

## Chapter 4 Fossils Study Guide

### Lesson 1: How Fossils Form

1. The remains of organisms that lived long ago are **fossils**.
2. **Imprints** are types of fossils. They're impressions (like footprints) that living things leave behind in the mud or hardened rock.
3. When minerals replace the hard parts of a dead organism, the fossil left behind is called a **stony model**.
4. An empty space inside rock where something once was is called a **mold**.
5. A copy of a mold's shape formed from hardened mineral is a **cast**.
6. Name 3 kinds of fossils. Describe how they form. **Imprints form when a mark is left in mud and hardens. Molds form when an animals is buried in sand or mud and breaks down leaving a hole. Casts form when minerals fill the hole and harden. Stony models form when minerals replace the hard parts of living things.**
7. Suppose a fossil of a fish was found in a desert. What could you infer from this? **The land was once covered by water.**
8. In which kind of rock do you think you would find the most fossils, igneous, sedimentary, or metamorphic? Explain. **Most fossils are formed inside sedimentary rock. Organisms become buried in the layers of sediment that harden forming rocks.**
9. A material that is burned for energy is called **fuel**.
10. **Coal, oil,** and **natural gas** are fossils fuels.
11. A **fossil fuel** is a fuel that forms from the remains of ancient plants and animals.
12. Fossil fuels can be used to make **electricity**.
13. How does coal form? **Swamp plants die and become buried. The plants decay and become a fossil fuel called 'peat' changes into coal.**
14. Can fossil fuels be replaced easily? Explain. **No, fossil fuels take millions of years to form. Once they are burned, they are all used up. It takes millions of years to make more.**

## Lesson 2: Living Things of the Past

15. A living thing is extinct when there are no more of its kind alive.
16. How have fossils helped scientists learn about the past? Fossils can tell an animal's shape, size, and what it ate. Fossils can tell how an animal moved. Fossils can also tell whether the climate was hot or cold; dry or wet.
17. Fossilized pointed teeth tell scientists that the animal was probably a meat eater.
18. Fossilized flat teeth tell scientists that the animals was probably a plant eater.
19. What can a fossil's depth in the ground tell us? Fossils found deeper in the ground are older than fossils found closer to the surface.
20. An ancient shark that lived in the ocean was known as a megalodon.
21. Eagles look very similar to extinct flying dinosaurs called pterodactyls.
22. The woolly mammoth was much like an elephant.
23. According to some scientist, about 100 animals species become extinct each day.
24. Which fossil do you think is the oldest and explain?

Fossils	Depth Underground
Woolly mammoth tusk	15 meters
Ammonite shell	27 meters

The ammonite shell is the oldest because it was found the deepest underground.