

Burke Lake Reptile & Amphibian Merit Badge

Important information for parents about how to prepare your scout for Reptile & Amphibian Merit Badge Program at Burke Lake Park. After reading information, print out Reptile & Amphibian Workbook (pages 5 -19 of PDF) to bring to class.



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

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 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 sign partial cards 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.

We encourage one of more parents to stay with the group. There is no a 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.

Reptiles & Amphibians: This is **one 3-hour class.**

Pre-Work (or Post-Work):

Requirement #8. We suggest 8A or 8B.

Requirement #9A: We will review frog calls during the program, but you have to complete the evening observation on your own and tell us about your experience.

To assist with **Requirement 9B** we suggest you look through the Virginia Herpetological Society website (or a field guide or other source) to familiarize yourself with local reptiles and amphibians. More information follows....

REPTILE & AMPHIBIAN MERIT BADGE

BE PREPARED: The Reptile & Amphibian Merit Badge session is three hours long and covers *a lot* of material. **It also requires either three months of recorded observation of a reptile or Amphibian in a nature center, zoo or similar location, OR one month care and recorded observations of a reptile or amphibian you keep at home.** If you have a pet reptile or amphibian already, then the one month of care is a simple option for you. **PLEASE do NOT go out and purchase a pet reptile or amphibian just to complete the badge!** Pet ownership is always a long-term commitment for the life of your pet and should only be undertaken after careful consideration. You may make observations at any a nature center, zoo, pet store, or other similar center near your home. Some other Fairfax County Parks with animals on display are Ellanor C. Lawrence, Hidden Pond, Hidden Oak and Riverbend Parks.

NO animal may be taken from any Fairfax County park (except fish). We discourage collecting wild animals outside the parks.

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.
- Complete a record of observations of a reptile or amphibian as specified in 8 a. or 8 b. 8.

Do ONE of the following:

a. Maintain one or more reptiles or amphibians for at least a month. Record food accepted, eating methods, changes in coloration, shedding of skins, and general habits; or keep the eggs of a reptile from the time of laying until hatching; or keep the eggs of an amphibian from the time of laying until their transformation into tadpoles (frogs) or larvae (salamanders).

a. Choose a reptile or amphibian that you can observe at a local zoo, aquarium, nature center, or other such exhibit (such as your classroom or school). Study the specimen weekly for a period of three months. At each visit, sketch the specimen in its captive habitat and note any changes in its coloration, shedding of skins, and general habits and behavior. Find out, either from information you locate on your own or by talking to the caretaker, what this species eats and what are its native habitat and home range, preferred climate, average life expectancy, and natural predators. Also identify any human-caused threats to its population and any laws that protect the species and its habitat. After the observation period, share what you have learned with your counselor.

- To complete requirement 9, option b, use a field guide and, or the Virginia Herpetology Society website, familiarize yourself with the appearance of the following eight local species: eastern black rat snake, eastern garter snake, northern water snake, eastern box turtle, eastern painted turtle, snapping turtle, American bullfrog, green frog, red-backed salamander.
- (<http://www.virginiaherpetologicalsociety.com/>)
- We will sign requirement 9, options A & B, as complete at the end of the program. But, in the warm weather months you should review the calls (see the last page of this document) and spend an evening listening to the various types of frogs that are frequently heard by around Burke Lake.

