

# EMERGENCY PREPAREDNESS MERIT BADGE REQUIREMENTS

*The previous version of the Merit Badge requirements can be found in Scoutbook*

**NOTE:** The official merit badge pamphlets are now free and downloadable [HERE](#) or can be purchased at the [Scout Shop](#).

## 1. Emergency Situations. Do the following:

(a) Discuss with your counselor the aspects of emergency preparedness and include in your discussion the kinds of questions that are important to ask yourself as you consider each of these: prevention, protection, mitigation, response, and recovery.

Resource: [5 Steps of Disaster Risk Management \(video\)](#)

(b) Using a chart, spreadsheet, or another method approved by your counselor, demonstrate your understanding of each aspect of emergency preparedness listed in requirement 1(a) (prevention, protection, mitigation, response, and recovery) for 10 emergency situations from the list below. Discuss your findings with your counselor.

(1) Home stovetop or oven fire

Resource: [How to Put Out a Stovetop Fire \(video\)](#)

(2) Home flammable liquid fire

Resource: [Flammable Liquids \(video\)](#)

(3) Gas leak in or near a home or with outside cooking

Resources: [What to Do If You Smell Gas \(video\)](#)

[How to Turn Off Main Gas Valve \(video\)](#)

(4) Food poisoning

Resources: [Stomach Flu and Food Poisoning \(video\)](#)

[Safe Food Handling \(video\)](#)

[How to Know If You Have Food Poisoning \(video\)](#)

(5) Automobile crash

Resource: [Responding to a Car Crash \(video\)](#)

(6) Vehicle stalled in the desert

Resource: [A Desert Survival Experience \(video\)](#)

(7) Vehicle trapped in a blizzard

Resource: [How to Survive A Car Stranding in Winter \(video\)](#)

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(8) Backcountry injury

Resources: [Patient Assessment \(video\)](#)

[Review of Traumatic Injuries with Wilderness First Aid \(video\)](#)

(9) Boating or water accident

Resource: [Preventing and Managing Boating Accidents \(website\)](#)

(10) Toxic chemical spills and releases

Resources: [Chemical Spill Preparedness \(video\)](#)

[Household Chemical Emergencies \(website\)](#)

(11) Nuclear power plant emergency

Resource: [How to Stay Safe in a Nuclear Emergency \(video\)](#)

(12) Fire or explosion in a public place

Resources: [How to Survive a Building Explosion \(video\)](#)

[How to Survive a Burning High-Rise \(video\)](#)

(13) Violence in a public place

Resource: [A Navy SEAL Reveals How to Survive an Active Shooter \(video\)](#)

(14) Wildland fire

Resource: [If You Are Trapped by a Wildfire \(video\)](#)

(15) Avalanche (snowslide or rockslide)

Resources: [Survive an Avalanche \(video\)](#)

[How to Survive a Landslide \(video\)](#)

(16) Earthquake

Resource: [10 Ways to Survive an Earthquake \(video\)](#)

(17) Tsunami

Resource: [How to Survive a Tsunami \(video\)](#)

(18) Major flooding or a flash flood with water outage

Resource: [How to Survive a Flood \(video\)](#)

(19) Hurricane with power outage

Resource: [How to Survive a Hurricane \(video\)](#)

(20) Tornado

Resource: [How to Survive a Tornado \(video\)](#)

(21) Lightning storm

Resources: [What Happens When You Are Struck by Lightning \(video\)](#)

[Backcountry Lightning Safety \(website\)](#)

**2. Planning for Family Emergencies. Do the following:**

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(a) At a family meeting, discuss the situations on the chart you created for requirement 1(b) and make emergency plans for sheltering-in-place and for evacuation of your home. Discuss your family meeting and plans with your counselor.

Resources: [How to Shelter in Place \(video\)](#)  
[How to Evacuate From Wildfires \(video\)](#)

(b) Develop and practice a plan of escape for your family in case of fire in your home. Draw a floor plan with escape routes and a map with a safe meeting place. Discuss your family's home escape plan with your counselor.

(c) Using a checklist in the *Emergency Preparedness* merit badge pamphlet or one approved by your counselor, prepare or inspect a family disaster kit for sheltering-in-place and for evacuation of your home. Review the needs and uses of the items in a kit with your counselor.

Resources: [Checklist for Sheltering in Place \(PDF\)](#)  
[Checklist for Evacuation \(PDF\)](#)  
[Build a Kit \(website\)](#)

### 3. Preventing Accidents and Emergencies. Do ONE of the following:

(a) Using a home safety checklist included in the *Emergency Preparedness* merit badge pamphlet or one approved by your counselor, inspect a home (or a similar building near where you live or at a camp) for safety hazards with the help of an adult. Present your completed checklist to and discuss your findings with your counselor.

Resource: [Checklists Home Safety \(PDF\)](#)

(b) Develop emergency prevention plans for five family activities outside the home, as approved by your counselor. (Examples are taking a picnic to a park, seeing a movie, attending a worship service, an outing at a beach, traveling to visit a relative, or attending a ball game or concert.) Each plan should include an analysis of possible hazards, proposals to prevent, protect from, mitigate, respond to, and recover from emergencies, and the reasons for the actions that you propose.

Resource: [Building an Emergency Kit \(video\)](#)

### 4. Dangerous Situations. Show how you could save a person from the following dangerous situations without putting yourself in danger:

(a) Live household electric wire

Resource: [Rescue and First Aid for Electric Shock \(video\)](#)

(b) A structure filled with carbon monoxide

Resource: [Rescue from CO Poisoning \(video\)](#)

(c) Clothes on fire

Resource: [Stop. Drop. Roll. Get Low and Go \(video\)](#)

(d) Drowning, using nonswimming rescues (including accidents on ice)

Resources: [Reach, Throw, Row, but Don't Go! \(video\)](#)

[A Patrol Performs An Ice Rescue \(video\)](#)

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### 5. Signaling for Help. Do the following:

(a) Show three ways of attracting and communicating with rescue aircraft or drones.

Resource: [Ground to Air Signals \(video\)](#)

(b) Show ways to attract the attention of searchers on the ground if you are lost in the wilderness.

Resource: [Ways to Signal for Help in the Wilderness \(video\)](#)

(c) Show ways to attract the attention of searchers on the water if you are stranded with a capsized or disabled motorboat or sailboat.

Resources: [Signaling Devices for a Water Rescue \(video\)](#)

[Water Rescue Signaling \(video\)](#)

[How does an EPIRB work? \(video\)](#)

[PLB and EPIRB Emergency Beacons \(video\)](#)

**6. Moving an Injured Person. With another person, show two good ways to transport an injured person out of a remote area using improvised stretchers to conserve the energy of rescuers while ensuring the well-being and protection of the injured person.**

Resource: [Improvised Stretchers \(video\)](#)

**7. National Incident Management System (NIMS) and Incident Command System (ICS). Do the following:**

(a) Describe the National Incident Management System (NIMS) and the local Incident Command System (ICS).

Resources: [NIMS \(video\)](#)

[ICS \(video\)](#)

(b) Find out how your community and its leaders work to manage and to train for disasters. Discuss this information with your counselor.

(c) Discuss how a Scout troop can help in an emergency situation using ICS.

**8. Emergency Service. Do the following:**

(a) Discuss with your counselor the duties that a Scout troop should be prepared to do, the training they need, and the safety precautions they should take for the following emergency services:

Resource: [Agency Cooperation in an ICS \(video\)](#)

(1) Crowd and traffic control

Resource: [Guidelines for Managing Crowds \(website\)](#)

(2) Messenger service during an incident

Resource: [Social Media Messaging for Natural Disasters \(website\)](#)

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(3) Collection and distribution services

Resource: [Food Bank \(video\)](#)

(4) Group feeding, shelter, and sanitation

Resource: [Feeding LA Wildfire Evacuees \(video\)](#)

(b) Prepare a written plan for mobilizing your troop when needed to do emergency service. If your troop already has a mobilization plan, present the plan to your counselor and tell your part in making the plan work.

(c) Using a checklist in the *Emergency Preparedness* merit badge pamphlet or one approved by your counselor, prepare or inspect a personal emergency service pack for a mobilization call. Explain the needs and uses of the contents to your counselor.

Resources: [Checklist for Go Bag \(PDF\)](#)

[Family and Personal Emergency Kits \(website\)](#)

(d) Take part in an emergency service project, either a real one or a practice exercise, with a Scouting troop or a community agency or at Scout camp or at a school. Review what you learned and practiced with your counselor.

