

# Activity—Interpreting Dinosaur Tracks

## Standard IV

### Objective 1

#### Connections

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Students will understand how fossils are formed, where they may be found in Utah, and how they can be used to make inferences.

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Describe Utah fossils and explain how they were formed.

#### Intended Learning Outcomes

1. Use science process and thinking skills.
4. Communicate effectively using science language and reasoning.

### **Background Information**

Dinosaur tracks are one type of fossil that has recently received attention in Utah. Near St. George on a ten-acre section of the Johnson Farm, over 1,000 dinosaur tracks have been found. According to the Utah Outdoors article by Dave Webb on the internet, “Most of the tracks are actually ‘negative impression’ casts which appear as bumps on the stone. The area was the bottom of an ancient freshwater lake in the center of the super-continent Pangea. Footprints left in the mud filled with silt and sand, and more sand was deposited over the top. The mixture eventually solidified into sandstone and mudstone, forming the casts. Now when the slabs are flipped over, the casts appear, much like Jell-O popping out of a mold.” Scientists have determined that most of the tracks were made by “dilophosaurus-like” animals and are three toed, 13-18 inches long. Some smaller tracks have been found along with skin prints and tail drag impressions.

For more information on the Johnson Farm Dinosaur Walkway go to <http://utahoutdoors.com/pages/dinowalkway.htm>. How fossil dinosaur tracks are formed in sedimentary rock is one of the concepts to be taught as part of Standard IV.

With this background information to set the stage, we would propose to do an activity where students interpret what they think happened based on sets of dinosaur tracks.

### **Invitation to Learn**

What inferences or interpretations can be made from sets of dinosaur tracks in sandstone?

### ***Instructional procedures***

1. Give each student a dinosaur track sheet and lined paper.
2. Have each student study the “dinosaur tracks” and develop an explanation of what happened at the time the tracks were made.
3. Have each student infer in story form on the lined paper what they think took place as these tracks were made. Each must support the inferences they make by telling how they reached that conclusion.

### ***Possible Extensions/Adaptations***

Students may be paired or placed in teams to give those who have difficulty writing an opportunity to verbalize their ideas.

Some students may want to create their own dinosaur track sheet and then see if another student can interpret the story of the tracks.

### ***Assessment Suggestion***

In this activity, it is not whether the student is wrong or right about what happened that is important. It is the science process and thinking skills that go into developing an interpretation of the tracks that is important. Look to see how they used the data (dinosaur tracks) to construct a reasonable conclusion.

### ***Additional Resources***

See the attached Additional Resources.

### ***Homework and Family Connections***

Allow the students to take home a copy of the “Dinosaur Tracks” sheet. Encourage them to tell members of their family their interpretation of the tracks. They in turn may ask family members to come up with a different interpretation of the tracks.

### ***Materials***

- 8.5 x 11" sheet of paper with drawings of dinosaur tracks for each student. (See the attached drawing.)
- Lined paper for the students to write their interpretation of what happened based on the tracks.

# Dinosaur Tracks

