

Making Tracks Middle School

Objectives

- Students will discover the track patterns of two and four legged dinosaurs.
- Students will use pictures to identify two and four legged dinosaurs.
- Students will study the dinosaurs tracks located on the geodetective page to determine what was happening by the river when the dinosaurs were alive.

Introduction

Divide the students into pairs or small groups. **Explain** that they are going to have a few minutes to discover how two legged and four legged dinosaurs walked. **Encourage** the students to pay close attention to how they move when they are modeling two and four legged dinosaurs. **Ask** the students to look for a pattern that could describe how two footed and four legged dinosaurs moved.

Discussion

Explain that two legged and four legged dinosaurs DID walk differently. **Ask** the students to share the different patterns they observed when they were acting like dinosaurs. **Guide** the discussion to include the following walking patterns.

Dinosaur walking patterns

- two leg pattern: one step, then the other;
- four leg patterns: can be alternating pairs move at the same time, same side moves at the same time, or each “leg” moves at a time.

Discussion

Explain that dinosaurs that walked on four legs are classified as **quadrupedals** and those that walked on two legs are classified as **bipedal**. **Encourage** the students to link the prefixes quad and bi to the number of legs the dinosaurs used for walking.

Show the students pictures of each type of dinosaur. *Pictures are located under the FAQ tab.*

Explain that

- **Bipedal tracks** in the Cretaceous rocks of Texas probably were made by several groups of dinosaurs, including theropods and ornithopods. These dinosaurs, like birds of today, walked on their toes, leaving three-toed prints.
- **Quadrupedal tracks** may include large (3-foot-wide) depressions made by hind feet. Prints of front feet are somewhat U shaped, but

they have sometimes been damaged or eliminated by the hind footprints coming after and obliterating them.

Exploration

Encourage the students to look at skeletal pictures of feet of dinosaurs. Have the students match the different dinosaurs with the skeletal pictures. *Pictures are found under the FAQ tab.*

Evaluation

Show the dinosaur footprint picture and drawing found under the Geodetective tab.

Explain that a •crime• is preserved in the rock. **Encourage** the students to figure out what happened?

Tips

- How many types of animals made tracks here?
- In what order were the tracks made?
- Looking at the picture, make a drawing of each animal as it walked through the mud.
- Can you and a few friends reenact what happened?
- What can you guess about the relationship among the animals?
- What things can you tell for sure?
- What things are guesses?

Answer: A two legged dinosaur was chasing a four legged dinosaur by the river. Just as lions and other predators go to the water holes to find food, the two legged dinosaurs would wait near the rivers to find food.