Resource: [Emergency Procedures at Camp \(video\)](#)

**9. First Aid Merit Badge. Earn the First Aid merit badge.**

**10. Careers. Do ONE of the following:**

(a) Interview an emergency services coordinator or a civil servant about their work in disaster management. Learn about how they chose this career and about their duties. Discuss what you learned with your counselor and whether you might be interested in this career.

Resource: [NYC Emergency Management Interns \(video\)](#)

(b) Identify three career opportunities that would use skills and knowledge in emergency services. Pick one and research the training, education, certification requirements, experience, and expenses associated with entering the field. Research the prospects for employment, starting salary, advancement opportunities, and career goals associated with this career. Discuss what you learned with your counselor and whether you might be interested in this career.

Resource: [Explore a Career in Disaster and Emergency Management \(video\)](#)

(c) Identify how you might use the skills and knowledge in the field of emergency preparedness to pursue a personal hobby and/or healthy lifestyle. Research the additional training required, expenses, and affiliation with organizations that would help you maximize the enjoyment and benefit you might gain from it. Discuss what you learned with your counselor and share what short-term and long-term goals you might have if you pursued this.

Resource: [Teen CERT Team Training \(video\)](#)

# FIRE SAFETY MERIT BADGE REQUIREMENTS

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Science of and Hazards of Fire. Do the following:**

- (a) Explain the concept of fire.
- (b) Name the parts of the fire tetrahedron and the products of combustion.
- (c) Describe the life cycle of a fire.
- (d) Explain the three methods of heat transfer.

**Fire Extinguishers. Do the following:**

- (a) Explain the different classes of fires.
- (b) Identify the different classes of fire extinguishers and which should be used for each class of fire.
- (c) Demonstrate how to use a fire extinguisher and a fire blanket.

**Fire-related Injuries. Do the following:**

- (a) Explain and demonstrate the technique of stop, drop, roll, cool, and call.
- (b) Describe how clothing fires occur, how to prevent them, and how clothing can prevent or contribute to burn injuries.
- (c) Identify the most frequent causes of burn injuries and how to prevent them.
- (d) Review the prevention of, symptoms and signs of, and treatment of airway burns and carbon monoxide (CO) poisoning.

**Origins of Fires. Do the following:**

- (a) Explain the four classifications of fire origin (natural, accidental, incendiary, or undetermined) and give an example of each.

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(b) Describe how a fire classified as incendiary might lead to criminal prosecution of a person charged with arson.

### **Fire Safety at Home. Do the following:**

(a) Describe how to prevent the frequent causes of home fires, including unattended cooking, electricity, smoking, clothes dryers, and rechargeable batteries.

(b) Describe how to prevent frequent causes of seasonal and holiday-related home fires, including fires related to home heating, holiday trees, candles, and fireworks.

(c) Demonstrate how to safely light and extinguish a candle. Discuss with your counselor, then with your family, how to safely use candles.

(d) Using the Home Fire Safety Checklist in the *Fire Safety* merit badge pamphlet or one approved by your counselor, and with the help of an adult, inspect a home (or a similar building near where you live or at a camp) for fire safety hazards. Present your completed checklist to your counselor and discuss your findings.

(e) Determine if, and what types of, smoke and CO alarms are required in homes in your community. List what types of smoke and CO alarms your home has, their locations, and their expiration dates.

(f) Demonstrate maintenance of smoke and CO alarms to your counselor and review plans to replace expired alarms.

(g) Develop a home fire-escape plan and a fire-drill schedule with your family, draw a floor plan of your home with exits marked and a map showing your family meeting point, and conduct a home fire drill.

(h) Explain what to do and what not to do if you smell natural gas and if you smell smoke.

(i) Explain how you would report a fire to have the fire department respond.

### **Safety with Flammable and Combustible Liquids. Do the following:**

(a) Explain what flammable and combustible liquids are commonly used in homes and how to safely store them.

(b) Describe the safe way to refuel a liquid-fueled engine, such as a lawn mower, outboard motor, farm machine, or automobile with fuel from an approved container.

(c) Describe the options available for safely disposing of unwanted flammable, combustible, and hazardous substances in your community.

### **Fire Safety in Public Buildings. Do the following:**

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- (a) Explain how public buildings are designed for fire safety.
- (b) Explain what fire safety systems and equipment can be found in public buildings.
- (c) Explain what fire safety precautions you should take when you are in a public building.

### **Fire Safety at Camp. Do the following:**

- (a) Explain how the Leave No Trace Seven Principles and the Outdoor Code apply to camping fires.
- (b) Demonstrate lighting a match safely, the proper way to extinguish it, and to dispose of it. Explain the similarities and differences between safety matches and strike-anywhere matches.
- (c) Explain and demonstrate making sparks with flint and steel or with a ferro rod and catching a spark to create a flame. Extinguish the flame safely using one of principles of the fire tetrahedron.
- (d) Demonstrate the safe way to start a charcoal fire.
- (e) Describe three common campsite fire lays. Collect, prepare, and set up tinder, kindling, and fuel for a campfire following the Leave No Trace Seven Principles and the Outdoor Code. Ignite your fire lay and safely extinguish your fire.
- (f) Demonstrate using a camp stove.
- (g) Explain how to set up and keep a campsite safe from fire.
- (h) Develop a lesson plan to teach a fire safety skill or topic, such as lighting a candle or a match or a charcoal fire or a lantern or a camp stove or using flint and steel or setting up a fire lay. Review your lesson plan with your counselor. Teach your skill or topic to one or more Scouts using the EDGE method.

### **Wildland Fires. Do the following:**

- (a) List causes of wildland fires and ways to prevent them.
- (b) Explain the social, economic, and environmental consequences of wildland fires.

### **Careers. Do ONE of the following:**

- (a) Visit a fire station in-person. Identify the various types of fire service vehicles. From the firefighters you meet during your visit, learn about the fire prevention activities in your community and about their careers. Discuss with your counselor what you learned during your tour and interviews.

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(b) Identify three career opportunities that would use skills and knowledge in the field of fire safety. Pick one and research the training, education, certification requirements, experience, and expenses associated with entering the field. Research the prospects for employment, starting salary, advancement opportunities and career goals associated with this career. Discuss what you learned with your counselor and whether you might be interested in this career.

# FIRST AID MERIT BADGE REQUIREMENTS

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**Handling a First Aid Emergency. Do the following:**

(a) Explain the steps necessary to assess and handle a first aid emergency, including a safety evaluation of the scene.

Resources: [The 3 C's of First Aid: Check, Call, Care \(website\)](#)  
[Check for Scene Safety \(video\)](#)

(b) Tell how you would obtain emergency medical assistance from your home and from a remote location on a wilderness camping trip.

Resources: [What to Say When You Call 911 \(video\)](#)  
[What Happens When You Call 911 \(video\)](#)  
[Preparing for a Medical Emergency at Home \(website\)](#)  
[Calling for Help for a Wilderness Emergency \(website\)](#)

(c) Demonstrate the precautions you must take to reduce the risk of transmitting an infection between you and the victim while administering first aid, including the safe disposal of used first aid supplies.

Resources: [Standard Precautions \(video\)](#)  
[How to Remove Disposable Gloves \(video\)](#)  
[Using Personal Protective Equipment in First Aid \(video\)](#)

(d) Demonstrate evaluation of and management of a patient's airway and breathing.

Resources: [Head Tilt, Chin Lift, Jaw Thrust \(video\)](#)  
[Look, Listen, Feel \(video\)](#)

(e) Demonstrate a thorough examination of an accident victim.

Resource: [Head to Toe Exam \(video\)](#)

(f) Discuss why shock is an emergency.

Resources: [Recognizing Shock \(video\)](#)  
[Shock From Bleeding \(video\)](#)  
[Shock and Bleeding \(video\)](#)

(g) Define the term triage and describe examples of triage situations that you may encounter.

Resources: [Multiple Casualties in a Remote Location \(video\)](#)  
[Triage \(video\)](#)

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### **Preparing for First Aid Emergencies. Do the following:**

(a) Obtain a copy of the Scout Annual Health and Medical Record and discuss the importance of the form including information on immunizations, allergies, medications, health history, and medical examinations to providing first aid at Scouting events.

