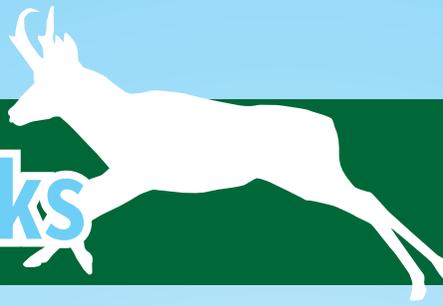


Tricky Tracks



Goals:

Students will identify the tracks of several different types of mammals. Students will explain how people can use tracks to find out more about mammal habits and behaviors.

Objectives:

- Use observation skills to identify different wildlife by their tracks
- Use reasoning to determine activities of wildlife from tracks
- Mold their own tracks.

Grade Level: K-4

Subject Areas:

reading, science and art

Materials Needed:

- internet and library access
- reference books and field guides
- flipchart paper
- pencils or markers and paper
- ruler (optional)
- plaster of paris (optional)
- water (optional)
- paper clip (optional)
- mixing container—plastic bucket is best (optional)
- cardboard or plastic strip (optional)

Time to Complete:

55 minutes

Except for a chattering squirrel or fleeing whitetail deer, you may rarely see mammals in the wild. That's because many mammals are active only at night, and quickly take cover when people come near. But you can often find evidence that mammals have been around by looking at the tracks they leave behind in moist sand, soft soil, or snow. And by studying these tracks, you can often figure out what these mammals were doing, where they were going, what they preyed upon, and what preyed upon them.

Identifying animal tracks and signs, as well as interpreting and trailing, are the primary skills used by wildlife trackers. Historically, animal tracking skills helped people find food, avoid dangerous predators, and read the stories on the landscape. Wildlife tracking skills continue to be valuable today and are being employed in wildlife research, conservation, and outdoor education.

Identifying animal tracks and signs such as scat, feeding signs, beds, scent marking, trails and other types of animal signs point to which animals passed by, what they did, where they went, and much more. Seemingly barren ground becomes alive with a diversity of fascinating information.

Part 1: Whose Track Is It?

1. List the following mammals on a chalkboard or large piece of easel paper: raccoon, whitetail deer, snowshoe hare, beaver, red fox, red squirrel, black bear, house cat, muskrat, porcupine, weasel, and skunk.
2. Using the internet or the library, have the student find tracks for each of the animals and print them out. One possible source: <http://www.bear-tracker.com/guide.html>
3. Before the kids begin their research, use the information below to talk about what to look for when studying mammal tracks.

Paws or Hooves: The shape of the track can tell you if it was made by a mammal with paws or hooves. Some pawed mammals, such as foxes and bobcats, walk on "tiptoes," so only the center pads and toes on their feet show in their prints.

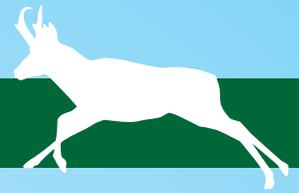
Mammals with hooves, such as horses, deer, cows, and elk, are also tiptoe walkers. A hoof is like a thick toenail.

Other mammals, such as raccoons, skunks, and porcupines, walk flat-footed, forming a print of the entire paw.

Claws or No Claws: Small triangular marks in front of paws are made by claws. Raccoons, skunks, coyotes, foxes, and dogs often leave claw marks. But most cats, such as cougars, lynx, and house cats, sheathe their claws when they walk or run, leaving no claw marks.

Different Patterns: The pattern of a set of tracks can help you figure

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out what animal made the tracks. Some mammals that live in trees, such as squirrels, hop or bound along when they're on the ground. And as they bound, their larger hind feet land ahead of their smaller front feet. If you look carefully at the prints made by the front feet, you will see they are side by side.

The tracks of hopping mammals that live on the ground, such as rabbits and some mice, are a little different. Although the hind feet still land ahead of the front feet, the front-foot tracks are usually found one in front of the other-not side by side.

Most bounders that live on the ground, such as weasels, leave paired prints as they run. (Check field guides for more track patterns.)

