



EXPLORATION MERIT BADGE

APRIL HAC - MERIT BADGE FOR SCOUTS BSA

MERIT BADGE TRACKING

A HomeScouting
Adventure

The tracking tool below is simply for your own tracking of completion of requirements.

Scouts are encouraged to find a local merit badge counselor to meet, discuss, and sign off on completion of the merit badge, however the HomeScouting Adventure Club will offer limited counseling sessions for Scouts needing a counselor.

| Requirement | Completed? |
|--|------------|
| 1. General Knowledge. Do the following: | |
| 1a. Define exploration and explain how it differs from adventure travel, trekking or hiking, tour-group trips, or recreational outdoor adventure trips. | |
| 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. | |
| 2. History of Exploration. Discuss the history of exploration. Select a field of study with a history of exploration to illustrate the importance of exploration in the development of that field (for example, aerospace, oil industry, paleontology, oceanography, etc.). | |
| 3. Importance of Exploration. Explain why it is important to explore. Discuss the following: a. Why it is important for exploration to have a scientific basis b. How explorers have aided in our understanding of our world c. What you think it takes to be an explorer | |
| 4. Real-Life Exploration. Do ONE of the following: | |
| 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. | |
| 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. Tell how the information gained from this expedition helped scientists answer important questions. | |
| 4c. Learn about types of exploration that may take place in a laboratory or scientific research facility (medicine, biology, chemistry, physics, astronomy, etc.). Explain how laboratory research and exploration are similar to field research and exploration. | |
| 5. Exploration in Lab and Field. Do ONE of the following: | |
| 5a. Visit either in person or via the internet an exploration sponsoring organization (such as The Explorers Club, National Geographic Society, Smithsonian Institution, Alpine Club, World Wildlife Fund, or similar organization). Find out what type(s) of exploration the organization supports. | |
| 5b. Visit either in person or via the internet a science lab, astronomical observatory, medical research facility, or similar site. Learn what exploration is done in this facility | |
| 6. Expedition Planning. Discuss with your counselor the steps for conducting a successful exploration activity. Explain the need for each step. (See list of steps later in this worksheet) | |

EXPLORATION TRACKING

| Requirement | Completed? |
|---|------------|
| 7. Prepare for an Expedition. Prepare for an actual expedition to an area you have not previously explored; the place may be nearby or far away. Do the following: | |
| 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). TIP: show your school science or history teacher your plans and have them give you feedback. | |
| 7b. Use the steps listed in requirement 6 to guide your preparations. List the items of equipment and supplies you will need. Describe why you chose each item and how it will be of value on the expedition. Determine who should go on the expedition. | |
| 7c. Conduct a pre-expedition check, covering the steps in requirement 6. With your counselor or a parent, walk through the Sweet Sixteen of BSA Safety for your expedition. Ensure that all foreseeable hazards for your expedition are adequately addressed. | |
| 8. Go on an Expedition. Complete the following: | |
| 8a. 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. | |
| 8b. Describe what is outdoor ethics and its role in exploration and enjoying the outdoors responsibly. | |
| 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. | |
| 8. Career Opportunities. Identify three career opportunities in exploration. Pick one and explain to your counselor how to prepare for such a career. Discuss what education and training are required, and why this profession might interest you. | |

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 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.



EXPLORATION MERIT BADGE

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MERIT BADGE WORKSHEET

A HomeScouting
Adventure

Through exploring The Trail inside the ClubHouse for the HomeScouting Adventure Club, complete this worksheet to demonstrate your knowledge of exploration. This worksheet will not be turned in and for your own use to demonstrate knowledge.

Define exploration.

How does exploration differ from adventure travel, trekking or hiking, tour-group trips, or recreational outdoor adventure trips?

How does the approach to exploration differ if it occurs in the ocean, in space, in a jungle, or in a science lab in a city?

Give a brief history of exploration.

On the next page, 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.).

EXPLORATION WORKSHEET

Field of Study (circle):

Aerospace Oil Industry Paleontology Oceanography Other: _____

Explain the importance of exploration in the development of the field you chose above.

