

Why Do You Classify This?

Standard V:

Students will understand the physical characteristics of Utah's wetlands, forests, and deserts and identify common organisms for each environment.

Objective 3:

Use a simple scheme to classify Utah plants and animals.

Intended Learning Outcomes:

1. Use science process and thinking skills
3. Understand science concepts and principles

Content Connections:

Science V-3; Classifying animals

Science
Standard

V

Objective

3

Connections

Background Information

Classification is a way to organize information in a hierarchal order. It helps students to see that animals and plants have similarities and differences, for example a bear is an animal and a mammal, but a frog is an animal and a amphibian. Students need to see that animals can be grouped by characteristics that are seen and are not seen; e.g. cold-blooded can't really be seen, but fur can be.

This lesson is to be used after the students have been exposed to many classifying activities. They should be familiar with grouping and simple classification keys.

Research Basis

Wolfe, P. (2001). Brain matters: translating research into classroom practice. *Association for Supervision and Curriculum Development*, Alexandria, VA.

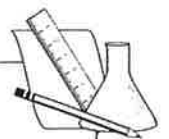
The brain processes abstract information best after experiencing real things first and then symbolic representations. To analyze and compare information, the brain needs to be able to base it on an experience. When learning science, students need to be presented with real-life experiences and meaningful context that build a base for the abstract written problems we usually pose on tests.

Invitation to Learn

Have students rip and fold a piece of paper in their journal to create a flip chart. Ask students to think of an animal they know well, one that they can picture in their mind and describe. Explain that students are going to create a character sketch of the animal. They will describe what the animal looks like, acts like, and places

Materials

- Animals Cards
- Animal pictures
- What Can You Do With a Tail Like This?*
- Student journals



where it would live. This sketch should give information about the animal without ever saying the name of the animal. Give students time to complete their animal sketch. Encourage them to include LOTS of detail and write in complete sentences. After completing the animal sketch, have students write the name of the animal on the inside of the flip chart. If they finish early they can draw a picture as well. *If you want to carry this into more writing practice students can revise and edit as partners and then present to a group.*

When all students are done, have them share their animal sketches. Students stand up and walk around until the teacher says stop. They turn to the person closest to them and take turns reading their sketch and having the other student guessing the animal.

Instructional Procedures

1. Show the students the book *What Do You Do With A Tail Like This?* Explain that this book talks about similarities in animals like tails, eyes, hands, etc (show pictures/example from the book). Then it talks about how these parts can be different and how they are used.
2. Explain that before you read the story you want to see how much the students know about animals. Pass out the Animal Cards. Assign partners or 3 students to work together. Give the students a few minutes to walk around looking for their matching cards. When they are done talk about what matches they found. Post the matches on a poster for reference.
3. Read the book to the students. Stop and observe matches when they apply to the story. Have students correct themselves when necessary.
4. Explain to students that scientists look at what is similar and different in animals to classify, just like with the grouping activities done before. Explain that today students will get to group pictures of animals into similar groups and defend their reasons. The process should mirror how they have been classifying objects previously.
5. Pass out animal picture cards. Pictures can be grouped in various ways depending on how much your students have already learned about animals. If they know what the differences between reptiles and mammals are, you can have some of both in a group. But a little more challenging is to have a group of spiders, birds, etc. That way, students can focus on characteristics that make the animal unique from other

animals similar to it. Students work in groups to classify them. Encourage students to look at all characteristics.

6. When the students have created groups, help them to make a classification key to show the animals.
7. Assess students as you move through the groups. If students need more practice have them switch cards and repeat the activity with different animals.

Assessment Suggestions

- The *Animal Cards* provide a pre-assessment of students' knowledge of animals and their adaptations.
- Give students a classification key and an animal/plant to identify.
- Students explain how to use a classification key and why they are important.

