**Animal Tracks:**
Keeping Track of Who has been Here!

**DESCRIPTION**

Students investigate the similarities and difference of various animals as seen through their tracks. Students learn the basics of track identification, make animal tracks using molds, explore how different animals move, and learn to walk quietly to observe wildlife.

**Black Bear Track** - Front foot. Black bear tracks are somewhat human-like in appearance. Unlike humans however, the largest toe on a black bear is on the outside of the foot. Black bear tracks show five toes and claw marks on both front and back feet.

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**Learning Environment:**
- Indoor Classroom
- School Yard or Forested Area

**Prep Time:** 15 min

**Length of Lesson:** 2 hours

**Key Vocabulary:** diagonal walkers, bounders, pacers, gallopers.

**Staffing:** 1

**Resources:**
- See Lesson Outline

**Groupings:**
- Whole Class
- Small Groups

**Teaching/Learning Strategies:**
- Game
- Field Trip

**Assessment Strategy:** Matching Activity
EXPECTATIONS

Developing Investigation and Communication Skills

2.3 use scientific inquiry/research skills to investigate ways in which plants and animals in a community depend on features of their habitat to meet important needs (e.g., beavers use water for shelter [they build their lodges so the entrance is under water], food [cattails, water lilies, and other aquatic plants], and protection [they slap their tails on the water to warn of danger])

Understanding Basic Concepts

3.7 describe structural adaptations that allow plants and animals to survive in specific habitats (e.g., the thick stem of a cactus stores water for the plant; a duck’s webbed feet allow it to move quickly and efficiently in water)

This lesson can also be used for Grade 2

2.2 observe and compare the physical characteristics e.g., fur or feathers; two legs or no legs and the behavioural characteristics (e.g., predator or prey) of a variety of animals, including insects, using student-generated questions and a variety of methods and resources (e.g., observation of live animals in the schoolyard; books, videos/DVDs, CD-ROMs, and/or Internet sources that depict animals in a positive light)

BACKGROUND

Often most of the activity of the animal world happens hidden from our view. Animal tracks provide a way to find out more about the secretive lives of animals. In order to know what is happening, we need to learn how to read the track just like we learn to read books.

Reading animal tracks becomes easier if you keep in mind a few things: the size of the track, number of toes, the shape of the track, and the track pattern.

Size of the Track
The easiest place to start examining prints with children is the size of the print – large, medium or small? Get children to think of what kind of animal might make a large track, a medium track and a small track.

Number of Toes
Counting the number of toes can be helpful in identifying the family of animal. See chart.

Shape of Track
Each group of animals has a characteristic shape to their tracks. The following is a list of the shapes of each:

- Deer Family (e.g. white-tailed deer, moose) – heart shaped
- Dog Family (e.g. wolf, red fox) – egg shaped
- Rodent Family (e.g. squirrel) – cross pattern
- Weasel Family (e.g. fisher, mink) – box shaped
- Bear Family (black bear) – human shaped

Patterns of Tracks

- Diagonal walkers - (cat, dog and deer family) Move opposite limbs together, right foreleg with left back leg.
- Bounders - (weasels) Hop in steady series of jumps, forelegs first and back legs pulling right behind them.
- Gallopers - (most rodents and rabbits) These animals hunch down and bring hind legs in front of back legs.
- Pacers - (wide-bodied animals such as raccoons, bears, beavers, porcupines, and skunks). They shuffle along, but move from pacing to bounding as they go faster.

Wolf Track - Like all members of the Dog Family, wolf tracks have four toes on each foot and claw marks showing. They are usually between 4 to 5 inches long. Wolf tracks are difficult to tell apart from large dogs - usually the biggest hint is where they are found.

Photo Credit: Carrie McGown
**TEACHING/LEARNING**

**Intro** – Discuss with students how tracks help us to know what is happening in the natural world.

**Activity #1—Whose Track is That?**
Human – medium size, human foot print-shaped
Deer – med-large size, heart-shaped
Wolf – medium size, egg-shaped
Mink – small size, box-shaped
Squirrel – very small size, cross-shaped
Bear – large size, human foot print-shaped

Using Gait pattern guides and Animal Track ID worksheet show track picture and match the track with the picture of the correct animal.
*(See Teacher’s Answer Key for Track ID).*

Discuss: How did you know which track was for each animal? (Size and shape) Where would you expect to find these tracks? (Forest, water’s edge?)

**Activity #2—Track Scavenger Hunt**
The objectives of this activity are to get students to look for tracks where the tracks would be found, on the ground, and to prepare for the next activity.

Preparation: Hide one picture of tracks per group throughout an area in schoolyard – preferably wooded.

Discuss with students: Where are tracks found? (On ground, in mud, sand, etc.)

Have students look for pictures of tracks. When they find them ask them to come back to you. The picture they find is the kind of animal track that they will be making in the animal track casts. This nicely prevents any squabbling when track casts are being handed out. Hand out track casts to each group. Each student will use the cast to make their own imprint

**Activity #3—Animal Track Casts**

1. Choose an area of ground to make imprints. Sand or moist soil works best. Make sure it can be protected while casts dry.
2. Press mold into ground to make imprint.
3. Pour the dry plaster into the mixing container.
4. Gradually, pour water in the plaster and mix. It should look like pancake batter *(Follow directions on package).*
5. Slowly pour the plaster into the track.
6. Let it dry for 30 minutes. If the plaster is hard around the track it is dry enough to pick up. Gently dig around the plaster and lift out.
7. Let tracks harden overnight.
Activity #5—Stalk the Deer
Teach students to fox walk. This walk is the basic step for walking quietly in the wilderness – helping you to get closer to wildlife. The fox walk has three basic parts and allows you to feel the surface of the ground and slowly compress, leaves, sticks etc. to minimize noise.
1. Lower the foot to land on the outside of the ball with light pressure.
2. Roll off the edge of the foot onto the ball laying the whole foot down still with only partial weight.
3. Place full weight on foot.
Discuss: How do our tracks change as we do the fox walk? How do animals’ tracks change as they walk or run?
Play “Stalk the Deer.”
Objective: To successfully “stalk the deer” by stealing a piece of material without detection.
Instructions:
1. Have students standing in a circle with one blindfolded student sitting in the middle as the “deer” with a piece of material in front of her.
2. Tap the shoulder of a student in the circle to become the wolf.
3. The deer gets three opportunities to guess the location of the wolf, by saying “Freeze” and pointing to where she thinks the wolf is (wolf must freeze). If the deer is correct, the wolf goes back to the outer circle, the deer remains, and another student is chosen to be the wolf. If the deer is incorrect, the wolf can continue on and the deer can continue guessing. If the wolf is successful in getting the material back to the outer circle, the wolf becomes the deer.
4. Continue playing until all students have had a turn being either the wolf or deer.
5. Debrief: What was the best strategy for successfully “stalking the deer”?

Activity #4—Walk Like an Animal
Use Gait Pattern guides to have students mimic the way different types of animal walk.

1. Divide students into groups
2. Give each group a gait pattern and have them figure out how the animal would move to make the pattern.
3. Students draw the pattern on the ground in sidewalk chalk.
4. Have each group describe how their animal moves and demonstrate to the rest of the class.
5. Give all students a chance to try all the different gait patterns

Assessment Activity
Animal Tracks matching sheet
Teacher’s Answer Key for Track Identification

A. Beaver
B. Deer
C. Fisher
D. Squirrel
E. Woodchuck
F. Bobcat
G. Raccoon
H. Red Fox
I. River Otter
J. Coyote