# SCOUTMASTER BUCKY

# Exploration Merit Badge Workbook

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Scouts participating in a Scoutmaster Bucky merit badge opportunity, whether online or in person, should consider using the Exploration merit badge pamphlet for discovery and knowledge, along with the class preparation pages for clarifications, insights, and expectations. These resources are available here:

https://scoutmasterbucky.com/merit-badges/exploration/

**REQUIREMENTS 5a, 5b, 7, and 8a REQUIRE COUNSELOR APPROVAL.**

**REQUIREMENTS 5a, 5b, 7, and 8a REQUIRE PARENT / GUARDIAN PERMISSION.**

**AS YOU WORK ON THE EXPLORATION MERIT BADGE, REMEMBER TO ALWAYS USE THE BUDDY SYSTEM. WHETHER YOU ARE OUT IN THE FIELD OR MEETING WITH YOUR MERIT BADGE COUNSELOR, HAVING A BUDDY WILL HELP ENSURE EVERYONE'S SAFETY. YOU AND YOUR BUDDY CAN WATCH OUT FOR EACH OTHER WHEREVER YOU MAY BE OR WHATEVER YOU MAY BE DOING.**

**REQUIREMENT 1a:** Define exploration.

Notes:

**REQUIREMENT 1a:** Explain how exploration differs from adventure travel, trekking or hiking, tour-group trips, or recreational outdoor adventure trips.

Notes:

| **REQUIREMENT 1b:** | 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. |
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Ocean:

Space:

Jungle:

Science Lab:

| **REQUIREMENT 2:** | Discuss with your counselor the history of exploration. |
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Notes:

| **REQUIREMENT 2:** | 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.). |
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Notes:

| **REQUIREMENT 3:** | Explain to your counselor why it is important to explore. |
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Notes:

| **REQUIREMENT 3a:** | Explain to your counselor why it is important for exploration to have a scientific basis. |
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Notes:

| **REQUIREMENT 3b:** | Explain to your counselor how explorers have aided in our understanding of our world. |
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Notes:

| **REQUIREMENT 3c:** | Explain to your counselor what you think it takes to be an explorer. |
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Notes:

**DO ONE OF THE FOLLOWING (4A, 4B, or 4C) FOR REQUIREMENT 4**

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|---|---|
| **REQUIREMENT 4a:** | 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. |

Living Explorer's Name:

Consider using the Exploration Merit Badge Pamphlet for preparation information

**This requirement must be reviewed with your merit badge counselor.**

**BE PREPARED!**

Notes:

| **REQUIREMENT 4b:** | 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. |
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Actual Scientific Exploration Expedition Name:

Consider using the Exploration Merit Badge Pamphlet for preparation information

**This requirement must be reviewed with your merit badge counselor.**

**BE PREPARED!**

Mission Objectives:

Most Interesting / Important Discoveries:

| **REQUIREMENT 4b:** | Tell how the information gained from this expedition helped scientists answer important questions. |
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Notes:

| **REQUIREMENT 4c:** | Learn about types of exploration that may take place in a laboratory or scientific research facility (medicine, biology, chemistry, physics, astronomy, etc.). |
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Notes:

| **REQUIREMENT 4c:** | Explain to your counselor how laboratory research and exploration are similar to field research and exploration. |
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Notes:

**DO ONE OF THE FOLLOWING (5A or 5B) FOR REQUIREMENT 5**

| **REQUIREMENT 5a:** | With your parent or guardian'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, American Alpine Club, World Wildlife Fund, or similar organization). |
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Selected Exploration Sponsoring Organization:

If a visit was selected, Date and Location of Visit and who you met with, Name and Title:

**PARENT / GUARDIAN PERMISSION:** IS REQUIRED.

Parent's / Guardian's Name _____ Phone or Email _____

Parent's / Guardian's Signature _____ Date _____ ☐ *permission*

**COUNSELOR APPROAL:** IS REQUIRED.

Counselor's Name _____ Phone or Email _____

Counselor's Signature _____ Date _____ ☐ *approved*

| **REQUIREMENT 5a:** | Find out what type(s) of exploration the organization supports then share what your learned with your counselor . |
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Notes:

| **REQUIREMENT 5b:** | With permission and approval, visit either in person or via the internet a science lab, astronomical observatory, medical research facility, or similar site. |
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Selected Site or Facility:

If a visit was selected, Date and Location of Visit and who you met with, Name and Title:

**PARENT / GUARDIAN PERMISSION:** IS REQUIRED.

Parent's / Guardian's Name | Phone or Email

Parent's / Guardian's Signature | Date ☐ *permission*

**COUNSELOR APPROAL:** IS REQUIRED.

Counselor's Name | Phone or Email

Counselor's Signature | Date ☐ *approved*

| **REQUIREMENT 5b:** | Learn what exploration is done in this facility then share what your learned with your counselor. |
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Notes:

