
Casting Tracks



Purpose:

- Students will construct a model of a track using Plaster of Paris and make inferences about habitat, food, and adaptations of the mammal based on its tracks.

Objectives:

- Students will work in pairs to create a Plaster of Paris model of an animal track.
- As a class, students will make inferences about the habitat, food, and adaptations of each animal based on its tracks.

Materials:

- quick-dry Plaster of Paris
- Vaseline
- old tooth brush
- vinyl animal track replicas
- green vinyl track molds
- paper clip (not provided)
- 2" cardboard strip (not provided)
- spoon or clean stick (not provided)
- large paper cup or container (not provided)
- measuring cup (not provided)
- water (not provided)
- ruler (not provided)
- an animal track found in the wild (optional) (not provided)

Time Required: 1 hour

Appropriate grades: 1-8

NGSS Standards:

K-2-ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

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

3-LS4-2: 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.

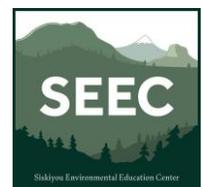
4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

Activity:

Introduction	This is a great culminating activity after working through the other track activities. Find a track in the wild, or make a track in mud using the vinyl track replicas included in the kit, or use the green vinyl track molds included in the kit. If you found the track in the wild, carefully clean it of rocks, twigs, and other
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	debris.
Body	<p>Using the 2" cardboard strip and paperclip, make a collar around the track. Press the cardboard collar about 1/2 inch into the soil.</p> <p>Pour the Plaster of Paris into the cardboard collar around the track, filling to 1/2 way up the sides of the collar.</p> <p>Measure two cups of Plaster of Paris into a large paper cup or other disposable container.</p> <p>While gently mixing with a spoon or clean stick, slowly add water until the mixture is the consistency of pancake batter (no lumps please!).</p> <p>Let it sit for 15 minutes or until the top surface of the Plaster of Paris mixture is dry and hard.</p> <p>When the cast has hardened, gently lift it from the soil and peel off the collar. Clean the raised copy of the animal track with a dull knife or stick (be very careful not to cut into the plaster).</p> <p>Finish by brushing the cast with an old tooth brush. Be gentle! If you brush too hard, you will scratch away part of the cast.</p> <p>When the cast is completely dry, you can ink or paint the raised surface to highlight the animal track.</p>
Closure	<p>Wrap up the exercise by discussing what each animal track tells us about the animal. Each student can share their track and what it says about their animal: Do we have any clues about what the animals eat? Can we infer anything about how the animals defend themselves? Can we hypothesize where the animals live and how they find shelter? How are these animals adapted to this particular habitat? These questions may have also been answered in previous lessons.</p>

Modifications:

- **Elementary:**
 - Write a story or a poem about the animal that the track belongs to paying special attention to its environment.
- **Middle School:**
 - Compare tracks side by side and discuss each animal's adaptations to its environment. The track identification booklet can be used as well.
- **High School:**
 - Research the evolution of different species specifically in terms of their tracks.
 - Research and discuss the use of tracks in scientific research.



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