



# Predator and Prey

\*Location of activity provided by staff\*

## Summary

Intro discussion: 5 mins

Activities: 15-20 mins

**Grades:** (suggested) K-3

**Subject:** Predator and Prey Relationships

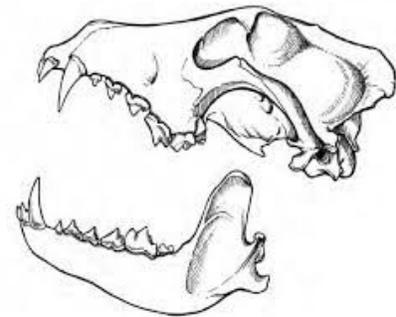
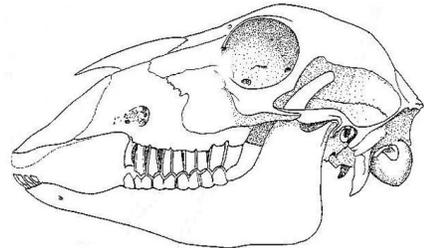
## **Activity Objective:**

To have students do a variety of activities that illustrate predator and prey relationships and the importance of each type of animal.

## **Materials & Preparation:**

### PROVIDED:

- Velcro board
- Laminated food chain pictures
- Animal pictures
- Set of real animal skulls or jawbones
- Set of rubber mammal foot replicas ( 1 set each: Badger, Coyote, Bobcat, Mule Deer)
- Books: *A Bold Carnivore* and *The True Story of the Three Little Pigs* (english and spanish version)



**PREP:** Check out the materials, decide which activities you will use, do additional research on predator and prey relationships

**NOTE:** You may not have time for all of the activities included, so decide which ones you want to use. \*Background information is provided at the end of this lesson plan\*

**Key Vocabulary Terms:** food chain, herbivores, omnivores, carnivores

### **Intro Discussion:** (5 mins)

Begin with a lesson about the food chain. Ask the students if they know what a food chain is. This is a basic, very important concept... the interrelatedness of all organisms. Use the velcro board and laminated pictures to create a simple food chain (energy cycle). Hand each child a picture and ask them to place it on the board as each element of the food chain is discussed.

Ask the students if they know the terms ***herbivore, carnivore, omnivore***. What do they mean? Looking at the pictures, ask the students to tell you which animals are herbivores, carnivores, and omnivores.

### **Activities:** (15- 20 mins)

-You may not have time for all of these activities, keep track of time-

#### **1. Characteristics of Teeth**

- Show the jawbones and skulls. Let the children touch the teeth. Ask if they can tell which belongs to the three kinds of “eaters” ( herbivore, omnivore, carnivore). Discuss the shape of the teeth and jawbone and how the shapes help the animals to eat the types of food they eat (different kinds of teeth are specialized for eating different kinds of food). **At this point discourage the group from trying to guess the animal...instead concentrate on the types of teeth.**
- Ask the students to feel their own teeth with their tongues. Can they locate different shaped teeth? What kind of teeth are in human mouths? Flat grinders? Sharp pointed cutters? (answers will vary depending on the age of the students and the teeth they have lost or replaced)
- Ask the students to think about what kind of eater we are based on the shape of our teeth

## 2. Characteristics of Eyes

- Place pictures of various animals on the velcro board. Ask the group to notice the eyes and the direction the eyes face. Are the eyes on the side of the head, or are they in front? Can they tell which animals are prey and which are predators? (take answers and ask them why they answered that way- talk about the placement of eyes in finding prey and avoiding predators)
- Ask the students to look at one another and decide if we have predator or prey eyes.
- Ask the students to identify the animals on the velcro board

## 3. Characteristics of Feet

- Using the same animal pictures, take a closer look at the feet. Ask the students, which animals can run the fastest? Who might run the slowest? Which feet are good for holding and grabbing?
- Introduce the words ***plantigrade, digitigrade, unguligrade.*** (Plantigrade = bear, human, badger) (Digitigrade = coyote or mountain lion) (Unguligrade = deer or javelina) - talk about the three types of animal feet and how they help animals move, run, find food and defend themselves
- Give each student a set of rubber mammal foot replicas (or one per 2 students) and ask them to make tracks in the sand. Encourage the students to tell stories about a predator and its prey using sand tracks as illustrations