Curriculum Extensions/Adaptations/Integration

- Have students gather and group leaves. Include leaves that are native to Utah.
- If your students need more hands-on or kinesthetic activity, have them group stuffed animals instead of pictures.
- Use the internet to have students research about animals. They can write a report or give an oral presentation.
- Use the jigsaw activity to learn about animals. Have groups of students learn about an animal (or group) through the internet, books, etc. Then regroup students so that each animal is represented in the group. Have them give an oral presentation.
- Focus classifying animals or plants from specific habitats. Students group the animals from wetlands, deserts, and forests. Then discuss differences in the adaptations that the animals have to survive.
- Students can write as if they are the animal and explain what life is like.
- Students can create a daily diary as if they were an animal living in the forest, wetland, or desert. (Use *Diary of a Worm* to encourage ideas.)

Family Connections

- Teach a family member how to use a classification key.
- Use a simple plant classification key to identify trees around their homes.
- Give students a classification key and animal pictures; they must identify the animals.

Additional Resources

Books

What Do You Do With a Tail Like This?, by Steve Jenkins and Robin Page; ISBN-10: 0-618-25628-8

Web sites

www.thefuturechannel.com

Great information and videos about animals and scientists. It covers many science topics.



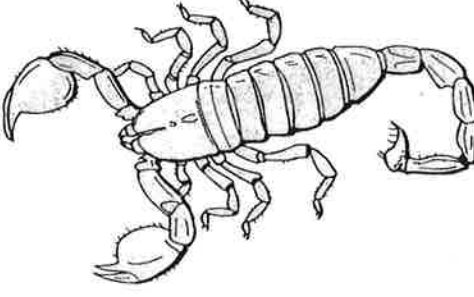
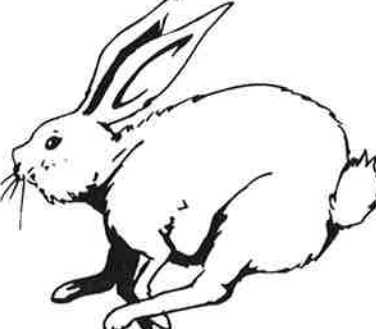
www.wildlife.utah.gov/projectwild/

Information about Utah wildlife, includes activities and resources.

Organizations

Project Wild, Diana Vos 801-538-4719, DianaVos@utah.gov

Animal Cards

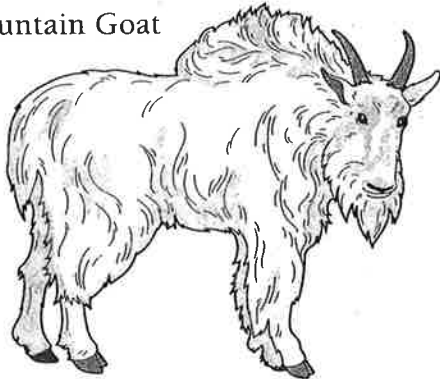
<p>Cricket</p> 	<p>An insect that chirps by rubbing its wings together. It jumps and has 6 legs. It has a hard body; an exoskeleton.</p>
<p>Skunk</p> 	<p>This mammal sprays its attacker with a stinky, eye stinging liquid. Its fur is black with a white stripe. It is an omnivore.</p>
<p>Scorpion</p> 	<p>This insect eats spiders and small mammals by poisoning its prey with a stinger on the end of its tail. Its exoskeleton is red and it lives in the deserts of Utah.</p>
<p>Jackrabbit</p> 	<p>This mammal lives in the deserts of Utah. It has very tall ears and a small bushy tail. It eats grass and shrubs.</p>

Bald Eagle



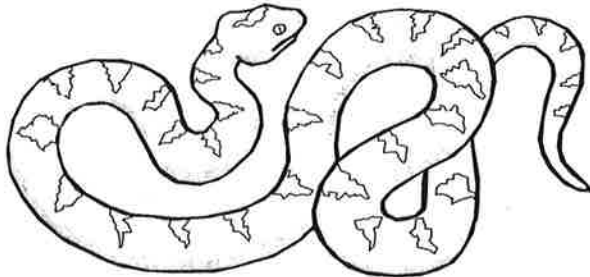
This bird has a white head and sharp claws. It dives from the sky to attack its prey, such as rabbits, small birds, or fish.

Mountain Goat



This mammal has short horns and fluffy fur. It lives in the mountains and its hooves help it to climb steep, rocky slopes.

Snake



This reptile has no legs and slithers on the ground. Some can unhinge their mouth to swallow their prey whole.