

# Geology Rocks!

## What types of rock form a fossil?

### Academic Excellence

We will learn the knowledge on the 'recall page' and we will be mastering the following skills:

- Compare, classify and group rocks according to appearance and properties and explain how fossils are formed.
- Ask relevant questions.
- Make systematic observations using simple equipment.
- Use oral and written explanations to report on findings.
- Identify differences, similarities and changes related to scientific ideas and processes.

### Character

What value am I focusing on and how will I demonstrate it?

### Aspiration

I know what steps to take to improve my weaknesses.

### Outcome– How will our learning be used in real life?

Write and present an explanation to year 2 that details the 3 different types of rock and how fossils are formed.

### Learning to Learn

Our focus thinking tool is:

#### **Smart Targets**

What is my target?

- How will I know I have achieved my targets?
- What do I already know that will help me?
- What are the things I need to do?
- What time do I have to complete this?

### Personalisation

What will help me in this experience?

Purposeful recording of steps to remember and organise information  
Thinking tools that work best for me.  
Resources and tools in the classroom that support my learning

### Rights Respecting

Article 13: The right to find out things and share what you think with others, by talking, drawing, writing.

Article 29: The right to develop your talents and abilities

### Concept

#### **Investigation**

I understand that some natural changes can happen over very long periods of time.



# Recall Page

## Vocabulary

## Knowledge


I will need to know:

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## Key facts



## Expert example

### **Igneous Rock**

Igneous rock is formed from molten rock in the form of magma or lava. They can be intrusive or extrusive. Intrusive igneous rock is formed when magma stays underground and then cools and hardens. Extrusive rock is formed when lava comes out of the ground and then cools and hardens externally. Obsidian, granite and basalt are examples of igneous rock.

### **Sedimentary Rock**

Sedimentary rock forms under the sea. Small fragments of rock erode and end up being transported by lakes and rivers until they are deposited at the bottom of the sea, creating sediment. Gradually, increasing layers of sediment appear and they begin to press down on the layers beneath. This pressure forces all of the water out from these layers and causes the fragments of rock to stick together, forming a solid layer. Chalk, sandstone and limestone are examples of sedimentary rock.

### **Metamorphic Rock**

Sometimes, igneous rock or sedimentary rock is heated or put under immense pressure, causing the minerals in it to change. This alteration in **minerals** creates a new rock called metamorphic rock; this name comes from the root words 'meta' and 'morphe', together meaning 'to change shape or form'. Marble, quartzite and slate are examples of metamorphic rocks.

Fossils are shapes of dead animals and plants that lived millions of years ago made in rock. Usually when something dies it is eaten or decays and disappears. However, when an animal or plant dies it can get covered over and, over millions of years, become a fossil.

### **Dinosaurs**

- Fossils are really important to know what happened a long time ago.
- Without fossils we would not even know that dinosaurs existed!
- People who study fossils are called palaeontologists.
- Palaeontologists started studying fossils 200 years ago, so we've only known about dinosaurs for 200 years!



### **Did You Know...?**

- 'Sue' is the nickname given to the most complete and best preserved Tyrannosaurus rex specimen ever found
- The word 'fossil' comes from an old word 'fossilis', meaning 'dug up'.
- Fossils are only found in sedimentary rock.
- The fossils in the pictures are called ammonites. It is the town symbol for Whitby in North Yorkshire. Whitby is good for fossil hunting and long ago, people thought that the ammonites were snakes turned to stone by St. Hilda!

### **How a Fossil is Made**

When a plant or animal dies, their body can sink into mud or be buried by sand. This usually happens at the bottom of the sea. When this happens it doesn't disappear. When it is underground, water and minerals leak into the bones and where bits of body used to be. This makes a hard shape. Next, the fossil gets squashed under more layers of sand, mud and other bits that make sedimentary rock. Finally, over many, many millions of years a fossil is created for someone to dig up one day.