What Am I?

Outdoor Wonders and Learning™

OWL

Elaborate/Apply

Students will collect and analyze data comparing characteristics of familiar animals to learn how to classify them into groups

Grade Levels:

K, 1, 2, 3, 4, 5

Curriculum Correlation:

NCSCS—Science

K.L.1.1

NCSCS—Mathematics

K.CC.4, K.CC.5, K.CC.6, K.MD.3

1.MD.4

2.MD.10

3.MD.3

Materials:

Whiteboard and markers; class set of Common Backyard Animals photos (see Appendix); six animal category signs

Duration:

30 minutes

Location:

Classroom for grades 3-5; Outdoor Study Area for grades K-5

Procedure (K-2):

1. Ask students to feel their backbones. Ask the students "What do you know about backbones?"

2. Show the students one animal picture at a time, let them decide if it also has a backbone like they do, then place the picture in one of two piles—animals with backbones and animals without. Have the students count and compare the numbers in each pile.

3. Now you can introduce the concept of bones on the inside or bones on the outside (exoskeleton) and have the students re-evaluate their answers, moving pictures if needed.

    * At this point a chart or graph can be made to compare these two numbers.

4. Next ask the students if these animals have other things in common. Is there another way we can group these animals? Choosing one of the insects in the pile as an example, ask the students what things make an insect an insect (six legs, three body segments, exoskeleton). Have them find other insects in the picture pile and line them up as a pictograph. Use the animal category signs as labels.

5. Repeat Step 3 with the other animal categories (Mammals, Birds, Reptiles, Amphibians, Fish).

6. Looking at the pictograph, have the students compare the number of animals in each category. Which group has the most animals? Which has the least? Could you see any of these animals in your schoolyard habitat? Why or why not?

Procedure (3-5):

1. Ask students to feel their backbones. Ask the students "What do you know about backbones?"

2.   Make a fill in the blank Concept Map with the students (see Appendix for Sample Category Chart example), listing the following categories: Invertebrates and Vertebrates; subcategories under Vertebrates are Mammals, Birds, Reptiles, Amphibians, and Fish. Give the students some common characteristics of each category of animal and list one example of each type. Then have each student name an animal and which category they think it goes into based on its characteristics.

3.   Outside, have the Animal Categories set up in a line in an open area, spaced evenly about five feet apart. Have the students lined up perpendicular to the line of animal categories. Ask everyone to listen carefully, and to think about the characteristics of the different animal groups. Call out an animal from one of the Common Backyard Animals picture cards. When the students hear the animal, they will run and line up in the category they think that animal falls into. For example, if you say Blue Jay, the students should run to the Bird category and line up. If they don't all go to the best category choice, take a moment to discuss with the group the key characteristics of a bird and see if anyone wants to change their answer.

4.   Place the picture next to the Animal Category, have the students go back to the starting line, and call out another animal. Repeat Steps 3 and 4 until all of the animals are sorted. The pictures can be counted and the results recorded so the students can make a bar graph back inside.

5.   Looking at the bar graph, have the students compare the number of animals in each category. Which group has the most animals? Which has the least? Could you see any of these animals in your schoolyard habitat? Why or why not? Do you think this graph is a good representation of our school yard habitat? Why or why not?

Extensions:

1.   To help students practice the characteristics that make up each group of animals, they can play these online interactive games: http://www.sheppardsoftware.com/content/animals/kidscorner/games/animalclassgame.htm OR http://unctv.pbslearningmedia.org/resource/lsps07.sci.life.oate.animalclass/animal-classification-game/

2.   To help students learn more about different ratios of animal groups that may live in different habitats, use the games on this website: http://www.sheppardsoftware.com/content/animals/kidscorner/gamesforkids.htm

Learning Targets:

1.   Classify animals into different groups that demonstrate similar characteristics and understand that individual differences show group variation.

2.   Analyze data from the animal sort using charts and graphs.