Resource: [Scout Health Forms \(website\)](#)

(b) Using checklists provided in the *First Aid* merit badge pamphlet or ones approved by your counselor, do the following:

(1) Assemble a personal first-aid kit for hiking and backpacking. Demonstrate the proper use of each item in your first-aid kit to your counselor.

Resources: [Personal, Family, and Troop First Aid Kit Checklist \(PDF\)](#)

[First Aid Kit Checklists \(website\)](#)

(2) With your counselor, inspect a unit, home, vehicle, or camp first-aid kit and discuss your findings.

### **Wounds with No External Bleeding. Describe the symptoms and signs of, show first aid for, and explain prevention of these wounds:**

Resources: [The Science of Skin \(video\)](#)

[How a Wound Heals Itself \(video\)](#)

[How Wounds Heal \(video\)](#)

(a) Closed wounds, such as a bruise (contusion) or a hematoma

Resources: [Bruise: What to Do \(video\)](#)

[First Aid for Bruises \(website\)](#)

[First Aid for a Hematoma \(video\)](#)

[How Bruises Change Color \(video\)](#)

(b) Superficial, partial thickness, and full thickness thermal (heat) burns or scalds

Resources: [Types of Burns \(video\)](#)

[Thermal, Chemical and Electrical Burns \(video\)](#)

(c) Chemical burns

Resource: [Chemical Burns \(website\)](#)

(d) Electrical burns

Resource: [Electrical Burns \(website\)](#)

(e) Sunburn

Resources: [Sunburn \(video\)](#)

[Sunburn, Causes, Signs and Symptoms, Diagnosis and Treatment \(video\)](#)

(f) Snow blindness

Resource: [Snow Blindness \(video\)](#)

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(g) Immersion foot, frostnip, frostbite, and ice burns

*Resources:* [Immersion \(Trench\) Foot \(video\)](#)

[Immersion \(Trench\) Foot \(website\)](#)

[Frostbite \(video\)](#)

[Frostbite \(website\)](#)

(h) Abrasions, such as chafing and rope burns

*Resources:* [How To Prevent Chafing While Hiking \(website\)](#)

[Treatment of Rope Burns \(website\)](#)

(i) Blisters on the hands, feet, buttocks, and shoulders

*Resource:* [How to Prevent and Treat Blisters \(website\)](#)

(j) Puncture wounds from splinters, rope splinters, nails, and fish hooks

*Resources:* [Splinters \(video\)](#)

[Tips for Removing Splinters, Including Tape and White Glue \(website\)](#)

[Puncture Wounds on the Feet \(website\)](#)

[Removing a Fishhook \(video\)](#)

(k) Rash from poisonous plants

*Resources:* [Poisonous Plants \(video\)](#)

[Poisonous Plants \(website\)](#)

(l) Bug bites of chiggers, ticks, mosquitoes, and biting gnats

*Resources:* [First Aid for Chigger Bites \(video\)](#)

[Removing a Tick and Preventing Tick Bites \(website\)](#)

[Preventing and Treating Mosquito Bites \(website\)](#)

[Biting Gnats \(video\)](#)

(m) Bee stings

*Resources:* [How to Treat a Bee Sting \(video\)](#)

[What if a Bee Stings You? \(video\)](#)

[Never Pinch a Bee Sting \(video\)](#)

(n) Bites of spiders

*Resources:* [Black Widow vs Brown Recluse Spider Bites \(video\)](#)

[Spider Bites \(website\)](#)

(o) Sting of a scorpion

*Resources:* [How Scorpion Stings Work \(video\)](#)

[Scorpion Stings \(website\)](#)

(p) Bite of a pet or wild mammal or human

*Resource:* [Treatment of Animal and Human Bites \(video\)](#)

(q) Bite of a venomous snake

*Resources:* [First Aid for Snake Bites \(website\)](#)

[First Aid for Snake Bites \(video\)](#)

[Venomous Snakes \(website\)](#)

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### **Bleeding Wounds. Describe the symptoms and signs of, show first aid for, and explain prevention of these wounds:**

(a) A nosebleed.

Resource: [Nosebleed \(video\)](#)

(b) An open wound with mild or moderate bleeding, such as a scratch or a scrape (abrasions), or a shallow cut (laceration).

Resource: [Care of Minor Wounds \(video\)](#)

(c) An open wound with severe bleeding such as a deep cut on an arm or leg.

Resource: [Using Direct Pressure to Control Life-Threatening Bleeding \(video\)](#)

(d) Explain when it is appropriate and is not appropriate to use one or more tourniquets. List some of the benefits and dangers of using a tourniquet. Demonstrate the application of a tourniquet without tightening it.

Resources: [How to Use a Tourniquet \(video\)](#)

[Tourniquet Mistakes \(video\)](#)

### **Breathing Emergencies. Describe the symptoms and signs of, show first aid for, and explain prevention of these conditions affecting breathing:**

(a) Choking

Resources: [Back Blows and Abdominal Thrusts for Choking \(video\)](#)

[First Aid for an Unresponsive Choking Adults \(video\)](#)

(b) Asthmatic attack

Resources: [What is Asthma? \(video\)](#)

[Using Albuterol for an Asthma Attack \(video\)](#)

[Pursed Lip Breathing for Asthma \(video\)](#)

(c) Anaphylaxis from an insect bite or sting or from food or product allergy

Resources: [Food Allergy with Anaphylaxis \(video\)](#)

[How to Inject an EpiPen \(video\)](#)

(d) Inhalation injuries

Resources: [Airway Burns \(video\)](#)

[Carbon Monoxide Poisoning \(video\)](#)

(e) Altitude sickness

Resource: [High Altitude Illness Treatment and Prevention \(video\)](#)

### **Loss of Consciousness. Describe the symptoms and signs of, show first aid for, and explain prevention of these conditions causing loss of consciousness:**

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(a) Fainting

Resource: [Fainting \(video\)](#)

(b) Hypoglycemia

Resource: [Diabetic Emergencies \(video\)](#)

(c) Seizure

Resource: [First Aid for a Seizure \(video\)](#)

(d) Drug overdose and alcohol poisoning

Resources: [Naloxone Treatment of an Opioid Overdose \(video\)](#)

[Alcohol Poisoning \(video\)](#)

(e) Underwater hypoxic blackout

Resource: [Underwater Blackout \(website\)](#)

(f) Cold water shock and drowning

Resources: [Understanding Cold Water Shock \(video\)](#)

[How to Perform CPR for a Drowning Victim \(video\)](#)

(g) Lightning strike and electric shock

Resource: [First Aid for Electrical Shocks and Lightning Strikes \(video\)](#)

### **Heart Attack. Do the following:**

(a) Explain what a heart attack is.

Resources: [What Happens During a Heart Attack \(video\)](#)

[Heart Attack vs. Cardiac Arrest \(video\)](#)

(b) Describe the symptoms and signs of a heart attack and first aid for this condition.

Resource: [Symptoms & Signs of a Heart Attack in Women & Men \(video\)](#)

(c) Describe the conditions that must exist before performing CPR on a person.

Resource: [Responding to Cardiac Arrest \(video\)](#)

(d) Demonstrate proper CPR technique using a training device approved by your counselor.

Resource: [Hands-Only CPR \(video\)](#)

(e) Explain the use of an automated external defibrillator (AED).

Resource: [Using an AED \(video\)](#)

(f) Demonstrate or simulate the proper use of an AED, using an AED training device if available.

Resource: [AEDs in Scouting \(website\)](#)

(g) Identify the typical location(s) of one or more AED(s) at public facilities in your community, such as, your school, place of worship, unit meeting place, sports facilities, and/or camp or by using a smart phone app. Discuss the reasons for choosing locations

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like these.

Resource: [Where to Place AEDs \(website\)](#)

### **Muscle and Bone Injuries. Do the following:**

(a) Explain the similarities and differences in a strain, a muscle tear, a tendon rupture, a sprain, a dislocation, a simple fracture, and a compound fracture.

Resources: [Understanding Limb Injuries: Strains, Sprains, Dislocations, Fractures \(video\)](#)  
[Muscle Strains and Tears \(video\)](#)

[Dislocations and Types of Fractures \(video\)](#)

(b) Describe the symptoms and signs of and first aid for a muscle strain, a muscle tear, and a tendon rupture.

Resource: [Muscle Strains and Tears \(video\)](#)

(c) Describe the symptoms and signs of, and potential complications of, a sprain, a fracture, and a dislocation.

