

What Teeth Tell Us

Activity for Grades K–4

Introduction

In the Hall of Ornithischian Dinosaurs at the American Museum of Natural History, robotic dinosaur skulls demonstrate how the dental adaptations of plant-eating dinosaurs worked. They show that as teeth wore down, new teeth grew to replace them. Paleontologists can tell a lot from the size of a dinosaur's skull and from the teeth in it. If the skull has powerful jaws and long, sharp teeth, then the dinosaur was most probably a meat-eater, a carnivore. The teeth were used to rip apart meat. Wide, flat teeth with ridges indicate that the dinosaur was a plant-eater, a herbivore. The teeth were used to mash and grind tough vegetation.

Objective

This activity will introduce students to teeth and help them differentiate between the teeth of meat-eaters and plant-eaters.



Materials

- Pictures of plant-eating and meat-eating animals (from nature magazines and calendars)
- Staple removers (one per group)
- Cotton balls
- Flat rocks (two per group)
- Leaves
- **What Teeth Tell Us** duplicated for each student
- Crayons
- Small mirrors

Procedure

1. Display the pictures of the animals, one at a time, to students. For each animal, ask students to describe the teeth. Ask them to name a food the animal might eat. Use questioning to elicit answers, leading students to the conclusion that long, sharp teeth are associated with meat-eaters and flat, blunt teeth are associated with plant-eaters. Tell students they are going to experiment to learn how the teeth of animals help the animals eat their food.
2. Have students work in small groups. Distribute the staple removers, cotton balls, rocks, and leaves to each group. Model what students are to do. Display the staple remover and tell students it represents the sharp teeth of a meat-eater. Show them how the staple remover works. Tell them the cotton balls represent meat. Display the rocks and tell students they represent the flat, grinding teeth of a plant-eater. Show them how the two rocks work by grinding them together. Tell them that the leaves represent plants. Have students experiment "eating" the cotton balls and leaves using the stapler remover and rocks. Have students determine which set of teeth worked best for each food. Then have students use the mirrors to examine their own teeth to identify what kind of teeth they have. Call on groups to share their findings. Students should conclude that they have both sharp, biting teeth and flat, grinding teeth. Point out to them that they are both meat-eaters and plant-eaters.
3. Distribute **What Teeth Tell Us** to students. Have them complete the exercise. (Answers: top left, herbivore; top right, carnivore; bottom left, carnivore; bottom right, herbivore.)

What Teeth Tell Us

Name _____ Date _____

Color the dinosaurs that eat meat blue. Color the dinosaurs that eat plants green.

