

Investigation Twelve - Amphibians & Reptiles

Standard V Students will understand the physical characteristics of Utah's wetlands, forests, and deserts and identify common organisms for each environment.
Objective 4 Observe and record the behavior of Utah animals.
Intended Learning Outcomes <ol style="list-style-type: none">1. Use science process and thinking skills2. Manifest scientific attitudes and interests4. Communicate effectively using science language and reasoning

Standard
V
Objective
4

Background Information

Amphibians are a group of cold-blooded animals that include frogs, toads, newts and salamanders. They typically spend part of their life in water, part on land. They are distinct from reptiles in that their eggs must be laid in moist conditions and that their soft moist skins have no scales. The skin is slippery because there are special glands that produce mucus. This helps keep the very thin skin from losing too much water. This is one adaptation that allows amphibians to live even in very dry deserts: The larvae usually live in the water while the adults live on the land and are generally four-legged and carnivorous.

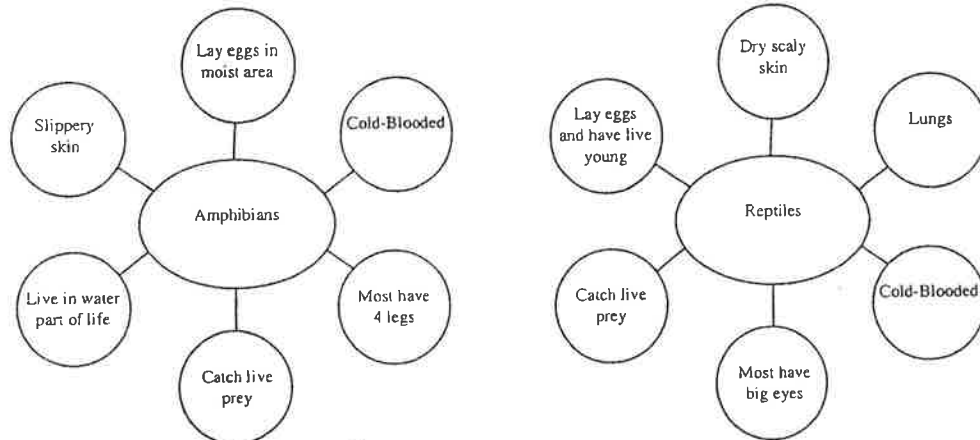
Reptiles, on the other hand, have dry, scaly skin. They breathe through their lungs. They are also cold-blooded. Most reptiles lay eggs, although certain snakes and lizards keep the eggs in their bodies until the young hatch. They are born live. Most reptiles live by eating other animals.

17 different kinds of amphibians can be found in Utah. There are eight toads, eight frogs (two which are not native) and only one salamander. When it comes to reptiles, however, the list is *long!* For a specific list of reptiles found in Utah, go to the website listed in resources.

This objective lesson is to help students compare and contrast the behavior and structure of amphibians and reptiles of Utah. Help students learn all about these vertebrates while narrowing their focus to the species found in Utah. The Division of Wildlife Resources website will be an important resource for them to access, both from information as well as colorful pictures of all these animals. The question chart activity will also reinforce Language Arts standards having children organize and report information.

Invitation to Learn

Construct a web using the two kinds of animals. Web the characteristics that class members name for each group. (At the end of the activity, add those characteristics that students discovered during their research which were not included.)



Instructional Procedure

1. Have students choose three questions from the suggested list found in this lesson or create their own questions. Write them on the compare and contrast chart that each student will receive.
2. Show a video from your district library on amphibians and reptiles. As they find answers to their questions, have students write them on the worksheet provided.
3. Have students read questions and allow groups to answer. This could be in game format with students divided into two groups.

Structure and Summary of Behavior Questions List

1. How are an amphibian's and a reptile's body different?
2. How are an amphibian's and a reptile's body alike?
3. How do they locate food?
4. Where do they live?
5. What do they eat?

6. How do they sleep?
7. What are their natural enemies?
8. When are an amphibian/reptile most active?
9. How do they reproduce?

Curriculum Extensions

Fine Arts/Visual Arts-

- Have students include some type of visual display with their report such as a model, diorama, or illustration. Try to encourage original student art rather than computer generated graphics. (Standard III, Objective 1)

Math

- Make origami frogs and toads out of different colors of paper. Have a jumping contest. (Standard III, Objective 3)

Assessment Suggestions

There is a rubric attached to the written report. This information will give scores for science as well as language arts. The rubric follows the Six Traits Writing Model.

Resources

Agencies:

- Utah Division of Wildlife Resources: Project WILD publications, *Growing Wild*, and *Natures Call* issues about reptiles and amphibians.
- Project WILD also has an “Amphibian and Reptiles” trunk with information/books/videos available to teachers who have attended a Project WILD training.

Websites:

- <http://www.wildlife.utah.gov>- a site that has the Utah Conservation Database website. Select “Vertebrates” and see options for amphibians and reptiles. There is a list of all the species. When you pick a species you can read information about it, see a picture (in most cases), and then click on the option to see a range map.
- <http://dwrcdc.nr.utah.gov/ucdc/> - Click on Fourth Grade plants and animals for great pictures and short summaries of amphibians and reptiles.

Books:

- Eyewitness books cover information that will help compare the structure and behavior of amphibians and reptiles.
- National Audubon Society First Field Guide Series offers guides on reptiles that provide excellent information and colored photos of different species. Clip art licensed from the Clip Art Gallery on Discovery School.com

Homework and Family Connections

Have students find out if any family members have had experiences with either amphibians or reptiles, good or bad. What did they learn from these? Review the guidelines for behavior when finding one of these animals. Many students try to catch lizards and bring them home to keep as “pets.” Encourage all students to enjoy such animals where they are and then leave them there. Discuss the importance of keeping a safe distance from snakes.

Amphibians and Reptiles

Compare and Contrast Structure and Behavior

Questions	Amphibian Answers	Reptile Answers
1.		
2.		
3.		