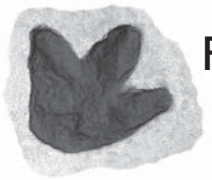
Colorado National Monument

Environmental Education

National Park Service
U.S. Department of the Interior

Fossils: Pre-Field Trip Activity
(4th Grade - Monumental Hike, Digging Into Fossils)

Name_____



Fossil Lingo - **Fill in the blanks** to learn more about the different types of fossils.

Key: body trace coprolite amber

1. A part of a plant or animal that was turned to stone is a _____ fossil.

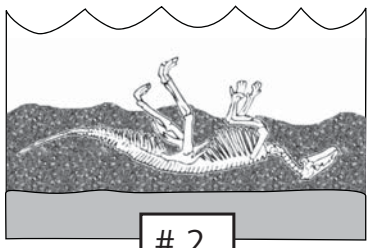
2. A _____ fossil is the remains of a sign left by a dinosaur or ancient animal like a fossilized track or _____ *(dinosaur droppings)*.

3. Some fossils are perfectly preserved, like insects trapped in _____ *(tree sap)*.

Trilobite Fossil

A Fossil in the Making - The pictures below show how the bones of an *Allosaurus* dinosaur turned into fossils. **Write** a story on the lines below to describe what happened.

1



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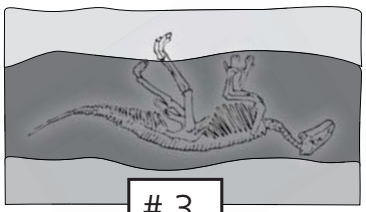

3

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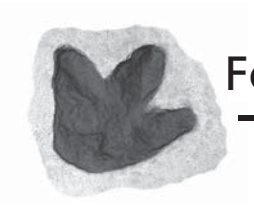
Fossils: Pre-Field Trip Activity
(4th Grade - Discovering Fossils Monumental Hike, Digging Into Fossils)

Answer Key



Fossil Lingo - **Fill in the blanks** to learn more about the different types of fossils.

Key: body trace coprolite amber

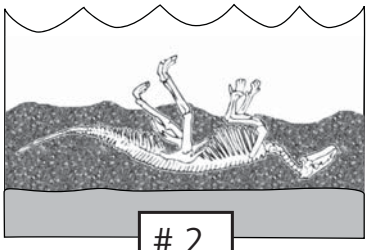
1. A part of a plant or animal that was turned to stone is a **body** fossil.

2. A **trace** fossil is the remains of a sign left by a dinosaur or ancient animal like a fossilized track or **coprolite** *(dinosaur droppings)*.

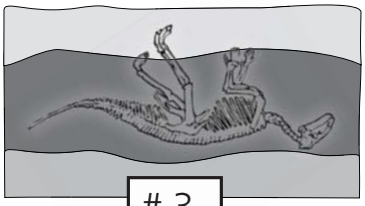
3. Some fossils are perfectly preserved, like insects trapped in **amber** *(tree sap)*.

A Fossil in the Making - The pictures below show how the bones of an *Allosaurus* dinosaur turned into fossils. **Write** a story on the lines below to describe what happened.

1



2



3

Answers will vary. Main points students should cover:

1. Allosaurus died

2. Bones were buried by sand in the bottom of a river/ocean.

3. Sand and bones turned to stone. *(Original bone material was replaced by minerals.)*

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Fossils, Post-Field Trip Activity, *(4th grade, Digging into Fossils, Discovering Fossils)*