Slow and Fast: Most mammals' track patterns change as their gaits change. For example, a walking skunk leaves a pattern of single prints that changes into a diagonal line of prints when it breaks into a run.

Direction: Tracks also tell in which direction a mammal was headed. Claw marks point in the mammal's forward direction, just as your toes point in the direction you're going. If claws aren't visible in the tracks, look for soil or snow pushed back by the movement of the mammal's feet. (The soil or snow will be pushed back in the direction the mammal came from.)

Snow, Soli, and Sand: Tracks will look different depending on what type of surface the mammal was walking on. Distinct tracks with well formed claw and paw shapes will show up in mud, moist earth, and in freshly fallen, relatively shallow snow. But tracks become blurry in deep snow and don't show up well at all in hard sand and dirt.

Part 2: The Tales Tracks Tell

1. Now that they can recognize some tracks, see if your kids can "read" track clues to answer questions based on the tracks. Copy the questions under "What Happened Here?" on a chalkboard or large piece of flipchart paper.
2. Using images from the internet, have the kids answer the questions under "What Happened Here?" to figure out the story behind each set of tracks. (They can write their answers on the blank pieces of paper.)

Image sources:

- http://www.google.com/images?hl=en&rls=com.microsoft:*&q=Tracks%20in%20the%20snow&um=1&ie=UTF-8&source=og&sa=N&tab=wi;
- http://www.google.com/images?um=1&hl=en&rls=com.microsoft%3A*&tbs=isch%3A1&sa=1&q=animal+Tracks+on+sand&aq=f&aqi=&aql=&oq=
- http://www.google.com/images?um=1&hl=en&rls=com.microsoft%3A*&tbs=isch%3A1&sa=1&q=animal+Tracks+in+mud&aq=f&aqi=g1&aql=&oq=

What Happened Here?

1. Which direction are the tracks heading?
2. What type of animal made these tracks? (overall category)
3. What specific species may have made the track?
4. Do the tracks stop or do they continue or can you not tell?
5. What could the wildlife have been looking for?
6. Are there more than one set of tracks? What might the other animal be?
7. If multiple tracks – why do you think they might be together?

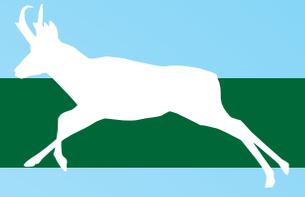
Branching Out: Taking Tracks Home

Take your group on a track walk to see if they can discover which mammals have been out and about. Muddy stream banks, sandy spots, and areas with freshly fallen snow are good places to look for tracks. Bring a ruler to measure the tracks and a field guide to help with identification.

If you find well formed prints, the kids can make plaster casts of the tracks to take home. Here's how to do it:

1. Find a clear track in soft mud, wet ground or snow.
2. Gently brush away excess dirt, small stones or leaves. Do not remove debris that is compressed into the track. If the track is in snow, spray it lightly with water. (The water should freeze, which will harden the track and form a better cast.)
3. Make a circular wall around the track using a cardboard or plastic strip. The

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strip should be approximately 1.5 inches wide. Use a paper clip to hold the strip into a circle. Press the strip into the soil deep enough so the plaster will not run under it.

4. Make your plaster mixture. Mix the plaster of paris with water according to the package directions. When in doubt, pour a cup of water in your mixing container then gradually add plaster, stirring constantly, until the mixture is thick and creamy (the mixture should be of about the same consistency as pancake batter.)
5. Tap your mixing container on the ground, lightly, to remove any bubbles.
6. Pour the plaster into the frame. To protect the track,

gently pour the plaster onto the surrounding ground and let it run inside the track. Do not pour directly into the track.

7. Let the cast set until it is firm enough to relocate. This usually takes approximately 30 minutes.
8. When the plaster has hardened, remove the frame carefully. Pick up the cast by digging out some of the mud beneath the cast and then lifting it up. Do not pry it out with a stick.
9. Wrap the cast in newspaper to protect it. Allow the cast to dry several days before painting or cleaning it.