

SKELETONS: Museum of Osteology

Tale of the Tooth

Teacher Resource

Grade Levels: Pre-Kindergarten and Kindergarten

Kindergarten Oklahoma Academic Standards (OAS):

K-LS1-1 From Molecules to Organisms: Structure and Processes

K-LS1-1: Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS2-2 Earth's Systems

K-ESS2-2: Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

K-ESS3-1 Earth and Human Activity

K-ESS3-1: Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.

1-LS1-2 From Molecules to Organisms: Structure and Processes

1-LS1-2: Read text and use media to determine patterns in behavior of parents and offspring that help offspring survive.

2-LS4-1 Biological Unity and Diversity

2-LS4-1: Make observations of plants and animals to compare the diversity of life in different habitats.

Program Overview:

Tale of the Tooth starts with the students being read a story about the different kinds of teeth animals have, and what they do with those teeth. After storytime, students will participate in a hands-on activity to decide whether specimen teeth belong to a carnivore or an herbivore.

Learning Objectives:

- Participants will listen to a story about animal teeth.
- Participants will examine and touch various teeth from animals we have read about.

Background:

Mammals, as well as some reptiles, amphibians and fish, have teeth. The teeth of an animal can tell you a lot about that animal's life. The type, shape and number of teeth an animal has can help determine its diet. If a mammal has long, sharp canines, it was most likely a meat eater. Some meat eating mammals (carnivores) have sharp shearing cheek-teeth called carnassials. These teeth act like a scissor to cut through tough flesh and to break it into smaller pieces for swallowing and digestion. Examples of carnivores include cats, dogs and weasels.

Plant eating animals (herbivores) tend to have flat teeth specialized in chewing various parts of plants. Some plant eaters eat a variety of grasses (grazers), some eat twigs, leaves and berries (browsers) while others eat only specific plant parts (I.e. roots, fruit, etc.). In order to properly digest vegetation, an animal must chew its food to help break down the plant. Most herbivores have cheek teeth called molars. These molars help grind leaves, stems, grasses, fruit and even seeds before the animal swallows them. Examples of herbivores include deer, rabbits and cattle.

Some animals eat both plants and animals (omnivores) and have both types of teeth. Examples of omnivores include pigs, bears and humans.

Vocabulary:

Browser: Herbivores that primarily eat twigs, leaves and berries

Carnassial: A carnivore's cheek teeth specialized for shearing meat

Canine teeth: Teeth that are pointed and conical, located between the incisors and premolars

Carnivore: Animals that primarily eat meat

Food Chain: The transfer of energy from one type of plant or animal to another

Grazer: Herbivores that primarily eat grasses

Habitat: The soil, water, climate, plants and animals of a particular ecosystem

Herbivore: Animals that primarily eat plants

Incisors: The front cutting teeth located anterior to the canine teeth

Molars: The rear grinding/shearing teeth located posterior to the premolars

Omnivore: Animals that eat both plants and meat

Premolars: Teeth located between the canines and molars used to hold prey, assist in cutting and/or grinding

Reference: visit the SKELETONS: Museum of Osteology web page at:

<http://skeletonmuseum.com/education>

Recommended Reading:

Gilbert, B. Miles

1990 *Mammalian Osteology*. Missouri Archaeological Society, Columbia, MO.

Roest, Aryan I.

1991 *A Key Guide to Mammal Skulls and Lower Jaws*. Mad River Press, Inc., Eureka, CA.

Searfoss, Glen

1995 *Skulls and Bones*. Stackpole Books, Mechanicsburg, PA.

While at SKELETONS:

- Have students visit the exhibits to identify whether an animal is a carnivore or herbivore.
- Have students describe what a carnivore/herbivore tooth looks like.
- Visit the Explorer's Corner to hold and examine the teeth of many animals including a Coyote, Beaver, Bobcat, Deer, Raccoon, and Opossum.
- Have students look for the Lion chasing the Eland to see their predator-prey relationship in motion.
- Look at the Oklahoma Exhibit and discuss why eye placement is significant for Oklahoma Herbivores and Carnivores.