Name_____

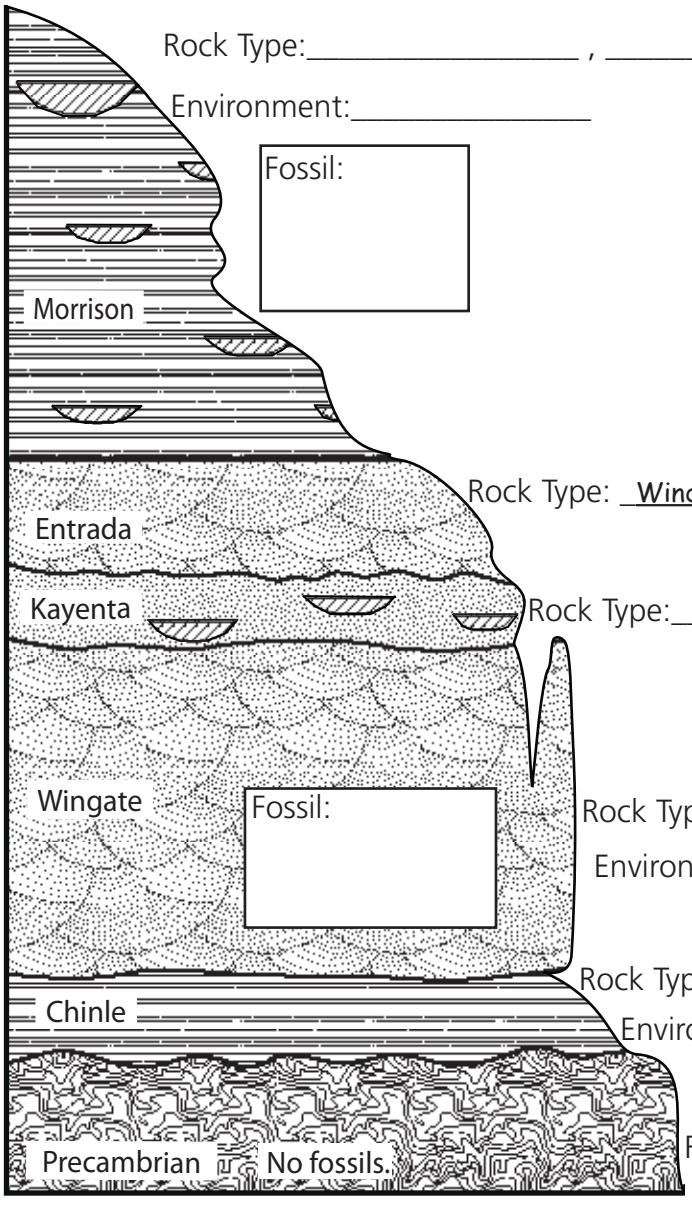
Clues to the Past - This drawing of the Monument's rock layers is called a stratographic column. Each layer has a name. Use the key to identify and **label the rock types.** (Entrada has been done for you.) Based on the rock types and what you learned during your field trip, write the name of the **ancient environment** next to the layers in the spaces provided. **Draw and label the fossils** found in the rock layers in the boxes below.

Key

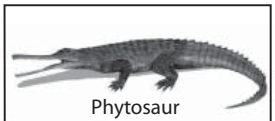
- Sandstone
- Mudstone
- Riverbed
- Windblown
- Metamorphic

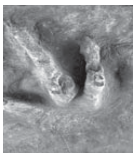
Ancient Environments

Swamp
Ocean
Desert
Lakes and Rivers



Fossils


Phytosaur


Grallator Track


Turtle Tracks

1) Draw a claw on the layer allosaurus fossils have been found in.
(Hint: Many dinosaur fossils have been found in the layer that is Riverbed Mudstone.)

2)Draw a star or stars on the layer or layers that you hiked in during the field trip.

On the back of this paper, or on a seperate sheet:
Write a paragraph explaining how **fossils** and **rock types** helped you figure out what the **ancient environment** was like for one of these layers: Morrison, Wingate or Chinle.

