

All About Sheep

Subject: Science

Grade Level: Elementary/Middle

Idaho General Education Performance Standards:

- LS1-4-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- LS2-5-2 Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.

Time: 45-60 min.

Supplies:

- Sheep skull
- Coyote skull
- Wool examples: raw, women, carded, spun, dyed, and felted

Learning Objectives:

Students will:

- Identify differences between herbivores (sheep skull compared to carnivores (coyote skull).
- Explain the different forms of wool (raw, woven, washed & carded, felted, dyed, spun).
- Compare and contrast fine and coarse wool.

Content Overview:

Students will learn about wool and look at a sheep skull (herbivore) compared to a coyote skull (omnivore).

Instructional Approach:

Interest Approach:

1. Sheep have been a big part of Idaho's history for many years. In 1918, there were 2.6 million sheep in Idaho. That was six times the state's human population.
2. Sheep provide many resources to humans: meat, wool, and lanolin.

Learning Activity:

1. Explain to students that they will be looking at wool today and the different ways it can be used.
2. Show the students what raw wool is (it is just shorn of the sheep; it has not been washed or carded.)
3. Show students the washed and carded wool. Discuss what differences they see: how do they feel, look, and smell different?
4. Discuss how sheep graze. Show them the skull- Note that sheep teeth influence what they eat.
5. The split lip allows sheep to pick the preferred leaves off of the plant.
6. The bottom front incisors are sharp like knives, and the back teeth grind the plants.
7. Tell them this skull was prey and the next skull is a predator. Have them define and give characteristics of predators and prey.
8. Show them the coyote skull- What are the differences and similarities between the coyote and sheep skulls? Tell students that when you are discussing predator vs. prey you are specifically talking about carnivores as the predator and an herbivore as the prey. Explain that carnivores can eat herbivores as well, which would make one the predator and one the prey. However, for today's lesson, that is not

- the case. Then propose the following questions: Why do predators have sharp teeth? Why does the coyote have more teeth than the sheep? How does the shape of the animal's teeth help determine the type of food it eats?
9. Also have students notice the shape of each animal's head, eye placement and head size. How do these characteristics affect what they eat?
 10. Discuss with students the importance of both predator and prey in the environment. Without both, the ecosystem would be unbalanced.
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Assessment:

1. Have students draw a picture of either predator or prey. They need to include 3 characteristics that make it clear whether the picture is of prey or predators. Have them write at the bottom, what the animal is and what it eats. Also have them justify why their animal is a predator or a prey.
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Background:

- Sheep teeth fact source: Sheep Facts- By: Matthew Claeys & Sharon Rogers
http://www.cals.ncsu.edu/an_sci/extension/animal/4hyouth/sheep/sheepfacts.htm
- Coyote Teeth Picture by: Predator Master's Forum:
<http://www.predatormastersforums.com/forums/ubbthreads.php?ubb=showflat&Number=54065>