

Nature Study Merit Badge



Important information for parents about how to prepare your scout for Nature Merit Badge Program at Burke Lake Park. After reading information, print out Nature Study Workbook (pages 4-9 of PDF) to bring to class.

Be sure that you are familiar with the requirements for the merit badge your scout has selected. Some badges can be very demanding and may take considerable time and planning to complete. Some badges are not appropriate for younger scouts. **Please bring your blue card. We do not have blue cards.**

Most Merit Badges are not designed to be completed in a single session with an instructor, so it is not always possible to walk away with a completed and signed blue card at the end of a program. Every badge requires some independent work by your scout. We call this "pre-work" because, if these requirements are performed *prior* to our program, we can complete and sign the merit badge card. Otherwise we will on the specific requirements covered at the completion of our program and will have qualified counselors review assignments on an individual basis at a later date. Note you will have to contact and schedule an appointment with an appropriate staff member to do this. Not all staff members are qualified for all badges.

Please *prepare for the possibility that you may have to stay for the program and not just drop off your scout*. We encourage that one or more adults remain. There is no fee for adults and you are sure to learn something. This will allow the instructor to concentrate more fully on the difficult task of imparting all the required information and assisting the boys individually if necessary, while other adults keep the atmosphere calm and productive. It is also in keeping with the scouting guidelines for youth protection.

Be sure your scout is dressed appropriately for being outdoors for some or all of the program time. Packing water and snacks is wise for long programs and programs scheduled in hot weather months. Lastly, obtaining copies of the scout resource booklet for the merit badge can help prepare your scout working with his counselor and for completing any independent study. Books for the badges can be ordered at your local scouting store or at www.scoutstuff.org.

Thank you! And best wishes for success to your scout.

Nature Study: This is one 4-hour class. PLEASE BRING A CAMERA.

Optional Pre-Work (or Post-Work if we don't catch fish): Requirement 4B.2 Build a bird-house, feeding station, or birdbath. List what birds used it during a period of one month.

NATURE STUDY MERIT BADGE

BE PREPARED: The Nature Study Merit Badge session is **four hours long** and covers *a lot* of material and a lot of ground: we will be doing a good bit of walking. Please bring water and snacks to keep up your energy. Dress for the weather. Wear hiking boots or a similar shoe that will support your feet and you don't mind getting muddy.

Please bring your blue card. We do not have them.

We hope to cover all of the requirements for the badge in the four-hour time period. It is possible that we will have an outstanding requirement if Nature does not provide all that we need. In that case there will be post-work and you will have to return here for final approval on your blue card.

A Note about Collecting: When Scouting first began collections of natural objects, such as insects, bird nests, rock, plants, etc. were popular. But removing animals and items from nature can pose serious problems to animals and their habitats, especially in populated areas. We heartily encourage collecting photographs or drawings of animals, plants and natural objects instead of the collection of actual specimens. And even this sort of collecting must be done with respect and with minimum stress to the animals and plants you are observing.

NO animals, plants, rocks, or other objects may be taken from any Fairfax County park (except fish). Therefore our collecting will be of photographs (or drawings) and observations, not of objects. Please bring a camera (a cell phone camera is fine) in order to collect specimens.

Outside the park, the laws regarding collecting animals, plants rocks, etc. are complex and contradictory, but often require a state permit on public land. You must obtain owner permission to collect on private lands.

PRE/POST-WORK:

- Please read the badge requirements carefully (see below) Any reading or research you can do on these topics before we meet will help to speed your completion of the workbook and the badge.
- We will complete requirements 1-3. and for #4, b, c, e, g, & h: mammals, reptiles & amphibians, fish, plants, and soil & rocks. If we cannot complete all of these options scouts may have to complete option 4A, birds, at home.