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| **REQUIREMENT 6:** | Discuss with your counselor each of the following steps for conducting a successful exploration activity. Explain the need for each step.<br>a. Identify the objectives (establish goals).<br>b. Plan the mission. Create an expedition agenda or schedule. List potential documents or permits needed.<br>c. Budget and plan for adequate financial resources. Estimate costs for travel, equipment, accommodations, meals, permits or licenses, and other expedition expenses.<br>d. Determine equipment and supplies required for personal and mission needs for the length of the expedition.<br>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.<br>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.<br>g. Determine team selection. Identify who is essential for the expedition to be successful and what skills are required by the expedition leader.<br>h. Establish detailed recordkeeping (documentation) procedures. Plan the interpretation and sharing of information at the conclusion of the expedition. |
| **REQUIREMENT 6a:** | Identify the objectives (establish goals). |

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| **REQUIREMENT 6b:** | Plan the mission. Create an expedition agenda or schedule. List potential documents or permits needed. |
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Plan:

Agenda / Schedule:

Documents / Permits Needed:

| **REQUIREMENT 6c:** | Budget and plan for adequate financial resources. Estimate costs for travel, equipment, accommodations, meals, permits or licenses, and other expedition expenses. |
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Notes:

| **REQUIREMENT 6d:** | Determine equipment and supplies required for personal and mission needs for the length of the expedition. |
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Notes:

| **REQUIREMENT 6e:** | 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. |
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| **REQUIREMENT 6f:** | Establish safety and first aid procedures (including planning for medical evacuation). |
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Notes:

| **REQUIREMENT 6f:** | Identify the hazards that explorers could encounter on the expedition, and establish procedures to prevent or avoid those hazards. |
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| HAZARD #1 | |
| Description: | |
| Anticipate: | |
| Help Prevent: | |
| Mitigate: | |
| Respond: | |

| HAZARD #2 |
| --- |
| Description: |
| Anticipate: |
| Help Prevent: |
| Mitigate: |
| Respond: |

| HAZARD #3 |
| --- |
| Description: |
| Anticipate: |
| Help Prevent: |
| Mitigate: |
| Respond: |

| HAZARD #4 |
| --- |
| Description: |
| Anticipate: |
| Help Prevent: |
| Mitigate: |
| Respond: |

| HAZARD #5 |
| --- |
| Description: |
| Anticipate: |
| Help Prevent: |
| Mitigate: |
| Respond: |

| **REQUIREMENT 6g:** | Determine team selection. Identify who is essential for the expedition to be successful and what skills are required by the expedition leader. |
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Notes:

| **REQUIREMENT 6h:** | Establish detailed recordkeeping (documentation) procedures. Plan the interpretation and sharing of information at the conclusion of the expedition. |
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Notes:

| **REQUIREMENT 7:** | With your parent or guardian'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. |
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**REQUIREMENT 8 YOU MUST GO ON AN EXPEDITION. MIGHT AS WELL PREPARE FOR IT WITH THIS REQUIREMENT.**

Consider using the Exploration Merit Badge Pamphlet for preparation information

**This requirement must be reviewed with your merit badge counselor.**

**BE PREPARED!**

Selected Actual Expedition Area:

**PARENT / GUARDIAN PERMISSION:** IS REQUIRED.

Parent's / Guardian's Name _____ Phone or Email _____

Parent's / Guardian's Signature _____ Date _____ ☐ *permission*

**COUNSELOR APPROAL:** IS REQUIRED.

Counselor's Name _____ Phone or Email _____

Counselor's Signature _____ Date _____ ☐ *approved*

Notes:

| **REQUIREMENT 7a:** | 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). |
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Consider using the Exploration Merit Badge Pamphlet for preparation information

**This requirement must be reviewed with your merit badge counselor.**

**BE PREPARED!**

Qualified Adut Experienced in Exploration (Name and Credentials as well as Contact Information):

Notes:

| **REQUIREMENT 7b:** | 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. |
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Notes:

| **REQUIREMENT 7b:** | Determine who should go on the expedition. |
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**REQUIREMENT 7c:** Conduct a pre-expedition check, covering the steps in requirement 6, and share the results with your counselor. With your counselor, walk through the Scouting America SAFE Checklist for your expedition. Ensure that all foreseeable hazards for your expedition are adequately addressed.

Scouts and their parents expect all Scouting America activities to be conducted safely. To ensure the safety of participants, Scouting America expects leaders to use the four points of SAFE when delivering the Scouting program.

## SUPERVISION

Youth are supervised by qualified and trustworthy adults who set the example for safety.

- Accepting responsibility for the well-being and safety of youth under their care.
- Ensuring that adults are adequately trained, experienced, and skilled to lead the activity, including the ability to prevent and respond to likely problems and
- potential emergencies.
- Knowing and delivering the program of Scouting America with integrity.
- Using qualified instructors, guides, or safety personnel as needed to provide additional guidance.
- Maintaining engagement with participants during activities to ensure compliance with established rules and procedures.

