



## Winter Track Mystery

### A Teacher's Guide to the SnowSchool Post-visit Activity

Reinforce the lessons your students learned during SnowSchool at Craters of the Moon with the Winter Track Mystery. This activity calls upon information learned in both the classroom and field sessions of their visit to the monument. Allow 10 minutes for instruction and 30 minutes for students to complete.



### Objective

Students will use careful observation to identify and label multiple track sets in the track mystery diagram. They will then complete a series of questions based on their interpretation of the diagram using critical thinking and writing skills to support their answers.

### Curriculum Standards

Idaho Content Standards for:

Nature of Science: making observations and evaluating data (grades 3-7)

Biology: animal adaptation (grades 3, 4, & 7)

Common Core Standards for:

English Language Arts: writing that is supported by reasons and information (grades 3-6)

### Materials needed

- pen or pencil
- crayons or colored pencils
- Answer Key for teachers

### Variations

Students can work individually or in small groups to complete this activity. Small groups may be preferable for younger grades.



### Lesson Preparation

Lead a brief discussion asking students to recall the variety of tracks they learned about during their trip to Craters of the Moon. The list should include: fox, coyote, squirrel, chipmunk, rabbit, mouse, as well as others.

Ask them to describe some of the track patterns they saw in the snow. (Refer to the Post-Visit Activity Track Mystery answer key for some examples.) Alternatively, draw two or three sets of tracks on a whiteboard or overhead projector and ask students to guess what animal made them. Ask students to think



# Craters of the Moon

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about how some animals move. Those that bound or hop (including squirrels, rabbits, and chipmunks) leave tracks in sets of four that repeat. Animals that walk (including foxes, coyotes, and humans) tend to leave a single track that repeats (see figure 1 below).

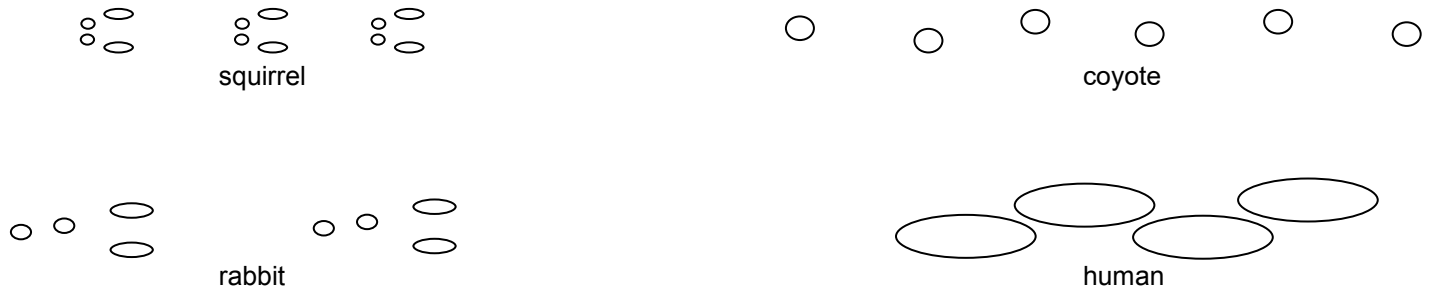


Figure 1 - The track sets on the left appear in patterns of four because these creatures bound or hop as they move, each foot landing in the same place relative to the other three feet. The sets on the right appear as one print repeated because these creatures walk, alternating which foot is in front.

Also review with students the three methods animals have to deal with winter:

**Escape** - Also known as migration, this method is common among birds including mountain bluebirds and swallows. Large mammals like mule deer and pronghorn migrate over shorter distances.

**Avoid** - Many avoiders hibernate. Bears, marmots, ground squirrels, reptiles, and insects all hibernate to avoid winter hazards. Mammals that hibernate often eat lots of food to add fat layers before winter, then burn them off slowly in lieu of eating. Others, such as pika, do not hibernate. Instead, pika sleep more and spend more time underground in their dens to avoid winter's worst aspects.

**Adapt** - Adapters include foxes, coyotes, bobcats, red squirrels, rabbits and hares, ravens, golden eagles, and humans. They adapt by adding extra layers of fur (extra clothes in the case of humans) or fluffing out feathers.

By the completion of this post-visit activity all students should know that the tracks they find in the snow are left by creatures that adapt to deal with winter.