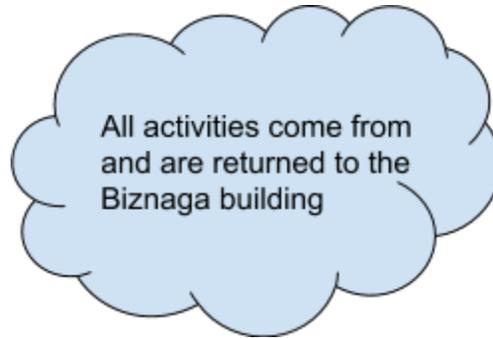
## 4. Reading a Story

- If there is time, read from one of the books: *The True Story of the Three Little Pigs* (In English and Spanish) or *A Bold Carnivore*

## **Clean Up:**

AFTER EACH GROUP: Collect all the pictures and foot replicas and return them to the box. Use the list in the kit to check that all tracks have been returned.

AFTER THE LAST GROUP: Upon completion of all the sessions, collect all materials, arrange them in the box, return box and velcro board to the table in the "Biznaga" building.



## **BACKGROUND INFORMATION FOR GROUP LEADERS**

### **A SIMPLE FOOD CHAIN**

All living organisms in an ecosystem are dependent on one another. To understand this relationship better we can show how energy flows from one organism to another in a simple "food chain" or energy cycle. Any food chain begins with the Sun and the energy it provides for growing plants. Plants are the first group of organisms in our food chain. Many insects, birds, and mammals depend on plants for their food. Animals that eat plants are called **herbivores** and make up the next group of organisms in the food chain. Examples are grasshoppers, kangaroo mice, deer, pronghorns, and sparrows. Herbivores provide food for the next group...meat-eating animals we call **carnivores**. Mountain lions, bobcats, snakes, and hawks are carnivores. The next group, **omnivores**, eats both plants and meat. Bears, coyotes, and most people eat both plants and meat and are omnivorous. When any organism dies it provides food for the **decomposers**. Bacteria, fungi, and earthworms are examples of decomposers. Many decomposers live in the air and soil and return dead material back to the soil where it is used by the plants.

**Predators** are animals that eat other animals. **Prey** are animals eaten by predators.

Please use the word "predator" rather than "enemy". Enemy implies the emotion of hatred. Predators play an important role in the energy cycle.

In our simple food chain, mountain lions, bobcats, bears, coyotes, snakes and hawks represent predators. Insects, mice, deer, and sparrows are prey.

## CHARACTERISTICS OF PREDATOR AND PREY

### EYES:

The eyes of **predators** face forward. These animals have good depth perception which means they can see how close or far away an animal is. Chasing and catching prey requires good vision in the direction one is moving...forward. Forward facing eyes can also focus on a single forward point.

The eyes of **prey** animals are located along the side of the head. They have good side and rear vision. If an animal spends most of its time eating grass and leaves, being able to see to the side and rear without moving the head allows it to look out for predators and eat at the same time. Prey animals have almost 360-degree vision.

### TEETH:

Predators, usually carnivores, have sharp, pointed teeth used for gripping and cutting. Little chewing takes place and the food is swallowed whole or in chunks. Long, sharp canine teeth are used for killing, holding and tearing. The sharp, pointed teeth cut the food into chunks small enough to swallow. The teeth cut much like scissors.

Prey, usually herbivores, have flat teeth that are used for grinding tough plant material.

Some of the teeth have sharp edges, but these are used to break down the plant material and make it easier to digest.

Omnivores, like coyotes and bears, have both sharp and flat teeth for cutting and grinding.

### FEET:

Mammals have three types of feet:

1) **Plantigrade** (walking on the sole of the foot)

The flat surfaces, which bear the animal's weight, extend from toe to heel and are in contact with the ground at some point during the step. These are slower moving animals.

...To illustrate this foot type, ask the children to "walk" their hands on the ground using the entire flat of the hand.

...Examples:

bear, badger, raccoon, coatimundi, skunk, human being

2) **Digitigrade** (walking on toes)

These animals walk on their toes, with the heel permanently raised. These are faster movers than the plantigrade animals.

...To illustrate this foot type, ask the children to "walk" their hands on the ground with only fingers touching the ground, and the "heel" of the hand raised up.

...Examples:

bobcat, mountain lion, wolf, coyote, fox, rabbit, squirrel, mouse

### 3) **Unguligrade** (walking on hooves)

These animals move on the tips of their toenails. The toenails have evolved into enlarged nails we call hooves. This group includes the fastest moving animals.

...To illustrate this foot type, ask the children to "walk" on their hands with the fingers bent under so that they are "walking" on their fingernails.

...Examples:

deer, javelina, pronghorn