Resource: [Fractures and Dislocations \(video\)](#)

(d) Demonstrate bandages for these injuries:

(1) Arm slings for forearm or upper arm or collarbone fractures

Resource: [Bandages for Sprained Ankle, Head, Upper Arm, Collarbone \(video\)](#)

(2) Elastic wrap and cravat bandages for ankle sprain

Resource: [Elastic Wrap for Ankle Sprain \(video\)](#)

(3) Elastic wrap and cravat bandages for wrist sprain or hand injury.

Resource: [Wrist Wrap \(video\)](#)

(e) Demonstrate the proper procedures for handling and splinting of suspected closed or open fractures or dislocations of the:

(1) Finger and toe

Resource: [Buddy Taping Toes \(video\)](#)

(2) Forearm or wrist

Resource: [Splints for Arms and Legs \(video\)](#)

(3) Upper leg

Resource: [Upper Leg Splint \(video\)](#)

(4) Lower leg or ankle

Resource: [Leg Splints \(video\)](#)

### **Head and Spine Injuries. Do the following:**

(a) Describe the symptoms and signs of, relationships between, possible complications of, and prevention of head, neck, and back injuries.

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*Resources:* [Head, Neck, and Spine Injuries \(video\)](#)  
[Assessing a Head Injury \(video\)](#)

(b) Describe the symptoms and signs of and first aid for a concussion.

*Resources:* [What Is a Concussion? \(video\)](#)  
[First Aid for Concussions \(video\)](#)

(c) Demonstrate first aid for an open head wound with a triangular or other bandage.

*Resource:* [Forehead Cravat Bandage \(video\)](#)

(d) Demonstrate first aid for someone with a suspected neck or back injury.

*Resource:* [Head, Neck, and Spine Injuries During Sports \(video\)](#)

### **Moving a Patient. Do the following:**

(a) Describe the conditions under which an injured person should and should not be moved.

*Resource:* [When to Move an Injured Person \(website\)](#)

(b) If a sick or an injured person must be moved, tell how you would decide the best method. Demonstrate these methods.

*Resource:* [Lifts and Carries \(website\)](#)

(c) By yourself and with a partner, demonstrate how to transport a person from a smoke-filled room.

*Resource:* [Fire and EMS Training | Moving a Victim | Moving a Patient \(video\)](#)

(d) By yourself and with a partner, demonstrate how to transport a person with a sprained ankle for at least 25 yards.

*Resource:* [Human Crutch Techniques \(video\)](#)

(e) With helpers under your supervision, improvise a stretcher and move a presumably unconscious person for at least 25 yards.

*Resource:* [Improvised Stretchers \(video\)](#)

### **Heat- and Cold-Related Conditions. Describe the symptoms and signs of, show first aid for, and explain prevention of these conditions associated with exertion and/or heat or cold exposure:**

(a) Dehydration and over-hydration

*Resources:* [What is Dehydration? \(video\)](#)  
[Overhydration \(video\)](#)

(b) Heat cramps and muscle pain after exertion

*Resources:* [Heat Cramps, Heat Exhaustion, and Heat Stroke \(video\)](#)  
[Muscle Damage from Over-exercising \(video\)](#)

(c) Heat exhaustion

*Resource:* [Heat Exhaustion vs Heat Stroke \(video\)](#)

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(d) Heat stroke

Resource: [Diagnosis and Treatment of Heat Stroke \(video\)](#)

(e) Chest pains associated with cold exposure

Resource: [Heart Attacks from Shoveling Snow \(video\)](#)

(f) Hypothermia

Resources: [Hypothermia \(video\)](#)

[C.O.L.D. Guidelines for Staying warm \(website\)](#)

[Frostbite and Hypothermia \(website\)](#)

[Recognize the "Umbles" and Avoid Hypothermia \(video\)](#)

### **Mental Health Conditions. Describe the following:**

(a) Reactions associated with at least three stressful situations, such as mountain backpacking, rappelling, a ropes course, speaking before an audience, making a phone call to an adult, taking a swim test, missing home, lighting a match, trying out for a sports team, meeting someone for the first time, or other stressful circumstances.

Resources: [3 Tools for Situational Anxiety \(video\)](#)

[Overcoming Social Anxiety \(video\)](#)

[Power of Self-Confidence \(video\)](#)

[Getting Ready for Tryouts \(video\)](#)

(b) The actions that you and others should take to prepare for and manage these situations.

Resources: [Techniques to Manage Stress \(video\)](#)

[Box Breathing | The Breathing Exercise Used By Navy SEALs \(video\)](#)

[Tips for Overcoming Phone Anxiety \(video\)](#)

[How To STOP Letting Social Anxiety Control You \(video\)](#)

(c) The indications that someone might be a danger to themselves or others.

(d) The actions that you should take if you suspect that someone might be a danger to themselves or others.

### **Miscellaneous Conditions. Describe the symptoms and signs of, show first aid for, and explain prevention of the following conditions:**

(a) Object in the eye

Resources: [5 Ways To Safely Remove Something Stuck In Your Eye \(video\)](#)

[Penetrating and Chemical Eye Injuries \(video\)](#)

(b) Broken, chipped, loosened, or knocked out tooth

Resources: [Dental Emergencies \(video\)](#)

[Dental Injuries \(website\)](#)

(c) Vomiting and diarrhea associated with food poisoning

Resource: [First Aid for Vomiting and Diarrhea \(video\)](#)

## Appendix: Relevant Merit Badges

(d) Abdominal pain

Resources: [Causes of Abdominal Pain \(website\)](#)

[Appendicitis \(video\)](#)

[What Does Appendix Pain Feel Like? \(video\)](#)

(e) Stroke

Resources: [Types of Strokes \(video\)](#)

[First Aid for Stroke \(video\)](#)

[FAST Symptoms and Signs of a Stroke \(video\)](#)

[What Causes Strokes? \(video\)](#)

**With guidance from your counselor, develop a plan to teach a first-aid skill or topic using the EDGE method. Discuss your skill, topic, and plan with your counselor, and then teach your skill or topic to your family or to one or more Scouts.**

**Resource: [The Teaching EDGE: The best way to teach someone a new skill \(website\)](#)**

**Do ONE of the following:**

(a) Visit an emergency medical station house or training center in person. From the medical first responders that you meet during your visit, learn about how they serve their community and about their careers. Discuss with your counselor what you learned during your tour and interviews.

Resource: [EMS Training Center Virtual Tour \(video\)](#)

(b) Interview an emergency medical services professional about their work. Learn about how they chose this career and about their duties. Discuss what you learned with your counselor and whether you might be interested in this career.

Resources: [A Day with a Paramedic \(video\)](#)

[Female EMS Helicopter Pilot: A Day in a Life \(video\)](#)

[An ER Nurse \(video\)](#)

(c) Identify three career opportunities that would use skills and knowledge in emergency medical services. Pick one and research the training, education, certification requirements, experience, and expenses associated with entering the field. Research the prospects for employment, starting salary, advancement opportunities, and career goals associated with this career. Discuss what you learned with your counselor and whether you might be interested in this career.

Resource: [5 Careers that Require CPR & First Aid Certification \(video\)](#)

(d) Identify how you might use the skills and knowledge in the field of emergency medical services to pursue a personal hobby and/or healthy lifestyle. Research the additional training required, expenses, and affiliation with organizations that would help you maximize the enjoyment and benefit you might gain from it. Discuss what you learned with your counselor and share what short-term and long-term goals you might have if you pursued this.

Resource: [EMS and Fire Volunteers in Washington State \(video\)](#)

# ORIENTEERING MERIT BADGE REQUIREMENTS

*The previous version of the Merit Badge requirements can be found in Scoutbook*

**NOTE:** The official merit badge pamphlets are now free and downloadable [HERE](#) or can be purchased at the [Scout Shop](#).

Show that you know first aid for the following types of injuries that could occur while orienteering: cuts, scratches, blisters, snakebite, insect stings, tick bites, heat and cold reactions (sunburn, heatstroke, heat exhaustion, hypothermia), dehydration. Explain to your counselor why you should be able to identify poisonous plants and poisonous animals that are found in your area.

**Resources:** [10 Ways to Handle Emergencies While Orienteering: Essential Tips for Adventure Safety \(website\)](#)

[Tick Checks \(video\)](#)

[Heat Cramps, Heat Exhaustion, and Heat Stroke \(website\)](#)

[Poisonous Plants \(video\)](#)

Explain what orienteering is.

