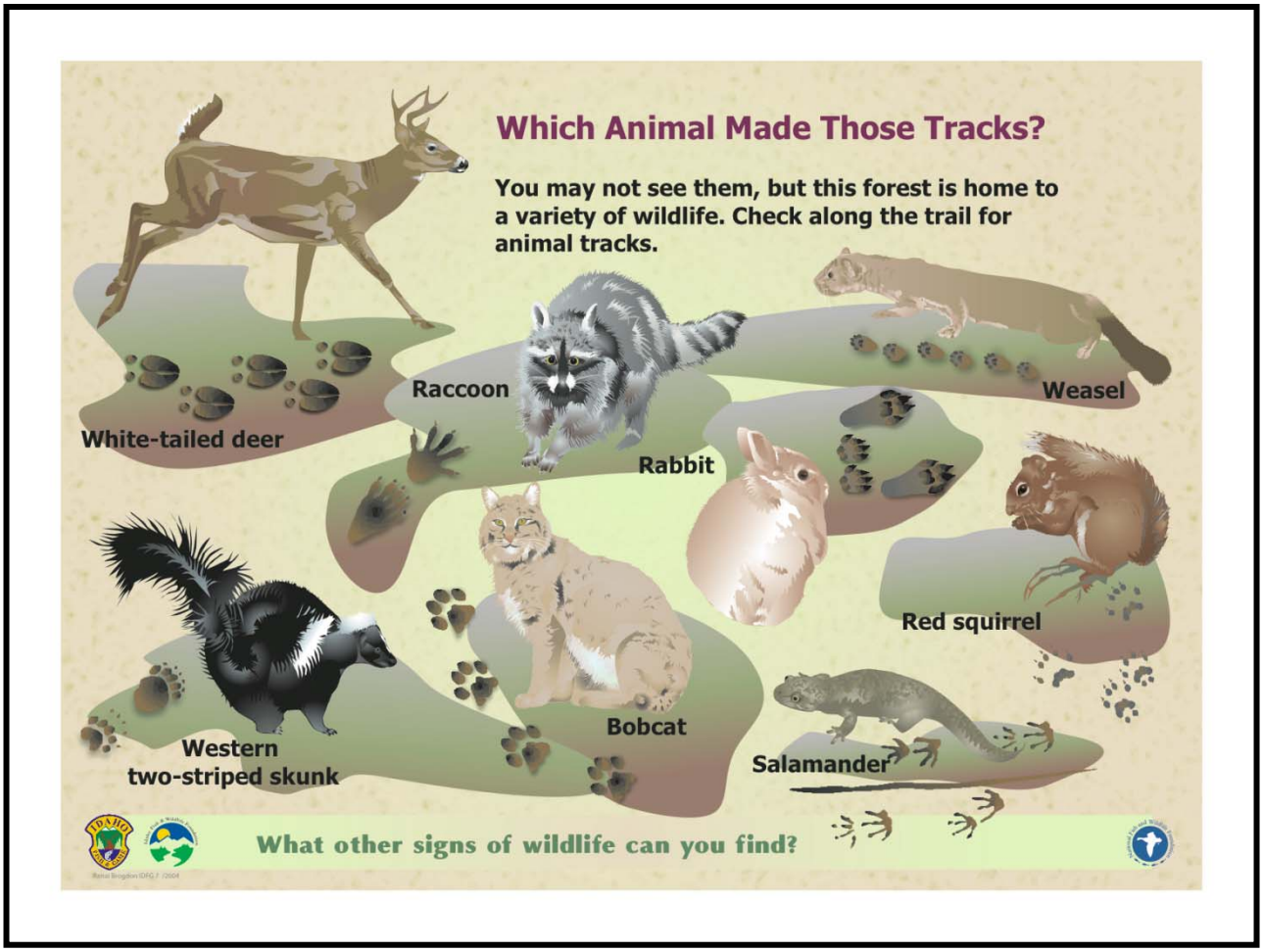

Learning Objectives-after this lesson, students will be able to:

Describe three categories of tracks and associate animals with those categories

List several different kinds of animal sign

Vocabulary Words

Track	Scat
Sign	Tracker
Trail	Gait
Plantigrade	Digitigrade
Unguligrade	

ANIMAL EVIDENCE

Animal footprints or tracks can help you learn about animals and their behavior. However, tracks are just one type of animal sign. There are many others. Any evidence of an animal is considered "sign."

