

# What is the Geologic Column?

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## What is the Geologic Column

- Rock layers found all around the world are filled with clues about creatures that lived in the \_\_\_\_\_.
- What ideas have you heard to explain why some of these creatures are not here anymore?

## Rock Layers

- Rock layers, or \_\_\_\_\_, usually form when sediment is carried along by moving water.
- When the water slows down, the \_\_\_\_\_ pieces are deposited first followed by increasingly smaller sediment.
- Sediments become \_\_\_\_\_ together and harden into rock layers during **lithification**.
- Strata are usually laid down \_\_\_\_\_, but they do not always remain in horizontal layers.
- As you know, the movement of tectonic plates can cause \_\_\_\_\_, volcanoes, and mountain building.
- As these processes happen, along with weathering, erosion, and deposition, rock formations \_\_\_\_\_.
- The evidence left behind provides clues that scientists can study to solve the mystery of the rock's \_\_\_\_\_.
- The rock layers and the fossils found in them make up what we call the \_\_\_\_\_ column.
- Most of the geologic column is buried out of sight, but where sections of it are visible, people have discovered millions of fascinating \_\_\_\_\_.
- Usually when a living organism dies, it \_\_\_\_\_.
- However, if an organism is buried \_\_\_\_\_ before it can decompose, there is a chance it may be preserved.
- These preserved remains are called \_\_\_\_\_.
- Scientists understand that most types of animals are fossilized \_\_\_\_\_ or not at all.
- This is especially true if the fossil has preserved \_\_\_\_\_ tissues – like muscle or skin – implying that the animal was buried very rapidly and its remains became mineralized rather than decomposing.

### Types of Fossils: Body Fossils

- Preserved \_\_\_\_\_ of animals or plants

### Types of Fossils: Trace Fossils

- Evidence (or \_\_\_\_\_) of an organism's behavior or activities

### Types of Fossils: Actual Remains

- Bones and shells are the most \_\_\_\_\_ types of fossils.
- Woolly mammoth fur, skin, and other body parts are sometimes found preserved in \_\_\_\_\_.
- Insects can be found preserved in fossilized tree resin called \_\_\_\_\_.
- A plesiosaur, a marine reptile with a long neck and flippers, was found in tar sands in \_\_\_\_\_.

### Types of Fossils: Footprints and Trails

- \_\_\_\_\_ give clues about:
  - The \_\_\_\_\_ of the organism that made them.
  - Whether it walked on two or four \_\_\_\_\_.
  - How quickly or slowly it \_\_\_\_\_.
- \_\_\_\_\_ provide similar clues about snakes, worms, and other footless creatures.

### Types of Fossils: Petrified Fossils

- When an organism's soft parts are mineralized, they are said to be \_\_\_\_\_.
- Entire petrified trees were found in Petrified Forest national Park in \_\_\_\_\_.
- Tiny \_\_\_\_\_ are beautifully preserved in 3D in the Orsten fauna in Sweden.

### Types of Fossils: Burrows and Borings

- \_\_\_\_\_ are holes or small tunnels made by worms and other organisms that lived in mud or soft sand.
- \_\_\_\_\_ are holes or tunnels made by organisms that lived in wood or other hard materials.
- Burrows and borings provide clues about the \_\_\_\_\_ of the organisms that made them and sometimes about their feeding habits.

### Types of Fossils: Fossilized Eggs and Nests

- These provide evidence about:
  - The \_\_\_\_\_ of offspring an adult may have produced.
  - The \_\_\_\_\_ of the young.
  - How their \_\_\_\_\_ may have taken care of them.

### Types of Fossils: Fossil Molds and Casts

- A \_\_\_\_\_ is the impression left in sediment by a body part, such as a shell, that is preserved (the body part disappears).
- A \_\_\_\_\_ forms when a fossil mold becomes filled with minerals or mud.

### Types of Fossils: Fossilized Wastes

- \_\_\_\_\_ are fossilized dung that often contains bits of other organism's bones, teeth, or shells.
- \_\_\_\_\_ are fossilized gizzard stones that are sometimes found among reptile bones.
- Coprolites and gastroliths provide clues about an organism's \_\_\_\_\_.

### Types of Fossils: Carbon Films

- Carbon forms very thin \_\_\_\_\_ that were once a part of a plant or animal.