**Resource:** [Start Orienteering || A Newcomer's Guide \(video\)](#)

**Do the following:**

(a) Explain how a compass works. Describe the features of an orienteering compass.

**Resource:** [Basic Orienteering \(video\)](#)

(b) In the field, show how to take a compass bearing and follow it.

**Resource:** [How to Use a Compass \(video\)](#)

**Do the following:**

**Resource:** [Topographic Maps \(video\)](#)

(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.

**Resource:** [Magnetic Declination \(video\)](#)

(d) Show a topographic map with magnetic north-south lines.

(e) Show how to measure distances on a map using an orienteering compass.

## Appendix: Relevant Merit Badges

(f) Show how to orient a map using a compass.

**Set up a 100-meter pace course. Determine your walking and running pace for 100 meters. Tell why it is important to pace-count.**

**Resource:** [Establishing a Pace Count \(video\)](#)

**Do the following:**

(a) Identify 20 international control description symbols. Tell the meaning of each symbol.

**Resource:** [International Orienteering Symbols \(PDF\)](#)

(b) Show a control description sheet and explain the information provided.

**Resource:** [Key Terms \(website\)](#)

(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, and rough versus fine orienteering.

**Resource:** [Setting Up an Orienteering Course \(website\)](#)

**Do the following:**

(a) Take part in three orienteering events. One of these must be a cross-country course.

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

(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.

**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.

**Act as an official during an orienteering event. This may be during the running of the course you set up for requirement 8.**

**Resource:** [How to Setup a Compass Course \(video\)](#)

**Teach orienteering techniques to your patrol, troop or crew.**

# PIONEERING MERIT BADGE REQUIREMENTS

*The previous version of the Merit Badge requirements can be found in Scoutbook*

**NOTE:** All pioneering projects constructed for this merit badge must comply with height standards as outlined in the [Guide to Safe Scouting](#).

Counselors should also ensure that Scouts follow the Leave No Trace Seven Principles and the Outdoor Code in their pioneering projects. Just as hiking and camping without a trace are signs of expert outdoorsmanship, protecting the environment is a mark of responsible pioneering. Minimize impacts to the land.

**NOTE:** The official merit badge pamphlets are now free and downloadable [HERE](#) or can be purchased at the [Scout Shop](#).

**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.

Resource: [Safe Pioneering \(video\)](#)

(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.

Resources: [Pioneering Safety Checklist \(PDF\)](#)

[Sunburn \(video\)](#)

[First Aid for Rope Burns \(website\)](#)

**Do the following:**

(a) Demonstrate the West Country method of whipping a rope.

Resources: [How to Tie a Half Knot \(West Country\) Whipping \(video\)](#)

[How to Tie a Sailmaker's Whipping \(video\)](#)

(b) Demonstrate how to tie a rope tackle and the following knots: clove hitch formed as two half hitches, clove hitch on a bight, butterfly knot, roundturn with two half hitches, and rolling hitch.

Resources: [How to Tie a Rope Tackle \(video\)](#)

[How to Tie and Apply a Clove Hitch and Half Hitches \(video\)](#)

[How to Tie a Clove Hitch on a Bight \(video\)](#)

[How to Tie a Butterfly Knot \(video\)](#)

## Appendix: Relevant Merit Badges

[How to Tie a Roundturn with Two Half Hitches \(video\)](#)

[How to Tie a Rolling Hitch \(video\)](#)

(c) Demonstrate and explain when to use the following lashings: square, diagonal, round, shear, tripod, and floor lashing.

Resources: [How to Tie the Mark II Square Lashing \(video\)](#)

[How to Tie a Diagonal Lashing \(video\)](#)

[How to Tie a Round Lashing \(video\)](#)

[How to Tie a Shear Lashing \(video\)](#)

[How to Tie a Tripod Lashing \(with Plain Turns\) \(video\)](#)

[How to Tie a Floor Lashing \(video\)](#)

### Do the following:

(a) Using square and tripod lashings from requirement 2(c), build a Tripod Wash Station (or with your counselor's permission, another camp gadget of your own design).

Resource: [Tripod Hand Wash Station: The Ideal First Class Camp Gadget! \(video\)](#)

(b) Using rolling hitches or roundturns with two half hitches, and round lashings from requirements 2(b) and 2(c), build a 15-foot Scout Stave Flagpole (or with your counselor's permission, another camp gadget of your own design).

Resource: [Patrol Challenge - 15 Foot Scout Stave Flagpole \(video\)](#)

(c) Using shear, square, and floor lashings, clove hitches on a bight, and rope tackles from requirements 2(b) and 2(c), build a Simple Camp Table (or with your counselor's permission, another camp gadget of your own design).

Resource: [Simple Camp Table \(video\)](#)

**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.**

Resource: [How to Prepare and Preserve Lashing Ropes and Pioneering Spars \(video\)](#)

**Explain the uses for the back splice, eye splice, and short splice. View a demonstration on forming each splice.**

Resources: [How to Create a Back Splice \(video\)](#)

[How to Create an Eye Splice \(video\)](#)

[How to Create a Short Splice \(video\)](#)

**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.**

Resource: [Making a Rope from Twine \(video\)](#)

**Explain the importance of effectively anchoring a pioneering project.**

**Describe to your counselor the 3-2-1 anchoring system and the log-and-stake anchoring system.**

Resource: [Anchoring Pioneering Projects \(video\)](#)

## Appendix: Relevant Merit Badges

Describe the lashings that are used when building a trestle, how the poles are positioned, and how X braces contribute to the overall structural integrity of a pioneering project.

**Resource:** [Making a Trestle \(video\)](#)

Working in a group, (or individually with the help of your counselor) build a full size pioneering structure, using one of the following designs in the *Pioneering* merit badge pamphlet: Double A-Frame Monkey Bridge, Single A-Frame Bridge, Single Trestle Bridge, Single Lock Bridge, 4x4 Square Climbing Tower, Four Flag Gateway Tower, Double Tripod Chippewa Kitchen, or another type of structure approved in advance by your counselor. Carefully plan the project, assembling and organizing all the materials, referring to the points under Safe Pioneering, and complying with the height restrictions in the *Guide to Safe Scouting*.

**Resources:** [Making a Trestle \(video\)](#)

[Building Pioneering Projects \(video\)](#)

[Double A-Frame Monkey Bridge \(video\)](#)

[Single Trestle Bridge \(video\)](#)

[Double Tripod Chippewa Kitchen \(video\)](#)

# RIFLE SHOOTING MERIT BADGE REQUIREMENTS

*The previous version of the Merit Badge requirements can be found in Scoutbook*

**NOTE: The official merit badge pamphlets are now free and downloadable [HERE](#) or can be purchased at the [Scout Shop](#).**

**Do the following:**

- (a) Explain what a projectile is, and why any device that shoots a projectile at high speed must be handled with care and respect, and used only in approved locations.
- (b) Explain the basic rules of safe gun handling that apply to all firearms.
- (c) Describe how you would react if a friend visiting your home asked to see your or your family's firearm.
- (d) Explain the need for, types, and use of eye protection and hearing protection.
- (e) Explain the main points of the laws for owning and using guns in your community and state.
- (f) Explain how hunting is related to the wise use of renewable wildlife resources.
- (g) Successfully complete a state hunter education course, or obtain a copy of the hunting laws for your state, then do the following:
  - (1) Explain the main points of hunting laws in your state, and any special laws on the use of guns and ammunition, AND
  - (2) List the kinds of wildlife that can be legally hunted in your state.
- (h) Explain to your counselor the proper hygienic guidelines followed while shooting.
- (i) Identify places in your community where you can join or be a part of range and target activities.
- (j) Discuss with your counselor a list of sources you could contact for information on firearms and their use.