## ASSESSMENT

Activities are assessed for risks during planning. Leaders have reviewed applicable program guidance or standards and have verified the activity is not prohibited. Risk avoidance or mitigation is incorporated into the activity.

- Predetermining what guidance and standards are typically applied to the activity, including those specific to Scouting America program.
- Planning for safe travel to and from the activity site.
- Validating the activity is age appropriate for Scouting America program level.
- Determining whether the unit has sufficient training, resources, and experience to meet the identified standards, and if not, modifying the activity accordingly.
- Developing contingency plans for changes in weather and environment and arranging for communication with participants, parents, and emergency services.

## FITNESS AND SKILL

Participants' Annual Health and Medical Records are reviewed, and leaders have confirmed that prerequisite fitness and skill levels exist for participants to take part safely.

- Confirming the activity is right for the age, maturity, and physical abilities of participants.
- Considering as risk factors temporary or chronic health conditions of participants.
- Validating minimum skill requirements identified during planning and ensuring participants stay within the limits of their abilities.
- Providing training to participants with limited skills and assessing their skills before they attempt more advanced skills.

## EQUIPMENT AND ENVIRONMENT

Safe and appropriately sized equipment, courses, camps, campsites, trails, or playing fields are used properly. Leaders periodically check gear use and the environment for changing conditions that could affect safety.

- Confirming participants' clothing is appropriate for expected temperatures, sun exposure, weather events, and terrain.
- Providing equipment that is appropriately sized for participants, is in good repair, and is used properly.
- Ensuring personal and group safety equipment is available, properly fitted, and used consistently and in accordance with training.
- Reviewing the activity area for suitability during planning and immediately before use, and monitoring the area during the activity through supervision.
- Adjusting the activity for changing conditions or ending it if safety cannot be maintained.

Consider using the Exploration Merit Badge Pamphlet for preparation information

**This requirement must be reviewed with your merit badge counselor.**

**BE PREPARED!**

Notes:

Expeditions are widely variable. You do not have to climb Mount Everest or go to a jungle to be an explorer. For this merit badge, an expedition should be viewed like a field trip or science project. While you cannot just hike some place and call it an expedition, you can hike to a location and study an aspect that interests you.

The major difference between an expedition and a field science trip is that you (with your counselor's guidance) have to plan everything. You have to formulate objectives and plan an agenda. As needed, you will need to do things like confirm transportation, arrange communication, plan for food and medical supplies, acquire all food and other supplies, construct safety and possible evacuation procedures, manage any adverse events, and prepare a report after the expedition.

Evaluating the effects of a storm on the local forest or nature preserve, the effects of a drought on a field used by birds and mammals, changes in butterfly populations due to loss of wildflower habitat, incursions by invasive plant or animal species, insect diversity, and presence or absence of amphibians or fish are just some of the examples that can be studied and reported. Your imagination is your only limitation.

| **REQUIREMENT 8a:** | With your parent or guardian's permission and under the supervision of your 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. |
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**PARENT / GUARDIAN PERMISSION:** IS REQUIRED.

Parent's / Guardian's Name _____ Phone or Email _____

Parent's / Guardian's Signature _____ Date _____ ☐ *permission*

**COUNSELOR APPROAL:** IS REQUIRED.

Counselor's Name _____ Phone or Email _____

Counselor's Signature _____ Date _____ ☐ *approved*

Notes:

| **REQUIREMENT 8b:** | Discuss with your counselor about the vital role of outdoor ethics in exploration. |
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Notes:

| **REQUIREMENT 8b:** | Discuss with your counselor how outdoor ethics promote responsible and mindful adventuring. |
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Notes:

| **REQUIREMENT 8b:** | Explain how you applied the outdoor code, Leave No Trace and Tread Lightly! principles during your expedition. |
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Notes:

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| **REQUIREMENT 8c:** | 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. |

Consider using the Exploration Merit Badge Pamphlet for preparation information

**This requirement must be reviewed with your merit badge counselor.**

**BE PREPARED!**

**DO ONE OF THE FOLLOWING (9A or 9B) FOR REQUIREMENT 9**

| | |
|---|---|
| **REQUIREMENT 9a:** | 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 people in this career work. |

Selected Career Opportunity:

Training:

Education:

Costs

Job Prospects:

| | |
|---|---|
| Salary: | |
| Job Duties: | |
| Career Advancement: | |
| **REQUIREMENT 9a:** | Discuss with your counselor both your findings and what about this profession might make it an interesting career. |
| Notes: | |

| **REQUIREMENT 9b:** | Explore how you could use knowledge and skills from this merit badge to pursue a hobby. |
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Notes:

| **REQUIREMENT 9b:** | Research any training needed, expenses, and organizations that promote or support it. |
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Training:

Expenses:

| | |
|---|---|
| Organizations: | |
| **REQUIREMENT 9b:** | Discuss with your counselor what short-term and long-term goals you might have if you pursued this. |
| Short-Term Goals: | |
| Long-Term Goals: | |