Why do you think it is important to explore?

Why it is important for exploration to have a scientific basis?

How have explorers aided in our understanding of the world?

What do you think it takes to be an explorer?

Do **ONE** of the following. Use the next page to take notes.

- 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.
- 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. Tell how the information gained from this expedition helped scientists answer important questions.
- 4c. Learn about types of exploration that may take place in a laboratory or scientific research facility (medicine, biology, chemistry, physics, astronomy, etc.). Explain how laboratory research and exploration are similar to field research and exploration.

EXPLORATION WORKSHEET

I chose to do requirement (circle one): **4A** **4B** **4C**

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal blue or grey lines across its entire width, typical of notebook paper. The lines are uniform in thickness and spacing, providing a guide for writing. There are no margins, text, or other markings on the page.

EXPLORATION WORKSHEET

Do **ONE** of the following:

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

I visited = _____

Use the space below to take notes on this place.

[illegible]

EXPLORATION WORKSHEET

Describe each of the following steps for conducting a successful exploration activity. Explain the need for each step.

a. Identify the objectives (establish goals).

Why is this important in the exploration planning process?

b. Plan the mission. Create an expedition agenda or schedule.

Why is this important in the exploration planning process?

Are there any documents or permits needed for your expedition?

c. Budget and plan for adequate financial resources. Estimate costs for travel, equipment, accommodations, meals, permits or licenses, and other expedition expenses.

Use the next page for your budgeting tool.

EXPLORATION WORKSHEET

| Item | Estimated Cost | Actual Cost |
|---|----------------|-------------|
| Travel | | |
| Equipment Needed | | |
| Accommodations (hotels, sleeping, etc.) | | |
| Meals | | |
| Permits / Licenses | | |
| Other: _____ | | |
| Other: _____ | | |

Why is budgeting important in the exploration planning process?

d. Determine equipment and supplies required for your expedition.

Why is this important in the exploration planning process?

e. Determine communication and transportation needs. Plan how to stay connected with your base or the outside world, and determine how you will communicate with each other on-site.

EXPLORATION WORKSHEET

Why is this important in the exploration planning process?

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.

Hazard

Procedure to Prevent / Avoid

| | |
|-------|-------|
| <hr/> | <hr/> |
| <hr/> | <hr/> |
| <hr/> | <hr/> |
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Why is this important in the exploration planning process?

g. Determine team selection. Identify who is essential for the expedition to be successful and what skills are required by the expedition leader.

EXPLORATION WORKSHEET

Why is this important in the exploration planning process?

h. Establish detailed recordkeeping (documentation) procedures. Plan the interpretation and sharing of information at the conclusion of the expedition.

Why is this important in the exploration planning process?

Prepare for an Expedition. Prepare for an actual expedition to an area you have not previously explored; the place may be nearby or far away.

List the items of equipment and supplies you will need for your trip.

[illegible]

EXPLORATION WORKSHEET

Why are these items you chose important and valuable for your trip?

On the previous page, put a star (★) next to the 10 most important items.

Who else is going on your trip with you?

Conduct a pre-expedition check with an adult.

- ☐ Objectives of the trip
- ☐ Agenda or schedule
- ☐ Documents or permits needed
- ☐ Budgeted for the trip
- ☐ Equipment needed
- ☐ Transportation needs
- ☐ Safety procedures
- ☐ Identified potential hazards
- ☐ Team selection. Who is going?
- ☐ Recordkeeping plans identified

Adult Initials: _____
Adult Initials: _____
Adult Initials: _____
Adult Initials: _____
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Adult Initials: _____
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Adult Initials: _____
Adult Initials: _____
Adult Initials: _____

List the Sweet Sixteen of BSA Safety

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____

EXPLORATION WORKSHEET

Go On Your Expedition. 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.

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.

List three career opportunities in exploration.

1. _____
2. _____
3. _____

Pick one of the above and learn about the education, training, and experience required for this profession.

Why does this career in exploration interest you?

This worksheet will not be turned in and for your own use to demonstrate knowledge of exploration