**Working under the supervision of a certified National Rifle Association (NRA) rifle instructor and a certified range safety officer, at a nationally authorized camp property or at a commercial firearm range (as defined in**

## Appendix: Relevant Merit Badges

the *Scouting America National Range and Target Activities Manual*), do **ONE** of the following options:

**Option A—Rifle Shooting (Modern Cartridge Type).** Do ALL of the following:

- (1) Identify the three main parts of a rifle, and tell how they function.
- (2) Identify and demonstrate the rules for safely storing and handling a rifle.
- (3) Identify the two types of cartridges, their parts, and how they function.
- (4) Explain to your counselor what a misfire, hangfire, and squib fire are, and explain the procedures to follow in response to each.
- (5) Explain and demonstrate the five fundamentals of shooting a rifle: aiming, breath control, hold control, trigger control, and follow-through.
- (6) Demonstrate the knowledge, skills, and attitude necessary to safely shoot a rifle on a range, including understanding and following range procedures and commands.
- (7) Explain the basic safety rules for cleaning a rifle, and identify the materials needed.
- (8) Demonstrate how to clean a rifle properly and safely.
- (9) Discuss what points you would consider in selecting a rifle.
- (10) Using a bolt-action .22 caliber rimfire rifle, and shooting from a benchrest or supported prone position at 50 feet, fire five groups (three shots per group) that can be touched by a quarter. Using these targets, explain how to adjust sights to zero a rifle.
- (11) Adjust sights to center the group on the target and fire five groups (five shots per group). In the event that your instructor determines it is not practical to adjust the sights—for instance, on a borrowed rifle—you may explain (rather than doing) how to adjust the sights, and then fire five groups (five shots per group) in which all shots can be touched by a quarter. According to the target used, each shot in the group must meet the following minimum score: A-32 targets: 9; A-17 or TQ-1 targets: 7; A-36 targets: 5.

**Note:** Other suitable NRA targets may be used based on availability.

**Option B—Air Rifle Shooting (BB or Pellet).** Do ALL of the following:

- (1) Identify the three main parts of an air rifle, and explain how they function.
- (2) Identify and demonstrate the rules for safely storing and handling an air rifle.
- (3) Identify the two most common types of air rifle ammunition.
- (4) Explain and demonstrate the five fundamentals of shooting an air rifle: aiming, breath control, hold control, trigger control, and follow-through.

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(5) Demonstrate the knowledge, skills, and attitude necessary to safely shoot on a range, including understanding and following range procedures and commands.

(6) Explain the basic safety rules for cleaning an air rifle, and identify the materials needed.

(7) Demonstrate how to clean an air rifle properly and safely.

(8) Discuss what points you would consider in selecting an air rifle.

(9) Using a BB gun or pellet rifle and shooting from a benchrest or supported prone position at 15 feet for BB guns or 33 feet for pellet rifles, fire five groups (three shots per group) that can be touched by a quarter.

(10) Adjust sights to center the group on the target and fire five groups (five shots per group). In the event that your instructor determines it is not practical to adjust the sights—for instance, on a borrowed air rifle—you may explain (rather than doing) how to adjust the sights, and then fire five groups (five shots per group) in which all shots can be touched by a quarter. According to the target used, each shot in the group must meet the following minimum score: BB rifle at 15 feet (or 5 meters) using TQ-5 targets: 8; Pellet rifle at 25 feet using TQ-5 targets: 8; Pellet rifle at 33 feet (or 10 meters) using AR-1 targets: 6.

**Note:** Other suitable NRA targets may be used based on availability.

**Option C—Muzzleloading Rifle Shooting.** Do ALL of the following:

(1) Discuss with your counselor a brief history of the development of muzzleloading rifles.

(2) Identify principal parts of muzzleloading rifles and discuss how they function.

(3) Identify and demonstrate the rules for safely storing and handling a muzzleloading rifle.

(4) Identify the various grades of black powder and explain their proper and safe use.

(5) Discuss proper safety procedures pertaining to black powder storage.

(6) Discuss proper components of a load.

(7) Identify proper procedures and accessories used for safely loading a muzzleloading rifle.

(8) Identify the causes of a muzzleloading rifle's failure to fire, and explain what a misfire, hangfire, and squib fire are. Explain and demonstrate proper preventive measures, and the procedures to follow in response to each.

## Appendix: Relevant Merit Badges

(9) Demonstrate the knowledge, skills, and attitude necessary to safely shoot a muzzleloading rifle on a range, including understanding and following range procedures and commands.

(10) Explain the basic safety rules for cleaning a muzzleloading rifle, and identify the materials needed.

(11) Demonstrate how to clean a muzzleloading rifle properly and safely.

(12) Discuss what points you would consider in selecting a muzzleloading rifle.

(13) Using a muzzleloading rifle of .45 or .50 caliber and shooting from a benchrest or supported prone position, fire three groups (three shots per group) at 50 feet that can be covered by the base of a standard-size soft drink can.

(14) Adjust the sights to center the group on the target and fire three groups (five shots per group). In the event that your instructor determines it is not practical to adjust the sights—for instance, on a borrowed muzzleloading rifle—you may explain (rather than doing) how to adjust the sights, and then fire three groups (five shots per group) in which all shots can be covered by the base of a standard-size soft drink can. According to the target used, each shot in the group must meet the following minimum score: at 25 yards using NRA A-23 or NMLRA 50-yard targets: 7; at 50 yards using NRA A-25 or NMLRA 100-yard targets: 7.

**Note:** Other suitable NRA targets may be used based on availability.

**Identify how you could apply the skills and knowledge of safe and responsible use of firearms you learned in this merit badge to pursue a career or personal hobby. Research the additional training and experience you would need, expenses you may incur, and the affiliation with organizations that could help you maximize the positive impact and enjoyment you gain from it. Discuss what you learned with your counselor, and share what short-term and long-term goals you might have if you pursued this.**

## Appendix: Relevant Merit Badges

### **NOTE: Prohibited Activities**

The Scouting America's *Guide to Safe Scouting* states under "Prohibited Activities" that flying in aircraft as part of a search and rescue mission is a prohibited activity for youth members. For complete information, see Scouting America's [Guide to Safe Scouting](#).

**NOTE: The official merit badge pamphlets are now free and downloadable [HERE](#) or can be purchased at the [Scout Shop](#).**  
**Hazards and First Aid. Do the following:**

(a) Show or explain first aid for, and prevention of, injuries and conditions that searchers and subjects could develop during an SAR situation, including:

- (1) Dehydration
- (2) Heatstroke
- (3) Hypothermia
- (4) Shock
- (5) Blisters
- (6) Eye injuries
- (7) Ankle and knee sprains
- (8) Bug bites of chiggers, ticks, mosquitoes, and biting gnats
- (9) Bee stings
- (10) Bites of spiders
- (11) Sting of a scorpion
- (12) Bite of a wild mammal
- (13) Bite of a venomous snake

(b) Explain how the Scout Basic Essentials address hazards outdoors and help lost Scouts stay safe before they are rescued.

(c) Discuss how the safety gear carried by SAR team members in their field packs address SAR hazards.

**Staying and Getting Found. Do the following:**

## Appendix: Relevant Merit Badges

(a) Explain how a trip plan and the buddy system help Scouts with staying found and getting found.

(b) Explain how seasonal and daily weather changes affect Trip Plans.

(c) Explain and show how a lost Scout could send signals that would alert a ground, airborne, or water SAR team to their location.

(d) Demonstrate how to use a signaling mirror.

(e) Explain how a Personal Locator Beacon (PLB) works and the role of the Air Force Rescue Coordination Center (AFRCC).

### **Maps. Using a map, a compass and a GPS device or app approved by your counselor, do the following:**

(a) Point out and explain the 5 D's (Date, Description, Details, Direction or Declination, Distance) of the map.

(b) Choose a location on the map and record the altitude, latitude, longitude, and US National Grid coordinates. Describe how these coordinate systems differ.

(c) Orient the map and take a bearing to another map location. Estimate the distance between, and describe the terrain between, the two locations.

(d) Show a hypothetical place last seen and point out an area on your map that could be used for containment using natural or human-made boundaries.

### **Incident Command System (ICS). Do the following:**

(a) Explain how a local ICS is organized and how it compares with Scouting's patrol method.

(b) Explain how local community agencies work to train for and manage search and rescue situations.

### **SAR Teams. Do the following:**

(a) Explain the official duties of a search and rescue team.

(b) Explain the differences between wilderness, urban, and water SARs.

(c) Identify four types of search and rescue teams and explain situations where they are used.

### **Search and Rescue Procedures. Do the following:**

(a) Explain the difference between search and rescue.

