DFW Earth Day 2022

Mammal Tracks

Name: Animal Track Sand Trap
Grade: All ages
Topic: Identify the different types of animals that are present where you go to school
Time: 2-3 Days, 40-50 minutes each day

Introduction:

In this activity, students are provided with the materials to create an animal track sand trap. The track traps will be used to capture animal tracks of some of the wildlife found around their schoolyard. Students will use scientific investigation to identify the different types of wildlife that are present by the tracks and clues they leave in the sand. Students will observe, form hypotheses, analyze data, predict, refine hypotheses, and develop conclusions.

Materials:

Kit will include:

- Sand
- Track Field Guide
- Magnifying Glass
- Ruler
- Bait (Optional)
- Data Sheet (one per student)

Videos and additional Information can be found on the DFW Earth Day website

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Key Terms:

Urban - in, relating to, or characteristic of a town or city

Suburban - a smaller community adjacent to or within commuting distance of a city

Habitat - the natural home or environment of an animal, plant, or other organism

Adapt - a change or the process of change by which an organism or species becomes better suited to its environment.

Procedure:

Day 1

To make one track trap, spread sand in an area approximately 3 square feet and about ½ inch deep where you think animals frequently travel. Choose areas that are away from high traffic areas such as the playground. Using a bucket or gallon jug, drench the sand with water. Then mix the sand with your hands to loosen it. Do not pack the sand down, only smooth it over lightly. If the sand is packed down, it will create a hard surface which may not capture any tracks. You can use bait to entice visitors. If using bait, place it in the center of the sand trap. Remember, even with bait, there is no guarantee that an animal will visit your track trap. Set 3 to 4 track traps. Experiment with different trap locations to see which sites are more productive. The track traps will be set and left undisturbed overnight. Have students check on them within 1 to 2 days.

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Day 2 & 3

The next step is to check each track trap for signs of any animals that visited overnight. (If now tracks are found you can always make some of your own.) Approach each site slowly and allow each student the opportunity to look for signs of animals. Using a magnifying glass have students observe the area for any tracks, signs left by wings or tails and any other disturbances. Teachers should take pictures of the area to be evaluated by the class later. Students should sketch any tracks they see on their data sheet and record any other observations. Write down descriptions of any tracks or other animal signs found at each trap. Note the number and size of each track. Try to identify the tracks found using the field guide. Answer the questions on the data sheet. Back in the classroom, students will discuss their findings.

Conclusion/Key Take away:

After completing this activity students will:

- Learn how to identify and interpret animal tracks.
- Use tracks to identify species and behavior
- Improve observation skills
- Use critical thinking to explain how human presence and development impacts the natural wildlife in suburban areas and how wildlife is adapting to humans.

Adaptations:

K-5

- Discuss common urban wildlife. Make predictions on what animals you will “trap” in your school yard. Was your hypothesis correct?

6-12

- Have students consider how changes in habitat or different levels of human activity will affect the animals tracked in the sand trap.
- Compare and contrast species activity based on changes in bait. (natural food vs human food)
- Compare and contrast species activity based on proximity to human activity. (close to parking lots and buildings, vs in remote corner)
- Discuss why some species are more adaptable to urban life than others.

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ANIMAL TRACK SAND TRAP DATA COLLECTION WORKSHEET

1. A **habitat** is the place or environment in which an animal or plant normally lives, which includes food, water, shelter and space. Describe the habitat of the area surrounding your traps:

2. What animals do you think live in the area surrounding your traps?

3. What kind of bait would be best to use to attract animals to your trap?

4. Can you predict what sites are best and why? What would make an animal visit one site over another?

5. **Nocturnal** animals are animals that are active during the night and sleep during the day. **Diurnal** animals are active during the day and sleep at night. Which animals in your area are nocturnal? Which are diurnal?

6. Based on the tracks and other signs you observed, which animals do you think might have visited the trap.

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SAND TRAP DIAGRAMS

Make a sketch of each trap. Note any disturbances to the bait pile. Using a magnifying glass look for any tracks, signs left by wings and/or tails, and scratch marks. If possible, measure any tracks with the ruler. Use the field guide to try and identify which animal made the track.