



List of All Materials Needed

Animal Track Molds

Animal Track Key

Aluminum foil

Pencils

Animal track identification sheet (one for each child)

Tracking Investigation Notebook (one for each child)

Plastic rings for molds from cut-up plastic containers

(can use cardboard strips stapled into a ring)

Sand (enough for each child's track)

Container

Spoon (mix plaster)

Plaster of Paris (mixes with water)

6 Animal Track scenarios on 4-foot lengths of newsprint

(*make your own using track casts)

Wildlife Track guidebooks appropriate for young children

Plastic bags & paper plates for taking home plaster tracks

Filler: 1 Box of Crayons, Paper for Each Student, Animal Print Matching Sheet

Room Arrangement or Special Needs

Desks should be arranged in groups to set up stations. At each station there should be tinfoil, animal tracks (pre-made), crayons, animal track key guide, and paper. The rabbit and wolf prints should be placed towards the side of the room.

Introduction (1 min)

Welcome to the Family Science Night.

Introduce self, degree, career plans, assistant, and state that family science night is sponsored by the Western U.P. Center for Science, Mathematics, and Environmental Education.

Attention-getter (1 min)

Has anyone ever walked in wet sand or mud? What happens? Do you think we could tell your tracks apart from your parent's tracks? How?

Lesson Introduction (2 min)

Humans leave tracks when they walk just like animals do. Since we cannot always see an animal when we want to, we use their tracks to learn more about them. (Ask for examples of places we can find animal tracks.) By studying animal tracks and following them through the woods, we can tell a lot about that animal. For example, we can tell where the animal spends its time, and who is chasing/eating whom. Give examples—if tracks are far apart what can this tell us? Animal is running; close together = walking, etc. Just being able to find tracks is useful because then you know for certain that an animal lives in that area.

Different animals have different shaped feet—this is how we can tell what kind of animal tracks we are looking at: webbed foot, paw, hoof. Tonight we will begin by learning to ID animal tracks using a Key. A Key is used to help us identify a plant or animal. The Key asks yes or no questions. I will show you how to use a Key.

Activities

I have three stations for you to do tonite: making animal tracks, using a track key & making a tinfoil cast, and six tracking investigations. Students will start at any station. We'll switch about every ten minutes, or move to the next station if you're done sooner. (Note: the stations will be set up ahead of time by the presenter).

Station 1: Making Casts (10 minutes) – The presenter will give each student a paper plate and a plastic ring to make a mold of animal track. The students will fill their rings about halfway with damp, packed sand. They will then press the track stamp into the sand. The plaster should then be mixed with two parts plaster to one part water. The presenter will have the students/parents

pour the plaster into the ring on top of the sand until the track is completely covered by about ½ inch of plaster. This activity should be done early in the lesson because the tracks will need to harden so that the students can take them home.

Station 2: Making A Tinfoil Cast & Using a Track Key (10 minutes) – Students will press the tinfoil into the animal track to make a model of the track. The presenter should demonstrate this before the students try it. After they make their model, with the help of the parents the students can key out which animal made the track using the simplified key provided.

Station 3: Tracking Investigation Activity (10 minutes) – The presenter will tell the students that they will now be biologists. Because the students are now experts, they will be able to identify what the animal is doing based on where the tracks are. Steps for the activity are as follows:

- Each student gets one Tracking Investigation booklet. Divide students/parents into groups, and send each group to a different scenario.
- Children should fill out their notebook for each scenario: identify the tracks using their track ID sheet, determine which animal is chasing which, and describe what happened (did the animal being chased get away? Get caught?)
- Allow students to rotate through the scenarios at their own pace. Ask parents to be the data recorder and the students will be the biologists.
- Students do not have to visit all of the scenarios. When time is up, stop the activity and ask students/parents to return to desks to summarize.
- Ask students what they determined at each scenario and ask for evidence.

Assessment of Student Learning (5 min)

Ask students:

1. What do we call the footprints of different animals, such as coyote, deer, duck? < webbed foot, paw, hoof>
2. How are tracks made? <animal steps into a moist sand or mud leaving behind the imprint of their foot, i.e. foot, paw or hoof, usually along a shoreline, after rain, or in snow>
4. Explain what we can learn about animals from observing their tracks. <size, how fast they are moving, direction of travel, possible behavior or interactions with other animals>
5. Explain the difference between a running animal's tracks and a walking animal's tracks. <distance between tracks>

Filler

Shoe Print Activity (5 min) - With the crayons and paper provided, students and parents will make their own tracks using their shoes and then compare.

Take Home Handouts and/or Materials

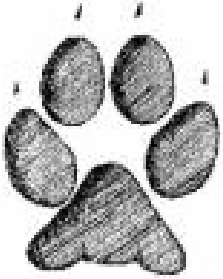
Students may take home the plaster track models that they made, the tinfoil track casts, their Tracking Investigation booklet, the animal track matching sheet, and the crayon prints.

Cleanup

Discard any papers left behind. Reorganize materials for the next group. Wash any desks that may have crayon marks on them.

Safety Considerations

Make sure that small children do not put anything into their mouths.



Animal Track Key



- | | |
|---|-------------------------------------|
| 1) A. Footprint has toes... | ...2 |
| B. Footprint does not have toes... | ...6 |
| C. Footprint is bird-like... | ...7 |
| 2) A. Toes connected to foot... | ... Raccoon |
| B. Toes not connected to foot... | ...3 |
| 3) A. Footprint has 5 toes... | ...4 |
| B. Footprint has 4 toes... | ... Gray Wolf |
| 4) A. Pad shaped like an oval... | ... Black Bear |
| B. Pad shaped like a triangle... | ...5 |
| 5) A. Pad is thin... | ... Squirrel |
| B. Pad is fat... | ... Skunk |
| 6) A. Footprint has one mark... | ... Rabbit |
| B. Footprint has four marks... | ... Deer |
| 7) A. Footprint has webbing between toes. | Duck |
| B. Footprint does not have webbing | Bird (raptor, songbird) |