

Photo Description



This image shows two deep footprints pressed into soft soil surrounded by green grass and small plants. The tracks appear to be from a large animal that walked across this muddy ground. We can see the shape and size of the animal's feet, which tells us what kind of animal made them.

Scientific Phenomena

Anchoring Phenomenon: Animal footprints in mud reveal evidence of an animal's presence and behavior.

Why This Happens (Scientific Explanation): When animals walk across soft ground like mud or sand, their feet press down and create impressions. These impressions remain visible because the soil has been displaced and compacted. The size, shape, and depth of tracks provide clues about what animal made them, how heavy it is, and which direction it was traveling. This is a form of indirect observation—we can learn about animals without seeing them directly.

Core Science Concepts

- * **Observation and Evidence:** Scientists look for clues in nature to answer questions about living things. Tracks are physical evidence that helps us learn about animals.
- * **Animal Characteristics:** Different animals have different foot sizes and shapes. Large animals make deeper, bigger tracks than small animals.
- * **Habitats and Animal Behavior:** Animals leave tracks in places where they live and hunt for food. Muddy areas near water are common places to find tracks.
- * **Cause and Effect:** When an animal's foot presses into soft soil, it creates a visible impression. The softer the ground, the clearer the track will be.

Pedagogical Tip:

For Kindergarteners, make this concrete and tactile! Before analyzing the photo, have students walk through a sand or mud tray themselves to feel how pressure creates impressions. This sensory experience makes the abstract concept of "evidence" tangible and memorable. Students will then recognize tracks as "footprints like mine!" which increases engagement and comprehension.

UDL Suggestions:

Representation: Provide picture cards showing different animal tracks (deer, rabbit, bird) alongside photos of the animals. This visual pairing helps students connect the abstract track to the concrete animal.

Action & Expression: Allow students to make their own tracks using paint or clay rather than only drawing or writing about them. This kinesthetic approach accommodates learners who struggle with fine motor skills.

Engagement: Connect tracks to students' own experiences ("Have you ever seen your footprints in snow or sand?") to increase relevance and motivation.

Discussion Questions

1. What do you think made these footprints, and why? (Bloom's: Analyze | DOK: 2)
2. How do you know a big animal made these tracks instead of a small animal? (Bloom's: Explain | DOK: 2)
3. Where else might we find animal tracks, and why do animals leave tracks in those places? (Bloom's: Apply | DOK: 3)
4. If you found tracks like these near your house, what could the animal have been looking for? (Bloom's: Evaluate | DOK: 3)

Extension Activities

1. Track Tasting: Set up a "tracking station" with a shallow tray of sand or kinetic sand. Provide toy animals or have students make animal feet from foam. Students press them into the sand, then trade with a partner to guess which animal made each track. This builds observation skills and classification thinking.
2. Nature Walk and Track Hunt: Take students outside to look for real animal tracks (birds, insects, pets, or deer). Provide clipboards with simple track outlines. Students can draw or photograph tracks they find. Back in the classroom, display the findings on a "Our Neighborhood Animals" bulletin board.
3. Footprint Art Project: Students trace their own feet, paint the bottom of their shoe, and make prints on large paper. Display these alongside animal track pictures. Create a comparison chart: "My footprint vs. a deer's footprint" to reinforce that different animals have different-sized feet.

NGSS Connections

Performance Expectation:

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

Disciplinary Core Ideas:

- * K-LS1.A - All organisms have basic needs. Animals need food, water, and shelter.
- * K-LS1.C - Organisms obtain the materials they need for growth and survival from their environment.

Crosscutting Concepts:

- * Patterns - Animal tracks show patterns that help us identify which animals live in an area.
- * Evidence and Explanation - Tracks provide evidence of animals, even when we don't see them directly.

Science Vocabulary

- * Track: A mark or footprint left behind by an animal walking through mud, sand, or snow.
- * Evidence: Clues or signs that help us learn about something that happened.
- * Habitat: The place where an animal lives and finds food and water.
- * Impression: A mark or dent made when something presses into soft material.
- * Animal: A living thing that can move around and needs food to survive.

External Resources

Children's Books:

Click, Clack, Moo: Cows That Type* by Doreen Cronin (While not exclusively about tracks, it engages young readers with animal sounds and movements)

Animal Tracks and Signs* by Jinny Johnson (Illustrated guide perfect for Kindergarten read-alouds)

Whose Feet Are These?* by Pam Munoz Ryan (A predictable question-and-answer format ideal for emergent readers)

YouTube Videos:

* "Animal Tracks for Kids" - National Geographic Kids

A 4-minute video showing real animal tracks with clear closeups and simple explanations.

URL: <https://www.youtube.com/watch?v=XWQJlxMCWvs>

* "Following Animal Tracks in the Snow" - PBS Learning Media

An engaging video showing how animals leave evidence of their presence in winter.

URL: https://www.youtube.com/watch?v=WKm3l8S_Ynl

Teacher Note: This lesson creates a bridge between the concrete (students' own footprints) and the abstract (invisible animals leaving evidence). The anchoring phenomenon in this image—visible tracks in soil—naturally invites the question "What made these marks?" which drives inquiry and deeper learning about animal behavior and evidence-based science thinking.