REPTILE & AMPHIBIAN MERIT BADGE



Requirements Covered by Our Program

1. Describe the identifying characteristics of six species of reptiles and four species of amphibians found in the United States. For any four of these, make sketches from your own observations or take photographs. Show markings, color patterns, or other characteristics that are important in the identification of each of the four species. Discuss the habits and habitats of all 10 species.
2. Discuss with your merit badge counselor the approximate number of species and general geographic distribution of reptiles and amphibians in the United States. Prepare a list of the most common species found in your local area or state.
3. Describe the main differences between
 - a. Amphibians and reptiles
 - b. Alligators and crocodiles
 - c. Toads and frogs
 - d. Salamanders and lizards
 - e. Snakes and lizards
4. Explain how reptiles and amphibians are an important component of the natural environment. List four species that are officially protected by the federal government or by the state you live in, and tell why each is protected. List three species of reptiles and three species of amphibians found in your local area that are not protected. Discuss the food habits of all 10 species.
5. Describe how reptiles and amphibians reproduce.
6. From observation, describe how snakes move forward. Describe the functions of the muscles, ribs, and belly plates.
7. Describe in detail six venomous snakes and the one venomous lizard found in the United States. Describe their habits and geographic range. Tell what you should do in case of a bite by a venomous species.
9. Do TWO of the following:
 - a. **Identify at night three kinds of toads or frogs by their voices. Imitate the song of each for your counselor.** *Stalk each with a flashlight and discover how each sings and from where.*
 - b. **Identify by sight eight species of reptiles or amphibians.**
 - c. *Using visual aids, give a brief talk to a small group on three different reptiles and amphibians.*
10. Tell five superstitions or false beliefs about reptiles and amphibians and give a correct explanation for each. Give seven examples of unusual behavior or other true facts about reptiles and amphibians.

NOTE: Scouts must not use venomous reptiles in fulfilling requirement 8a. Species listed by federal or state law as endangered, protected, or threatened must not be used as live specimens in completing requirement 8a unless official permission has been given. In most cases, all specimens should be returned to the wild at the location of capture after the requirement has 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.

Sounds of Frogs and Toads

These are records or tapes of the calls of a great many of our native frogs and toads. They can be ordered through the following addresses or Web sites.

- Bogert, Charles M. *Sounds of North American Frogs: The Biological Significance of Voice in Frogs*. Folkways Cassette Series: 06166, 1958. Office of Folklife Programs, 955 L'Enfant Plaza 2600, Smithsonian Institution, Washington, DC 20560.
- Elliott, Lang. *The Calls of Frogs and Toads*. NatureSound Studio. Web site: <http://www.naturesound.com>
- Kellogg, Peter P., and Arthur A. Allen. *Voices of the Night*. Library of Natural Sounds, 1982. Cornwell Laboratory of Ornithology, 159 Sapsucker Woods Road, Ithaca, NY 14850.
- *Sounds of North American Frogs*. Smithsonian Folkways. Web site: [http://www.folkways .si.edu](http://www.folkways.si.edu)



Organizations and Web Sites

Virginia Herpetological Society

<http://www.virginiaherpetologicalsociety.com/>

Virginia Game & Wildlife

American Museum of Natural History

Web site: <http://www.amnh.org>

The American Zoo and Aquarium Association

Web site: <https://www.aza.org>

National Geographic Society

Web site: <http://www.nationalgeographic.com>

National Fish and Wildlife Foundation

Web site: <http://www.nfwf.org>

National Wildlife Federation

Web site: <http://www.nwf.org>

U.S. Fish and Wildlife Service

Web site: <http://www.fws.gov>



Reptile and Amphibian Study

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 34765).

The requirements were last issued or revised in 2006 • 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

- Describe the identifying characteristics of six species of reptiles and four species of amphibians found in the United States. For any four of these, make sketches from your own observations or take photographs. Show markings, color patterns, or other characteristics that are important in the identification of each of the four species. Discuss the habits and habitats of all ten species.

Reptiles

Species			
Identifying Characteristics			
Habits:			
Habitat:			

Species			
Identifying Characteristics			
Habits:			
Habitat:			

Species	
Identifying Characteristics	
Habits:	
Habitat:	

Species	
Identifying Characteristics	
Habits:	
Habitat:	

Species	
Identifying Characteristics	
Habits:	
Habitat:	

Species	
Identifying Characteristics	
Habits:	
Habitat:	

Amphibians

Species	
Identifying Characteristics	
Habits:	
Habitat:	

Species	
Identifying Characteristics	
Habits:	
Habitat:	

Species	
Identifying Characteristics	
Habits:	
Habitat:	

Species	
Identifying Characteristics	
Habits:	
Habitat:	

For any four of these, make sketches from your own observations or take photographs. Show markings, color patterns, or other characteristics that are important in the identification of each of the four species.