Animal Track Types

Plantigrade– Plantigrades put their full foot on the ground (humans, bears)
Digitigrade-These animals walk on their digits, or toes. (dogs, cats)
Unguligrades-These animals basically walk on their toe nails! (deer, elk, moose)

Animal Gaits

There are multiple types of gaits, all dependent on the anatomy of each type of animal. (Please refer to the attached diagrams of prints and gaits)

- **Walkers** are "perfect steppers" with *direct registry*—their tracks looks like they only have two feet because each hind foot steps exactly where the front foot, on the same side, had stepped previously. Walkers include deer and moose (ungulates), the cat family, and the dog family (though many dogs, especially domesticated, are "imperfect steppers," and may show slight variation from the typical walker gait).

- **Waddlers**, well, waddle. Because of how their hips are formed, they waddle back and forth as they walk. Waddlers include bears, skunks, raccoons, beavers, muskrats and porcupines.

- **Hoppers** hop from place to place, which is evident in their tracks. Typical tracks show a set of two smaller prints inside (and slightly behind) a set of two larger prints. Hoppers include rabbits and hares, and rodents (e.g. squirrels, chipmunks, mice, voles, shrews, etc.).

- **Bounders** can be identified by tracks that show two front legs bounding forward, followed by two hind legs. Members of the weasel family are bounders, and picturing them enables one to visualize bounding better than a simple description. Members found in this category include weasels, minks, martens, fishers, otters and badgers.

Making Tracks

When attempting to identify an animal by its track you must not only look at the shape of the track and pattern of the gait, but also the how, when, where, and on what substrate a track is made. Time can change the size and shape of a track making it difficult to accurately identify. For example, as snow melts and refreezes, tracks can become larger than when the animal actually made them. Tracks in dry dusty conditions can quickly blow away, or parts of the track can blow away. Rain can wash tracks away.

The habitat where a track was found can also offer valuable clues regarding what type of animal made the track. What type of animals likely live in the area where the track was found? For example, you are not likely to find an antelope track at the WaterLife Center because antelope do not live in the Sandpoint area. You are, however, likely to find a white tailed deer track. In another example, a track found miles from water is not likely to be a beaver or river otter. Geography, surrounding vegetation type, and other habitat clues are fundamental in deciphering animal tracks.

To confidently identify an animal track, you must consider a number of factors: Size, shape, likely age of track, substrate track was laid in, weather conditions, pattern of tracks (gait and track type), location of track, and habitat type.

Additional Animal Sign

In addition to tracks, there are many other clues to help determine what species of animals are in an area. **Nests, dens, beds, hair**, and **scat** can provide additional information. Many animals, including birds, make nests, and many nests are unique. Woodpeckers and chickadees build nests in the cavities of trees, orioles build hanging nests from tree branches, and several species of swallows build nests primarily of mud and saliva. Hair, feathers, and scat can often be found in and around nests, beds, and dens to provide additional clues.

Scat is another word for animal droppings. The size, shape, and contents of the scat can identify the species of animal it came from.

Scent and sound can identify animals present when none are visible. Some animals can leave a heavy scent after moving through an area. Elk and skunks are

two examples. If you listen you will hear a whole wild world all around you that you may not have noticed before. Different bird species can be identified by their unique song or call. Coyotes yip and howl, elk grunt and bugle, bears growl and snort, and squirrels squeak and chirp. Knowing the language of the animals that inhabit an area can help the observer identify what animals are there even if none can be seen!

Other clues that can help determine what species have been frequenting an area include looking for disturbed soil where animals might have tried to dig or move rocks or stumps. For example, bears will often tear apart stumps looking for insects to eat, and ungulates such as deer and elk will rub the bark off trees in early fall using their antlers.

At the WaterLife Center

Look along the sides of the trail and find animal sign. What kind of tracks and scat can you find?

There is other animal sign present, such as owl pellets, feathers and hair lost by passing animals. Can you identify what kind of animals passed through here by the animal sign present?

Suggested Activities

Have a classroom set of track books or check one out from the local library. The WaterLife Center MAY have one you can borrow. Divide students into groups of two to four, give each group a copy of the book to use.

Animal Sign Scavenger Hunt

Advised each student or group of students to take 10 minutes to see how many signs of animals they can see. Describe or draw each animal sign.

Be sure students note what criteria they used to decipher the animal sign they observed.

Spend two to three minutes standing still and listening. How many different animals can you hear? How many bird species? Can you identify any of them?

For a winter time follow-up, have the students measure track sinuosity as a surrogate measure of habitat use. (A more sinuous track pattern means greater habitat use, a less sinuous track pattern means travel, but not habitat use.)

WORK SHEET

Live animal

Track

Scat

Hair

Home (web, nest, hole)

Digging

Browsed plants

Sounds

Other

Related Classroom Activity

Have each student pick a type of bird that they observed while at the WaterLife Center and look it up in a bird guide. What kind of nest does that bird make? What type of habitat does it live in? What is its geographic distribution? Can you identify its call or song?