration, heat-related illnesses, sunburn, sprains, and strains.
  - c. Discuss the BSA Safety Afloat policy. Tell how it applies to canoeing activities.
2. Before doing the following requirements, successfully complete the BSA swimmer test. Jump feet first into water over your head in depth, swim 75 yards or 75 meters in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards or 25 meters using an easy resting backstroke. The 100 yards or 100 meters must be swum continuously and include at least one sharp turn. After completing the swim, rest by floating.
3. Do the following:
  - a. Name and point out the major parts of a canoe.
  - b. Describe how the length and shape of a canoe affect its performance.
  - c. Discuss the advantages and disadvantages of the different materials used to make canoes.
4. Do the following:
  - a. Name and point out the parts of a paddle. Explain the difference between a straight and bent-shaft paddle and when each is best used.
  - b. Demonstrate how to size correctly a paddle for a paddler in a sitting position and a kneeling position.
5. Do the following:
  - a. Discuss with your counselor the characteristics of life jackets most appropriate for canoeing and tell why a life jacket must always be worn while paddling.
  - b. Demonstrate how to select and properly fit the correct size life jacket.
6. Discuss with your counselor the general care and maintenance of canoes, paddles, and other canoeing equipment.
7. Do the following:
  - a. Discuss what personal and group equipment would be appropriate for a canoe camping trip. Describe how personal and group equipment can be packed and protected from water.
  - b. Using the containers and packs from requirement 7a, demonstrate how to load and secure the containers and other equipment in the canoe.
  - c. Using appropriate knots, including a trucker's hitch, tautline hitch, and bowline, demonstrate how to secure a canoe to a vehicle or a trailer, or if these are not available, a rack on land.
8. With a companion, use a properly equipped canoe to demonstrate the following:
  - a. Safely carry and launch the canoe from a dock or shore (both, if possible).
  - b. Safely land the canoe on a dock or shore (both, if possible) and return it to its proper storage location.
  - c. Demonstrate kneeling and sitting positions in a canoe and explain the proper use for each position.
  - d. Change places while afloat in the canoe.

9. With a companion, use a properly equipped canoe to demonstrate the following:
  - a. In deep water, exit the canoe and get back in without capsizing.
  - b. Safely perform a controlled capsize of the canoe and demonstrate how staying with a capsized canoe will support both paddlers.
  - c. Swim, tow, or push a swamped canoe 50 feet to shallow water. In the shallow water, empty the swamped canoe and reenter it.
  - d. In deep water, rescue a swamped canoe and its paddlers by emptying the swamped canoe and helping the paddlers safely reenter their boat without capsizing.
10. With a companion, use a properly equipped canoe to demonstrate the following paddling strokes as both a bow and stern paddler:
  - a. Forward stroke
  - b. Backstroke
  - c. Draw

For stern paddling only:

- d. J-stroke
  - e. Pushaway
  - f. Forward sweep
  - g. Reverse sweep
  - h. Rudder stroke
  - i. Stern pry
11. Using the strokes in requirement 10, and in an order determined by your counselor, use a properly equipped canoe to demonstrate the following tandem maneuvers while paddling on opposite sides and without changing sides. Each paddler must demonstrate these maneuvers in both the bow and stern and on opposite paddling sides:
    - a. Pivot or spin the canoe in either direction.
    - b. Move the canoe sideways or abeam in either direction.
    - c. Stop the canoe.
    - d. Move the canoe in a straight line for 50 yards.
  12. Use a properly equipped canoe to demonstrate solo canoe handling:
    - a. Launch from shore or a pier (both, if possible).
    - b. Using a single-blade paddle and paddling only on one side, demonstrate proper form and use of the forward stroke, backstroke, draw stroke, pushaway stroke, forward sweep, reverse sweep, J-stroke, and rudder stroke. Repeat while paddling on the other side.
    - c. Using a single-blade paddle and paddling only on one side, demonstrate proper form and use of a combination of a forward stroke, rudder stroke, and stern pry by canoeing to a target 50 yards away. Repeat while paddling on the other side.
    - d. Make a proper landing at a dock or shore (both, if possible). Store canoe properly (with assistance, if needed).
  13. Discuss the following types of canoeing:
    - a. Olympic canoe sprint
    - b. Flatwater and river touring
    - c. Outrigger
    - d. Marathon
    - e. Freestyle
    - f. Whitewater
    - g. Canoe poling

## Knots

### Scout

- 4a. Show how to tie a square knot, two half-hitches, and a taut-line hitch. Explain how each knot is used.
- 4b. Show the proper care of a rope by learning how to whip and fuse the ends of different kinds of rope.

### EDGE

1. Explain.
2. Demonstrate.
3. Guide.
4. Enable.

### Tenderfoot

- 3a. Demonstrate a practical use of the square knot.
- 3b. Demonstrate a practical use of two half-hitches.
- 3c. Demonstrate a practical use of the taut-line hitch.
- 8. Describe the steps in Scouting's Teaching EDGE method. Use the Teaching EDGE method to teach another person how to tie the square knot.

## Second Class

- 2f. Demonstrate tying the sheet bend knot. Describe a situation in which you would use this knot.
- 2g. Demonstrate tying the bowline knot. Describe a situation in which you would use this knot.

## First Class

- 4a. Show how to tie a square knot, two half-hitches, and a taut-line hitch. Explain how each knot is used.
- 4b. Show the proper care of a rope by learning how to whip and fuse the ends of different kinds of rope.

## Pioneering

**Whip/Fuse:** West Country methods of whipping a rope. Fuse the ends of a rope.

**Knots:** clove hitch, butterfly knot, roundturn with two half hitches, rolling hitch, water knot, carrick bend, sheepshank, and sheet bend.

**Lashings:** square, diagonal, round, shear, tripod, and floor lashing.

**Splicing:** back splice, eye splice, and short splice.

## Climbing

- Figure eight on a bight
- Figure eight follow-through
- Water knot
- Double fisherman's knot (Grapevine knot)

## Fishing

- Improved clinch knot
- Palomar knot
- Uni knot
- Uni to uni knot
- Arbor knot

## Canoeing

- Trucker's hitch
- Tautline hitch
- Bowline