## Appendix: Relevant Merit Badges

- (b) Explain the difference between PLS (place last seen) and LKP (last known point)
- (c) Explain the importance of effective communication in SAR operations.
- (d) Explain how predictions of "lost person behavior" determine SAR search plans for a young child, a teenager, and an adult.
- (e) Explain the following terms:
  - (1) Evaluating search urgency
  - (2) Establishing confinement
  - (3) Scent item
  - (4) Area air scent dog
  - (5) Briefing and debriefing
  - (6) Clue awareness
  - (7) Evidence preservation
  - (8) Tracking a subject
  - (9) Locating a subject using attraction
  - (10) Hasty search
  - (11) Trail sweep search
  - (12) Grid search

### **Plan and Complete a Search. Do the following with a team of Scouts, friends, or family to execute a practice SAR exercise:**

- (a) Choose a hypothetical SAR scenario, either one presented in the *Search and Rescue* merit badge pamphlet or one approved by your counselor.
- (b) Develop an Incident Action Plan (IAP) for a hasty search using the scenario information.
- (c) Before the search begins, conduct a PAUSE briefing to review hazards, safety concerns, personal and shared Scout Basic Essentials, and other gear.
- (d) Execute the search.

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(e) After the search, hold a team debriefing to discuss the search, problems, successful and unsuccessful tactics, and ideas for improvement.

### **Careers. Do ONE of the following:**

(a) Explore careers related to Search and Rescue merit badge or emergency management. Research one career to learn about the training and education needed, costs, job prospects, salary, job duties, and career advancement. With permission of your parent or guardian, your research methods may include an internet or library search, an interview with a professional in the field, or a visit to a location where people in this career work. Discuss with your counselor both your findings and what about this profession might make it an interesting career.

(b) Explore how you could use knowledge and skills from this merit badge to serve as a volunteer on a disaster relief team, a wilderness rescue team, or a ski patrol. Research any training needed, expenses, and organizations that promote or support it. Discuss with your counselor what short-term and long-term goals you might have if you pursue this.

# SIGNS, SIGNALS, AND CODES

## MERIT BADGE

### REQUIREMENTS

*The previous version of the Merit Badge requirements can be found in Scoutbook*

**NOTE:** The official merit badge pamphlets are now free and downloadable [HERE](#) or can be purchased at the [Scout Shop](#).

Discuss with your counselor the importance of signs, signals, and codes, and why people need these different methods of communication. Briefly discuss the history and development of signs, signals, and codes.

Explain the importance of signaling in emergency communications.

Discuss with your counselor the types of emergency or distress signals one might use to attract airborne search-and-rescue personnel if lost in the outdoors or trying to summon assistance during a disaster. Illustrate these signaling examples by the use of photos or drawings.

**Do the following:**

(a) Describe what Morse code is and the various means by which it can be sent. Spell your first name using Morse code. Send or receive a message of six to 10 words using Morse code.

(b) Describe what American Sign Language (ASL) is and how it is used today. Spell your first name using American Sign Language. Send or receive a message of six to 10 words using ASL.

**Do the following:**

(a) Give your counselor a brief explanation about semaphore, why it is used, how it is used, and where it is used.

(b) Explain to your counselor the difference between semaphore flags and nautical flags.

(c) After 4(a) and 4(b) have been completed, do the following:

(1) Spell your first name using semaphore. Send or receive a message of six to 10 words using semaphore.

(2) Using illustrations or photographs, identify 10 examples of nautical flags and discuss their importance.

## Appendix: Relevant Merit Badges

**Explain the braille reading technique and how it helps individuals with sight impairment to communicate. Then do the following:**

- (a) Either by sight or by touch, identify the letters of the braille alphabet that spell your name. By sight or touch, decode a braille message at least six words long.
- (b) Create a message in braille at least six words long, and share this with your counselor.

**Do the following:**

- (a) Describe to your counselor six sound-only signals that are in use today. Discuss the pros and cons of using sound signals versus other types of signals.
- (b) Demonstrate to your counselor six different silent Scout signals. Use these Scout signals to direct the movements and actions of your patrol or troop.

**On a Scout outing, lay out a trail for your patrol or troop to follow. Cover at least one mile in distance and use at least six different trail signs and markers. After the Scouts have completed the trail, follow the Leave No Trace Seven Principles and the Outdoor Code by replacing or returning trail markers to their original locations.**

**For THREE of the following activities, demonstrate five signals each. Tell what the signals mean and why they are used:**

- (a) Sports official's hand signs/signals
- (b) Heavy-equipment operator's hand signals
- (c) Aircraft carrier catapult crew signals
- (d) Cyclist's hand signals
- (e) An activity selected by you and your counselor

**Share with your counselor 10 examples of symbols used in everyday life. Design your own symbol. Share it with your counselor and explain what it means. Then do the following:**

- (a) Show examples of 10 traffic signs and explain their meaning.
- (b) Using a topographical map, explain what a map legend is and discuss its importance. Point out 10 map symbols and explain the meaning of each.
- (c) Discuss text-message symbols and why they are commonly used. Give examples of your favorite 10 text symbols or emoticons. Then see if your parent, guardian, or counselor can identify the meaning or usage of each symbol.

## Appendix: Relevant Merit Badges

**Briefly discuss the history of secret code writing (cryptography). Make up your own secret code and write a message of up to 25 words using this code. Share the message with a friend or fellow Scout. Then share the message and code key with your counselor and discuss the effectiveness of your code.**

# WEATHER MERIT BADGE REQUIREMENTS

*The previous version of the Merit Badge requirements can be found in Scoutbook*

**NOTE:** The official merit badge pamphlets are now free and downloadable [HERE](#) or can be purchased at the [Scout Shop](#). Define meteorology. Explain what weather is and what climate is. Discuss how the weather affects farmers, sailors, aviators, and the outdoor construction industry. Tell why weather forecasts are important to each of these groups.

**Resources:** [What is Meteorology? \(video\)](#)  
[Weather vs Climate \(video\)](#)

Name five dangerous weather-related conditions. Give the safety rules for each when outdoors and explain the difference between a severe weather watch and a warning. Discuss the safety rules with your family.

**Resources:** [Severe Weather Safety \(video\)](#)  
[Know the Difference Between a Watch and a Warning \(video\)](#)  
[Winter's Hidden Hazard - Cold Weather Health & Safety \(video\)](#)  
[Hurricane Preparation and Safety \(video\)](#)

Identify at least two sources of weather forecasts that can be used to prepare for hikes, overnight camping, and other outdoor activities. Name two sources of emergency weather warnings both at home and during outdoor Scout functions.

**Resources:** [The Best Weather App? \(video\)](#)  
[Ways To Get Warnings \(video\)](#)  
[National Weather Service \(website\)](#)

Explain the difference between high and low pressure systems in the atmosphere. Tell which is related to good and to poor weather. Draw cross sections of a cold front and a warm front, showing the location and movements of the cold and warm air, the frontal slope, the location and types of clouds associated with each type of front, and the location of precipitation.

**Resources:** [What Are Weather Fronts? Warm Front, Cold Front? \(video\)](#)  
[Weather 101: High Pressure vs. Low Pressure \(video\)](#)

Tell what causes wind, why it rains, and how lightning and hail are formed.

**Resources:** [What Creates Weather? \(video\)](#)  
[What Causes Lightning? \(video\)](#)  
[What is Hail? \(video\)](#)

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Identify and describe clouds in the low, middle, and upper levels of the atmosphere. Relate these to specific types of weather.

*Resource:* [What Are the Different Types of Clouds? \(video\)](#)

Draw a diagram of the water cycle and label its major processes. Explain the water cycle to your counselor.

*Resources:* [Easy Water Cycle Drawing \(video\)](#)

[How Does Rain Form and What is the Water Cycle? \(video\)](#)

Identify some human activities that can alter the environment, and describe how they affect the climate and people.

*Resources:* [10 Human Activities Heavily Impacting Climate Change \(video\)](#)  
[Causes and Effects of Climate Change \(video\)](#)

Describe how the tilt of Earth's axis helps determine the climate of a region near the equator, near the poles, and across the area in between.

*Resources:* [Why Do We Have Different Seasons? \(video\)](#)

[Why Do We Have Different Climates Across the Globe? \(video\)](#)

Do **ONE** of the following:

(a) Make one of the following instruments: wind vane, anemometer, rain gauge, hygrometer. Keep a daily weather log for one week using information from this instrument as well as from other sources such as local radio and television stations, NOAA Weather Radio All Hazards, and internet sources (with your parent or guardian's permission). Record the following information at the same time every day: wind direction and speed, temperature, precipitation, and types of clouds. Be sure to make a note of any morning dew or frost. In the log, also list the weather forecasts from radio or television at the same time each day and show how the weather really turned out.