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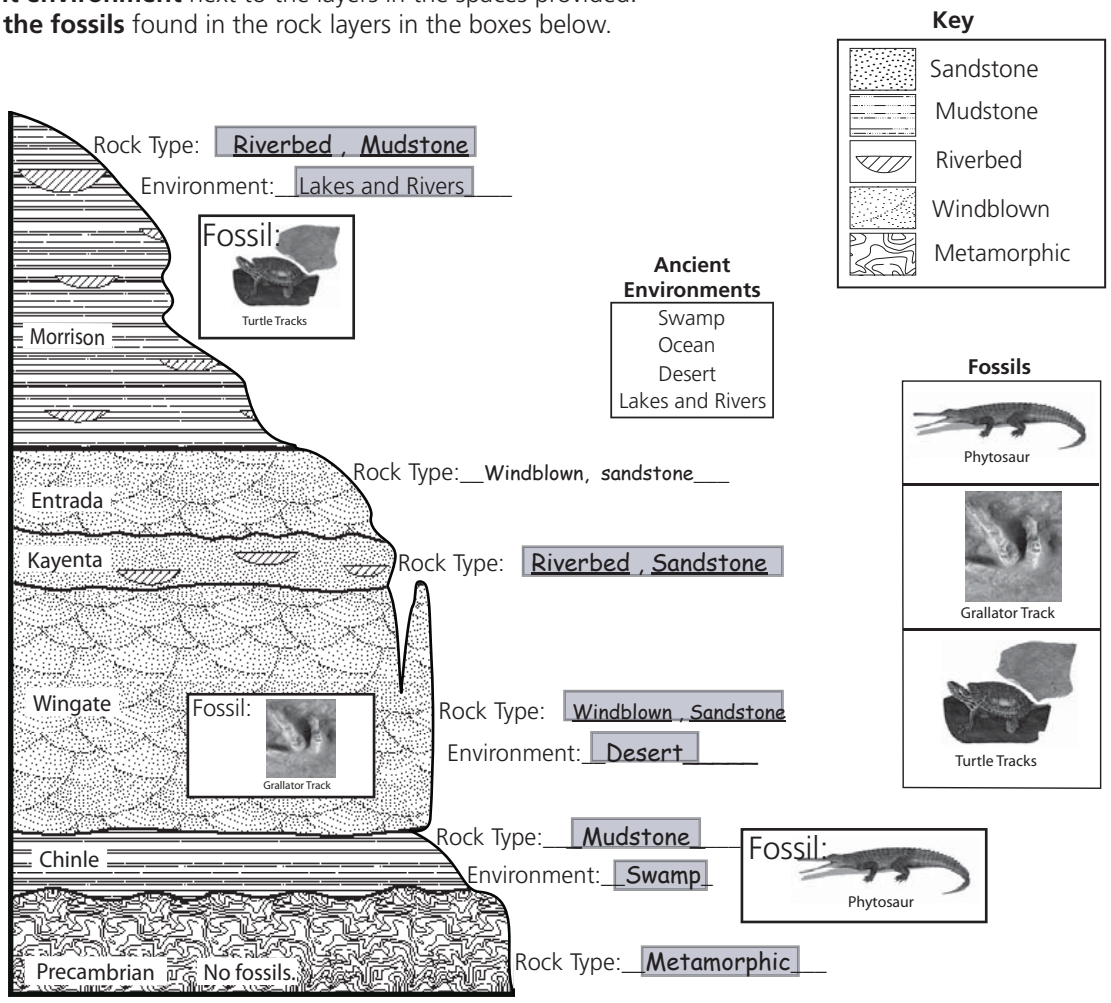
Fossils, Post-Field Trip Activity, *(4th grade, Digging into Fossils, Discovering Fossils)*

Name___ **Answer Key**

Clues to the Past

This drawing is called a stratographic column. The rock layers names are labeled.
Use the key to identify and **label the rock types.** (Entrada has been done for you.)
Based on the rock types and what you learned during your field trip;
write the ancient environment next to the layers in the spaces provided.
Draw and label the fossils found in the rock layers in the boxes below.



1) Draw a claw on the layer allosaurus fossils have been found in. (Morrison Layer)

(Hint: Many dinosaur fossils have been found in the layer that is Riverbed Mudstone.)

2)Draw a star or stars on the layer or layers that you hiked in during the field trip. Field trips at the Visitor Center hiking on the canyon rim trail are on the Kayenta layer (the alcove trail is in Entrada). Lower Monument Canyon hikes in the Precambrian, Chinle and Wingate layers. (The trailhead is actually in Morrison, but rangers rarely point this out.)

On the back of this paper, or on a seperate sheet:
How did you determine what ancient environments matched the rock layers? Choose one of the rock layers: Morrison, Wingate or Chinle, and write a paragraph explaining how **fossils** and **rock types** helped you figure out what the **ancient environment** was like. Samples:

I know from using the key and from the hike that the chinle layer is mudstone. A fossil that has been found in the chinle layer is phytosaur a creature like a crocadile. Crocodiles today live in swamps. Phytosaur probably lived in swamps too. Swamps are muddy, which is why the rock layer is mudstone.

Turtles today live near water like lakes and rivers. The ranger told us fossilized turtle tracks have been found in the Morrison layer, and that is a clue that the ancient environment had shallow water. Also the key says the rock is riverbed mudstone which is formed from lakes and rivers.

Wingate is windblown sandstone. This is formed from sandunes in a desert. Fossilized grallator tracks are from a group of dinosaurs, some of these dinosaurs were desert dwellers.