



Activity: Be a Trackway Detective

Introduction

Students will analyze a fossil trackway to draw conclusions about what it reveals about nonavian dinosaur behavior.

Objective

Students will:

- gain an understanding of the information trackways provide about dinosaurs.

Time Frame

40 minutes

Materials

- Illustration of a fossil trackway
- *Be a Trackway Detective* reproducible, duplicated for each student
- Blue, red, yellow, and green crayons or colored pencils

Procedure

Prior Knowledge

1. Display the illustration of the trackway. Point out that it is a trace fossil, evidence of the dinosaur's activity. Ask:
 - What does the trackway show? (Answer: footprints.)
 - How many different kinds of trackways can you see? (Answer: Three.)
 - Can you tell which animal passed by first? How? (Answer: The other prints cover the first print.)
 - Can you tell which dinosaur is the meat eater and which the plant eater? (Answer: Generally, three-toed dinosaurs were meat eaters. The large footprint was of a large, slow-moving dinosaur, probably a plant eater.)
 - Can you tell whether or not the dinosaurs were at this spot at the same time? (Answer: No, because the meat eater might have passed by hours after the plant eater.)



Be a Trackway Detective

Exploration

2. Tell students that they will each get their own trackway to analyze. Distribute the student sheets and crayons or pencils. Have a volunteer read the directions aloud. Make sure students understand what they are to do. Provide 20 minutes for students to complete the activity.

Wrap-Up

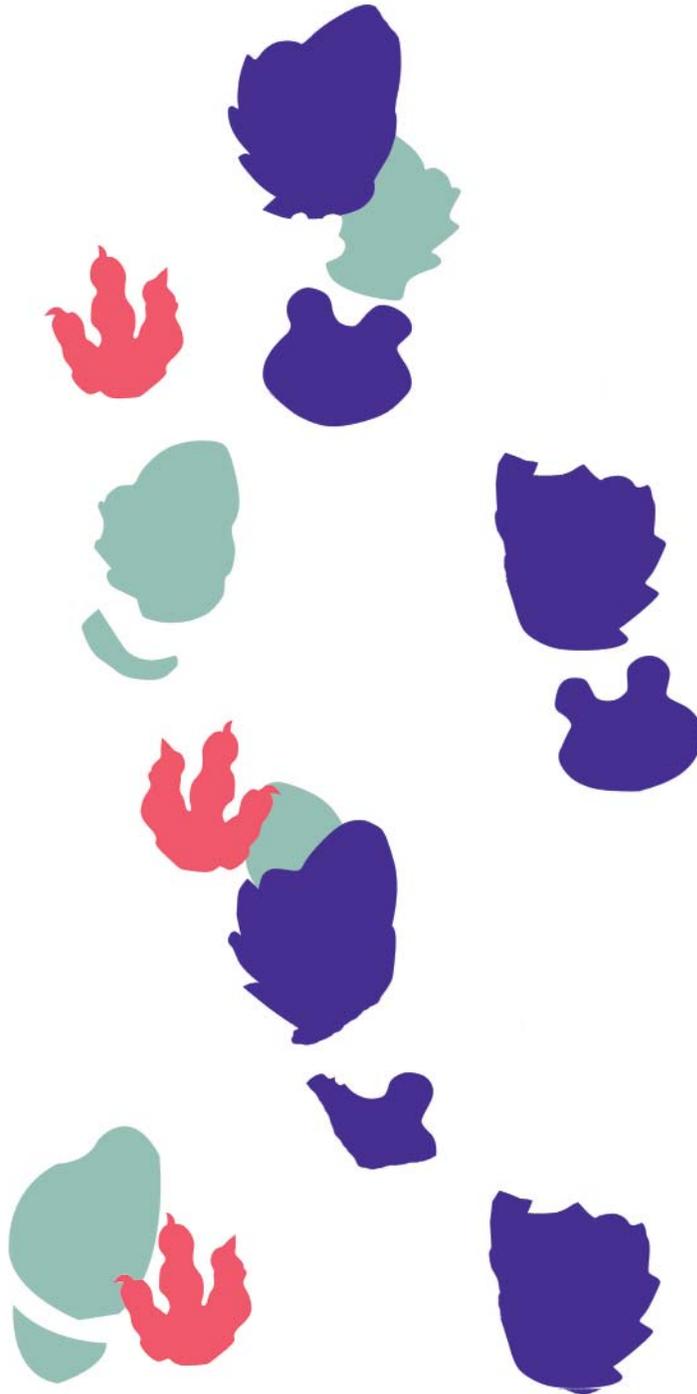
3. Review and discuss students' answers.

ANSWER KEY to *Be a Trackway Detective*

1. How many individual animals were here? (Answer: five adults and one juvenile.)
2. Did the animal that left the red tracks move on two or four limbs?
(Answer: two.)
3. Can you determine whether any dinosaurs were running? Why or why not?
(Answer: There is not enough information on the trackway to determine whether or not any dinosaur was running.)
4. Which animal walked across the area first? How do you know?
(Answer: The animal with the black tracks. Other tracks are imprinted over it.)
5. Did the animals that left the yellow tracks travel together? (Answer: Probably, since they are very close together.)
6. Why are the yellow tracks two different sizes? What made the larger tracks? What made the smaller tracks? (Answer: An adult and a juvenile traveled together. The adult made the larger tracks, the juvenile the smaller tracks.)
7. How many different animals were here? (Answer: five different animals.)
8. Can you tell whether or not the animals were here at the same time? Why or why not? (Answer: We only know the animals left the tracks, but we do not know how much time it took for all the animals to leave their tracks.)



Dinosaur Trackway



Be a Trackway Detective

Name: _____ Date: _____

Look at the trackway. Color each animal track as indicated in the key (the first one is done for you). Then answer the questions.

1. How many individual animals were here? _____
2. Did the animal that left the red tracks move on two or four limbs? _____
3. Can you determine whether any dinosaurs were running? Why or why not?

KEY:

 =black
  =red
  =green
  =blue
  =yellow

4. Which animal walked across the area first? How do you know? _____
5. Did the animals that left the yellow tracks travel together? _____
6. Why are the yellow tracks two different sizes? What made the larger tracks? What made the smaller tracks? _____
7. How many different animals were here? _____
8. Can you tell whether or not the animals were here at the same time? Why or why not? _____