*Resources:* [Weather 101: Build Your Own Wind Vane! \(video\)](#)

[DIY Anemometer \(Measure Wind Speed\) \(video\)](#)

[How to Make a Rain Gauge \(video\)](#)

[How to Make Your Own Hygrometer \(video\)](#)

(b) Visit a National Weather Service office or talk with a local radio or television weathercaster, private meteorologist, local agricultural extension service officer, or university meteorology instructor. Find out what type of weather is most dangerous or damaging to your community. Determine how severe weather and flood warnings reach the homes in your community.

*Resource:* [Behind the Scenes of the National Weather Service Atlanta/Peachtree City \(video\)](#)

Give a talk of at least five minutes to a group (such as your unit or a Cub Scout pack) explaining the outdoor safety rules in the event of lightning, flash floods, and tornadoes. Before your talk, share your outline with your counselor for approval.

Explore careers related to this merit badge. Research one career to learn about the training and education needed, costs, job prospects, salary, job duties, and career advancement. Your research methods may include—with your parent or guardian's permission—an internet or library search, an interview with a professional in the field, or a visit to a location where

## Appendix: Relevant Merit Badges

people in this career work. Discuss with your counselor both your findings and what about this profession might make it an interesting career.

*Resources:* [Hurricane Hunter \(video\)](#)

[Careers in Meteorology - National Weather Service Hurricane Meteorologist \(video\)](#)

[Careers in Meteorology - Broadcast Meteorology \(video\)](#)

[Careers in Meteorology - Digital Meteorology \(video\)](#)

# WILDERNESS SURVIVAL MERIT BADGE REQUIREMENTS

*The previous version of the Merit Badge requirements can be found in Scoutbook*

**NOTE: The official merit badge pamphlets are now free and downloadable [HERE](#) or can be purchased at the [Scout Shop](#). Hazards and First Aid. Do the following:**

(a) Show or explain first aid for, and prevention of, injuries and conditions that could occur in backcountry settings, including:

(1) Dehydration

Resources: [Dehydration: Hiking in the Desert \(video\)](#)  
[Symptoms, and Treatment of Dehydration \(website\)](#)

(2) Heatstroke

Resource: [Diagnosis and Treatment of Heat Stroke \(video\)](#)

(3) Hypothermia

Resources: [Recognize the "Umbles" and Avoid Hypothermia \(video\)](#)  
[Hypothermia \(video\)](#)  
[Frostbite and Hypothermia \(website\)](#)

(4) Shock

Resources: [Shock \(video\)](#)  
[Shock and Bleeding \(video\)](#)

(5) Blisters

Resource: [How to Prevent and Treat Blisters \(website\)](#)

(6) Eye injuries

Resource: [5 Ways To Safely Remove Something Stuck In Your Eye \(video\)](#)

(7) Ankle and knee sprains

Resources: [First Aid for Ankle Sprains \(video\)](#)  
[Knee Sprains \(website\)](#)

(8) Bug bites of chiggers, ticks, mosquitoes, and biting gnats

Resources: [Chiggers 101 \(video\)](#)  
[Preventing and Treating Tick Bites \(website\)](#)

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[Preventing and Treating Mosquito Bites \(website\)](#)  
[Biting Gnats \(video\)](#)

(9) Bee stings

Resource: [How to Treat a Bee Sting \(video\)](#)

(10) Bites of spiders

Resources: [Black Widow and Brown Recluse Spider Bites \(video\)](#)  
[Black Widow vs. Brown Recluse Spider Bites \(video\)](#)

(11) Sting of a scorpion

Resource: [Scorpion Stings—Symptoms and Causes \(website\)](#)

(12) Bite of a wild mammal

Resource: [Treatment of Animal and Human Bites \(video\)](#)

(13) Bite of a venomous snake

Resource: [Venomous Snake Bites \(website\)](#)

(b) Explain how the Scout Basic Essentials address hazards of survival situations and are basic to a survival kit.

Resources: [The 10 Scout Basic Outdoor Essentials \(website\)](#)  
[Checklist for a Wilderness Survival Kit \(PDF\)](#)

(c) Explain how a trip plan could help prevent a wilderness survival situation.

Resources: [How to Plan an Adventure | Plan a Camping Trip \(video\)](#)  
[Importance of a Float Plan \(website\)](#)

**Priorities for Survival. Explain the importance of each of the seven priorities of survival in a wilderness location.**

Resource: [Seven Priorities of Survival \(video\)](#)

**Avoiding Panic: Describe ways to avoid panic and to maintain a high level of morale when lost, and explain why this is important.**

Resources: [Lost? Stop Panic & Think Clearly. \(video\)](#)

[Box Breathing | The Breathing Exercise Used By Navy SEALs \(video\)](#)

**4 First Aid Kits. Put together a personal first aid kit and a personal survival kit. Show how items in the kits are used.**

Resources: [Personal Family Troop First Aid Kit Checklist \(PDF\)](#)

[First Aid Kit Checklists \(website\)](#)

[Scout Basic Essentials for Wilderness Survival \(website\)](#)

[Survival Kit List \(PDF\)](#)

**Shelter. Do the following:**

(a) Describe the steps you would take to survive in the following exposure conditions:

(1) Cold and snowy

Resources: [Cold Weather Survival Skills \(video\)](#)  
[Winter Survival Skills \(website\)](#)

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(2) Wet

Resources: [Building Fire in the Rain \(video\)](#)  
[Staying Warm and Dry in Wind and Rain \(video\)](#)  
[Camping in the Rain \(video\)](#)

(3) Hot and dry

Resource: [10 Desert Survival Tips \(video\)](#)

(4) Windy

Resources: [Danger of Wind Chill \(video\)](#)  
[Wind Chill Safety: 5 Tips to Prevent Frostbite \(video\)](#)

(5) At or on the water

Resource: [What to do if Your Boat Capsizes \(website\)](#)

(b) Show that you know the proper clothing to wear while in the outdoors during extremely hot and cold weather and during wet conditions.

Resource: [Packing Lists for Hot and Cold Weather Camping \(website\)](#)

(c) Explain how to protect yourself from bears and raccoons.

Resources: [Preventing and Managing Bear Encounters \(video\)](#)  
[Keeping Raccoons Away from your Campsite \(video\)](#)

(d) Describe how to build or find survival shelters in a forest or in snow.

Resources: [Tree Well Shelter \(video\)](#)  
[A Quick Shelter under a Tree \(video\)](#)

(e) 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.

Resource: [How to Build a Survival Shelter \(video\)](#)

**Fire Building. Using three different methods (other than matches), build and light three fires.**

**Resource: [4 Emergency Fire Starters \(video\)](#)**

**Signaling. Do the following:**

(a) Explain and show how lost or stranded Scouts could send signals to attract the attention of ground, airborne, or water search teams.

Resources: [How to Signal for Ground Rescue \(video\)](#)  
[Surface to Air Visual and Body Signals \(website\)](#)  
[Distress Signals for Water Emergencies \(video\)](#)

(b) Demonstrate how to use a signal mirror.

Resource: [How to Use a Signal Mirror \(video\)](#)

(c) Describe from memory five ground-to-air signals and tell what they mean.

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**Water.** Demonstrate three ways to treat water found in the outdoors to prepare it for drinking.

*Resources:* [Purifying Water \(video\)](#)

[Melting Snow for Water \(website\)](#)

**Food.** Explain why it usually is not wise to eat wild plants or wildlife in a wilderness survival situation.

**Careers.** Do ONE of the following:

(a) Explore careers related to this merit badge. Research one career to learn about the training and education needed, costs, job prospects, salary, job duties, and career advancement. With permission of your parent or guardian, your research methods may include an internet or library search, an interview with a professional in the field, or a visit to a location where people in this career work. Discuss with your counselor both your findings and what about this profession might make it an interesting career.

*Resources:* [Wilderness Jobs \(website\)](#)

[Unusual Careers in the Wilderness \(video\)](#)

(b) Explore how you could use knowledge and skills from the Wilderness Survival merit badge to pursue a hobby or to serve as volunteer. Research any training needed, expenses, and organizations that promote or support it. Discuss with your counselor what short-term and long-term goals you might have if you pursue this.

*Resource:* [Ultralight Backpacking \(website\)](#)