NATURE STUDY MERIT BADGE

REQUIREMENTS



1. Name three ways in which plants are important to animals. Name a plant that is protected in your state or region, and explain why it is at risk.
2. Name three ways in which animals are important to plants. Name an animal that is protected in your state or region, and explain why it is at risk.
3. Explain the term "food chain." Give an example of a four-step land food chain and a four-step water food chain.
4. Do all of the requirements in FIVE of the following fields:
 - (b) **Mammals**
 - (1) In the field, identify three species of wild animals.
 - (2) Make plaster casts of the tracks of a wild animal.
 - (c) **Reptiles and Amphibians**
 - (1) Show that you can recognize the venomous snakes in your area.
 - (2) In the field, identify three species of reptiles or amphibians.
 - (3) Recognize one species of toad or frog by voice; OR identify one reptile or amphibian by eggs, den, burrow or other signs.
 - (e) **Fish**
 - (1) Catch and identify two species of fish.
 - (2) Collect four kinds of animal food eaten by fish in the wild
 - (g) **Plants**
 - (1) In the field, identify 15 species of wild plants.
 - (2) Collect and label seeds of six plants; OR the leaves of 12 plants.
 - (h) **Soils and Rocks**
 - (1) Collect and identify soils found in different layers of a soil profile.
 - (2) Collect and identify five different types of rocks from your area.

In case we cannot complete 4.E (1): catch and identify two species of fish, we will complete:

- a) **Birds**
 - (1) In the field, identify eight species of birds.
 - (2) Make and set out a birdhouse OR a feeding station OR a birdbath. List what birds used it during a period of one month.

Requirement 4.A (2) would have to be completed at home.



Nature

Merit Badge Workbook



This workbook can help you but you still need to read the merit badge pamphlet.

The work space provided for each requirement should be used by the Scout to make notes for discussing the item with his counselor, not for providing the full and complete answers. Each Scout must do each requirement.

No one may add or subtract from the official requirements found in **Boy Scout Requirements** (Pub. 33216 – SKU 619576).

The requirements were last issued or revised in 2014 • This workbook was updated in January 2014.

Scout's Name: _____ Unit: _____

Counselor's Name: _____ Counselor's Phone No.: _____

<http://www.USScouts.Org> • <http://www.MeritBadge.Org>

Please submit errors, omissions, comments or suggestions about this **workbook** to: Workbooks@USScouts.Org
Comments or suggestions for changes to the **requirements** for the **merit badge** should be sent to: Merit.Badge@Scouting.Org

1. Name three ways in which plants are important to animals.

1.

2.

3.

Name a plant that is protected in your state or region, and explain why it is at risk.

2. Name three ways in which animals are important to plants.

1.	
2.	
3.	

Name an animal that is protected in your state or region, and explain why it is at risk.

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3. Explain the term "food chain."

Give an example of a four-step land food chain and a four-step water food chain.

land food chain

1.	
2.	
3.	
4.	

water food chain

1.	
2.	
3.	
4.	

4. Do all of the requirements in FIVE of the following fields:

a. **Birds**

1. In the field, identify eight species of birds.

<input type="checkbox"/> 1.	
<input type="checkbox"/> 2.	
<input type="checkbox"/> 3.	
<input type="checkbox"/> 4.	
<input type="checkbox"/> 5.	
<input type="checkbox"/> 6.	
<input type="checkbox"/> 7.	
<input type="checkbox"/> 8.	

2. Make and set out a birdhouse OR a feeding station OR a birdbath.

List what birds used it during a period of one month.

MONTH(S):

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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b. Mammals

1. In the field, identify three species of wild mammals.

<input type="checkbox"/> 1.	
<input type="checkbox"/> 2.	
<input type="checkbox"/> 3.	

2. Make plaster casts of the tracks of a wild mammal.

c. Reptiles or Amphibians

1. Show that you can recognize the venomous snakes in your area.

2. In the field, identify three species of reptiles or amphibians.

<input type="checkbox"/> 1.	
<input type="checkbox"/> 2.	
<input type="checkbox"/> 3.	

3. Recognize one species of toad or frog by voice; OR identify one reptile or amphibian by eggs, den, burrow, or other signs.

d. Insects or Spiders

1. Collect, mount, and label 10 species of insects or spiders.

<input type="checkbox"/> 1.	
<input type="checkbox"/> 2.	
<input type="checkbox"/> 3.	
<input type="checkbox"/> 4.	
<input type="checkbox"/> 5.	
<input type="checkbox"/> 6.	
<input type="checkbox"/> 7.	
<input type="checkbox"/> 8.	
<input type="checkbox"/> 9.	
<input type="checkbox"/> 10.	