1		2	

3	4

2. Discuss with your merit badge counselor the approximate number of species and general geographic distribution of reptiles and amphibians in the United States.



Prepare a list of the most common species found in your local area or state.

Reptiles		Amphibians	

3. Describe the main differences between:

a. Amphibians and reptiles.

b. Alligators and crocodiles.

c. Toads and frogs.

d. Salamanders and lizards.

e. Snakes and lizards.

4. Explain how reptiles and amphibians are an important component of the natural environment.

List four species that are officially protected by the federal government or state you live in, and tell why each is protected. List three species of reptiles and three species of amphibians found in your local area that are not protected. Discuss the food habits of all ten species.

Protected Species

1. Species	
Why protected?	
Food habits:	

2. Species	
Why protected?	
Food habits:	

Species

--

Why protected?

Food habits:

4. Species

--

Why protected?

Food habits:

Unprotected Reptiles

1. Species

--

Food habits:

2. Species

--

Food habits:

3. Species	
Food habits:	

Unprotected Amphibians

1. Species	
Food habits:	

2. Species	
Food habits:	

3. Species	
Food habits:	

5. Describe how reptiles and amphibians reproduce.

Reptiles	
Amphibians	

6. From observation, describe how snakes move forward.

Describe the functions of the muscles, ribs, and belly plates.

7. Describe in detail six venomous snakes and the one venomous lizard found in the United States. Describe their habits and geographic range.

Venomous Snake 1	
Description:	
Habits:	
Range:	

Venomous Snake 2	
Description:	
Habits:	
Range:	

Venomous Snake 3

Description:

Habits:

Range:

Venomous Snake 4

Description:

Habits:

Range:

Venomous Snake 5

Description:

Habits:

Range:

8. Do ONE of the following:

- a. Maintain one or more reptiles or amphibians for at least a month. Record the food accepted, eating methods, changes in coloration, shedding of skins, and general habits; or keep the eggs of a reptile from the time of laying until hatching; or keep the eggs of an amphibian from the time of laying until their transformation into tadpoles (frogs) or larvae (salamanders).

Reptile(s) or Amphibian(s) Maintained:

Dates:

Day	Food Accepted	Eating Methods	Color Changes	Skin Shedding	General Habits
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					

30					
31					

- b. Choose a reptile or amphibian that you can observe at a local zoo, aquarium, nature center, or other such exhibit (such as your classroom or school). Study the specimen weekly for a period of three months. At each visit, sketch the specimen in its captive habitat and note any changes in its coloration, shedding of skins, and general habits and behavior. Find out, either from information you locate on your own or by talking to the caretaker, what this species eats and what are its native habitat and home range, preferred climate, average life expectancy, and natural predators. Also identify any human caused threats to its population and any laws that protect the species and its habitat. After the observation period, share what you have learned with your counselor.

(Npte: Make your sketches on separate pages and attach them to the workbook.)

9. Do TWO of the following:

- a. Identify at night three kinds of toads or frogs by their voices. Imitate the song of each for your counselor. Stalk each with a flashlight and discover how each sings and from where.
- b. Identify by sight eight species of reptiles or amphibians.
- c. Using visual aids, give a brief talk to a small group on three different reptiles and amphibians.

10. Give five superstitions about reptiles and amphibians and a correct explanation for each.

	Superstition	Explanation
1.		
2.		
3.		
4.		
5.		

Give seven examples of unusual behavior or other true facts about reptiles and amphibians.

1	
2	
3	
4	
5	
6	
7	

NOTE: Scouts must not use venomous reptiles in fulfilling requirement 8a. Species listed by federal or state law as endangered, protected, or threatened must not be used as live specimens in completing requirement 8a unless official permission has been given. In most cases, all specimens should be returned to the wild at the location of capture after the requirement has 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/Reptile and Amphibian Study#Requirement resources](http://www.meritbadge.org/wiki/index.php/Reptile_and_Amphibian_Study#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.