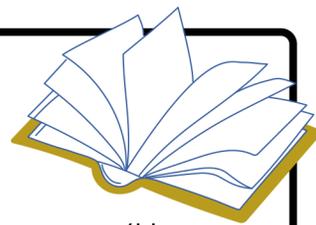


FOSSIL TYPES *Review Reading*



What is a fossil?

Fossils are the preserved remains or traces of once living things. When an organism (like a plant or animal) dies it is usually broken down by bacteria and fungi. For example, what would happen if you left an apple in your yard? It would start to rot and over a relatively short time it would start to break down and become a nutrient rich part of the soil. Most organisms break down and do not become fossils. In order for a fossil to form an organism is usually buried quickly in sediment and there is not enough time for the organism to break down. As the organism is buried by new sediments it becomes deeper and deeper in the Earth. Over tens of thousands of years, the organism is replaced by rock and minerals and a model of the organism is formed in stone. Fossils help us learn about **geologic time** (the Earth's past) especially the organisms that existed before humans. Fossils help us learn about how the Earth has changed over time and how life has evolved. **Paleontologists** are the scientists who excavate (dig up) and study fossils. There are several different types of fossils which form in slightly different ways. There are 7 main fossil types we will learn about below.

Fossil Types

Preserved Remains- the organism has not been replaced by stone- it is well preserved in some kind of medium which has stopped the organism from decaying. An example of a preserved remain fossil is a woolly mammoth preserved in a block of **ice** near the north pole or an insect preserved in amber. **Amber** is a fossilized tree sap; amber looks like a reddish-gold transparent rock. An organism may also be well preserved if it has dried out in a very dry place like a desert. We call this **mummification** after the ancient Egyptians who dried out their dead nobles and leaders before burying them in the desert.

Carbon Film Fossil- a thin coating of an organism is preserved on a rock. Carbon film fossils are caused by the vaporization of an organism's fluids in a hot environment underground. We usually see carbon film fossils of plants or small fish on the surface of a rock.

Mold and Cast Fossils- a **mold fossil** forms when an organism leaves an impression in rock and then the organism is washed away. Imagine pressing a shell into pizza dough- this is an impression. If the mold fills with sediment, a rounded 3D rock in the shape of the organism forms called a **cast fossil**. Imagine a gummy bear candy- this is like a rounded 3D cast fossil.

Petrified Fossils- all or part of an organism has been replaced by minerals. **Petrified wood** is a common petrified fossil- minerals replace the organic particles in a piece of wood. This creates a rock in the shape of a log of wood!

Trace Fossils- the fossilized remains of the *activities* of an organism- not the actual organism. Examples of trace fossils are footprints, burrows (holes dug by animals), or nests. Trace fossils give us important clues about how an organism lived and what its life was like!

Body Fossils- the fossilized bones or shells of an organism. When you see a T-Rex or other dinosaur fossil in a museum you are looking at a body fossil.

FOSSIL TYPES Vocab Questions



1 How does a fossil typically form?

2 Match each definition with the correct vocabulary term.

- 1.) Scientists who study fossils are called ____
- 2.) Fossils help biologists discover how life ____ on Earth.
- 3.) Typically dead organisms are broken down by ____.
- 4.) An impression of an organism left in rock ____
- 5.) A mosquito preserved in fossilized tree sap ____
- 6.) The history of the Earth even before humans ____
- 7.) A fossil made of the organism's organic material ____
- 8.) A 3D model of an organism left in rock ____.
- 9.) An organism's particles are replaced by minerals ____
- 10.) A dinosaur's footprint or nest is an example of a: ____
- 11.) The preserved remains of once living things ____
- 12.) A paper-thin flower fossil on the surface of a rock ____.
- 13.) Million-year-old shark bones are an example of: ____.
- 14.) An original remains fossil preserved in a dry climate ____
- 15.) Fossils are tens of ____ of years old or more!

VOCABULARY

- A.) Original remains
- B.) Carbon film
- C.) Amber fossil
- D.) Fossils
- E.) Mummification
- F.) Body fossils
- G.) Thousands
- H.) Paleontologists
- I.) Evolved
- J.) Bacteria & fungi
- K.) Geologic Time
- L.) Petrified fossil
- M.) Trace Fossil
- N.) Mold fossil
- O.) Cast fossil

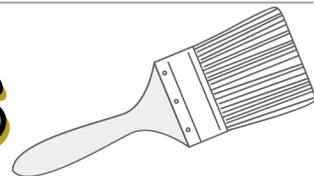
3 Draw and label a cast fossil and a mold fossil of a seashell. How can you tell them apart?

Name: _____

Date: _____



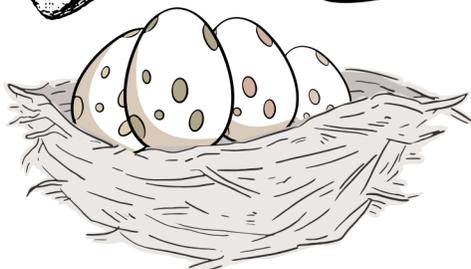
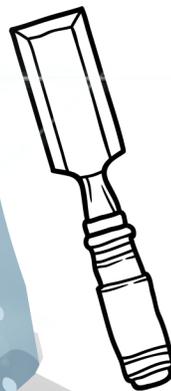
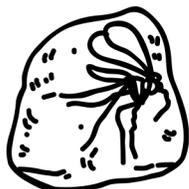
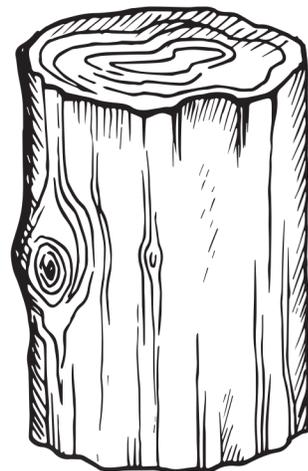
Fossil Types



Label each fossil using the reading. Key: original remains, cast, mold, trace, carbon film, petrified, & body fossil. Next color the scene.



Ex: Trace Fossil



FOSSIL TYPES *Reading Questions*

1.) Why are fossils rare? What usually happens when an organism dies?

2.) What is a fossil? Are bird tracks in the snow considered fossils? Why or why not?

3.) How do you think fossils help us to learn about geologic time?

4.) Do you think an original remains fossil or a cast fossil would be more useful to a paleontologist? Explain.

5.) What is the difference between a cast and a mold fossil?

6.) If you found dinosaur trace fossils like nests or footprints, what information do you think a paleontologist could collect from these fossils?

FOSSIL TYPES *Extension Activity*



1.) Drawing Prompt- in each box, draw a tiny diagram of the fossil type in the caption. This doesn't need to be a masterpiece but make sure you are drawing the right shape for the fossil.

Original remains- amber	Original remains- frozen	Original remains- mummification
Carbon Film- Fish	Cast fossil- fish	Mold fossil- fish
Trace fossil- footprints	Petrified fossil	Body fossil- bones
Body fossil- shark teeth	Trace fossil- worm burrows	Trace fossil- nest