- 2. Hatch an insect from the pupa or cocoon; OR hatch adults from nymphs; OR keep larvae until they form pupae or cocoons; OR keep a colony of ants or bees through one season.

e. Fish

- 1. Catch and identify two species of fish.

<input type="checkbox"/> 1.	
<input type="checkbox"/> 2.	

- 2. Collect four kinds of animal food eaten by fish in the wild.

<input type="checkbox"/> 1.	
<input type="checkbox"/> 2.	
<input type="checkbox"/> 3.	
<input type="checkbox"/> 4.	

f. Mollusks and Crustaceans

- 1. Identify five species of mollusks and crustaceans.

<input type="checkbox"/> 1.	
<input type="checkbox"/> 2.	
<input type="checkbox"/> 3.	
<input type="checkbox"/> 4.	
<input type="checkbox"/> 5.	

- 2. Collect, mount, and label six shells.

<input type="checkbox"/> 1.	
<input type="checkbox"/> 2.	
<input type="checkbox"/> 3.	
<input type="checkbox"/> 4.	
<input type="checkbox"/> 5.	
<input type="checkbox"/> 6.	

g. Plants

- 1. In the field, identify 15 species of wild plants.

<input type="checkbox"/> 1.	
<input type="checkbox"/> 2.	
<input type="checkbox"/> 3.	
<input type="checkbox"/> 4.	
<input type="checkbox"/> 5.	
<input type="checkbox"/> 6.	
<input type="checkbox"/> 7.	
<input type="checkbox"/> 8.	
<input type="checkbox"/> 9.	

<input type="checkbox"/>	10.	
<input type="checkbox"/>	11.	
<input type="checkbox"/>	12.	
<input type="checkbox"/>	13.	
<input type="checkbox"/>	14.	
<input type="checkbox"/>	15.	

2. Collect and label the seeds of six plants OR the leaves of 12 plants.

<input type="checkbox"/>	1.	
<input type="checkbox"/>	2.	
<input type="checkbox"/>	3.	
<input type="checkbox"/>	4.	
<input type="checkbox"/>	5.	
<input type="checkbox"/>	6.	

h. **Soils and Rocks**

1. Collect and identify soils found in different layers of a soil profile.

<input type="checkbox"/>	1.	
<input type="checkbox"/>	2.	
<input type="checkbox"/>	3.	
<input type="checkbox"/>	4.	
<input type="checkbox"/>	5.	

2. Collect and identify five different types of rocks from your area.

<input type="checkbox"/>	1.	
<input type="checkbox"/>	2.	
<input type="checkbox"/>	3.	
<input type="checkbox"/>	4.	
<input type="checkbox"/>	5.	

Note: In most cases all specimens should be returned to the wild at the location of original capture after the requirements have been met. Check with your merit badge counselor for those instances where the return of these specimens would not be appropriate.

Under the Endangered Species Act of 1973, some plants and animals are or may be protected by federal law. The same ones and/or others may be protected by state law. Be sure that you do not collect protected species.

Your state may require that you purchase and carry a license to collect certain species. Check with the wildlife and fish and game officials in your state regarding species regulations before you begin to collect.

Requirement resources can be found here:
http://www.meritbadge.org/wiki/index.php/Nature#Requirement_resources

Important excerpts from the [Guide To Advancement - 2013](#), No. 33088 (SKU-618673)

[1.0.0.0] — Introduction

The current edition of the *Guide to Advancement* is the official source for administering advancement in all Boy Scouts of America programs: Cub Scouting, Boy Scouting, Varsity Scouting, Venturing, and Sea Scouts. It replaces any previous BSA advancement manuals, including *Advancement Committee Policies and Procedures*, *Advancement and Recognition Policies and Procedures*, and previous editions of the *Guide to Advancement*.

[Page 2, and 5.0.1.4] — Policy on Unauthorized Changes to Advancement Program

No council, committee, district, unit, or individual has the authority to add to, or subtract from, advancement requirements. There are limited exceptions relating only to youth members with special needs. For details see section 10, “Advancement for Members With Special Needs”.

[Page 2] — The “Guide to Safe Scouting” Applies

Policies and procedures outlined in the *Guide to Safe Scouting*, No. 34416, apply to all BSA activities, including those related to advancement and Eagle Scout service projects.

[7.0.3.1] — The Buddy System and Certifying Completion

A youth member must not meet one-on-one with an adult. Sessions with counselors must take place where others can view the interaction, or the Scout must have a buddy: a friend, parent, guardian, brother, sister, or other relative—or better yet, another Scout working on the same badge—along with him attending the session.

When the Scout meets with the counselor, he should bring any required projects. If these cannot be transported, he should present evidence, such as photographs or adult verification. His unit leader, for example, might state that a satisfactory bridge or tower has been built for the Pioneering merit badge, or that meals were prepared for Cooking. If there are questions that requirements were met, a counselor may confirm with adults involved. Once satisfied, the counselor signs the blue card using the date upon which the Scout completed the requirements, or in the case of partials, initials the individual requirements passed.

Note that from time to time, it may be appropriate for a requirement that has been met for one badge to also count for another. See “Fulfilling More Than One Requirement With a Single Activity,” 4.2.3.6.

[7.0.3.2] — Group Instruction

It is acceptable—and sometimes desirable—for merit badges to be taught in group settings. This often occurs at camp and merit badge midways or similar events. Interactive group discussions can support learning. The method can also be attractive to “guest experts” assisting registered and approved counselors. Slide shows, skits, demonstrations, panels, and various other techniques can also be employed, but as any teacher can attest, not everyone will learn all the material.

There must be attention to each individual’s projects and his fulfillment of *all* requirements. We must know that every Scout—actually and *personally*—completed them. If, for example, a requirement uses words like “show,” “demonstrate,” or “discuss,” then every Scout must do that. It is unacceptable to award badges on the basis of sitting in classrooms *watching* demonstrations, or remaining silent during discussions.

It is sometimes reported that Scouts who have received merit badges through group instructional settings have not fulfilled all the requirements. To offer a quality merit badge program, council and district advancement committees should ensure the following are in place for all group instructional events.

- Merit badge counselors are known to be registered and approved.
- Any guest experts or guest speakers, or others assisting who are not registered and approved as merit badge counselors, do not accept the responsibilities of, or behave as, merit badge counselors, either at a group instructional event or at any other time. Their service is temporary, not ongoing.
- Counselors agree not to assume prerequisites have been completed without some level of evidence that the work has been done. Pictures and letters from other merit badge counselors or unit leaders are the best form of prerequisite documentation when the actual work done cannot be brought to the camp or site of the merit badge event.
- There is a mechanism for unit leaders or others to report concerns to a council advancement committee on summer camp merit badge programs, group instructional events, and any other merit badge counseling issues—especially in instances where it is believed BSA procedures are not followed. See “Reporting Merit Badge Counseling Concerns,” 11.1.0.0.
- There must be attention to each individual’s projects and his fulfillment of all requirements. We must know that every Scout—actually and *personally*—completed them.

[7.0.3.3] — Partial Completions

A Scout need not pass all the requirements of one merit badge with the same counselor. It may be that due to timing or location issues, etc., he must meet with a different counselor to finish the badge. The Application for Merit Badge has a place to record what has been finished—a “partial.” In the center section on the reverse of the blue card, the counselor initials for each requirement passed. In the case of a partial completion, the counselor does not retain his or her portion of the card. A subsequent counselor may choose not to accept partial work, but this should be rare. A Scout, if he believes he is being treated unfairly, may work with his unit leader to find another counselor. An example for the use of a signed partial would be to take it to camp as proof of prerequisites. Partials have no expiration except the Scout’s 18th birthday. Units, districts, or councils shall not establish other expiration dates for partial merit badges.

[7.0.4.8] — Unofficial Worksheets and Learning Aids

Worksheets and other materials that may be of assistance in earning merit badges are available from a variety of places including unofficial sources on the Internet and even troop libraries. Use of these aids is permissible as long as the materials can be correlated with the current requirements that Scouts must fulfill. Completing “worksheets” may suffice where a requirement calls for something in writing, but this would not work for a requirement where the Scout must discuss, tell, show, or demonstrate, etc. Note that Scouts shall not be required to use these learning aids in order to complete a merit badge.