



# Year 3: Genius Geologists

1. Terms	Definitions
<b>Reliability</b>	How trustworthy something or someone is. In history, some sources of evidence may be more reliable than others.
<b>Primary Source of evidence</b>	A source of evidence from the time in history we are studying, like a fossil or a diary entry written at the time.
<b>Secondary Source of evidence</b>	A source of evidence about a time in history we are studying that was made after the time, such as a text book, or a documentary.
<b>Physical properties</b>	Physical properties are characteristics that can be observed or measured. Is something hard or soft? Does it absorb water?
<b>Tectonic plates</b>	Giant jigsaw-like pieces of rock under the earth's surface.
<b>Plate boundaries</b>	Where tectonic plates meet.
<b>Soil</b>	Soil is the loose upper layer of the Earth's surface where plants grow. Soil consists of a mix of <b>organic material</b> (decayed plants and animals) and broken bits of rocks and minerals.
<b>Fossil</b>	Bodies/ remains of plants and animals that lived a long time ago.

## 6. Mountains

- Mountains are usually formed together in **mountain ranges**.
- The Highest mountains in the UK is Ben Nevis, Scotland. It is in the Grampian range.
- The highest mountain in the world is Mount Everest in Nepal. It is in the Himalayas.
- The Mid Atlantic Ridge**, which runs along the Atlantic ocean floor, is part of the longest mountain range on Earth.

## 5. Earthquakes and volcanoes

- The Earth is made out of gigantic, rock jigsaw pieces called **tectonic plates**.
- Where these plates meet is called a **plate boundary**. If they rub against each other, they can create earthquakes (from little **tremors** to huge earthquakes which measure highly on the **Richter scale**).
- The point directly above an earthquake's source is called the **epicentre**.
- Some of the most powerful earthquakes have happened in Japan, Fiji, Tonga, Chile, Indonesia, around the edges of the Pacific Ocean (this is called the **Ring of Fire**).



Volcanoes erupt when lava, gas and rock push from the core of the earth. Some volcanoes can be **dormant** (unlikely to erupt anytime soon) or **active** (it erupts regularly).

## 2. Rocks and Soils

- Rocks (**Boulders, stones, pebbles etc**) are made when soil and other organic material (leaves, animal bodies etc) **decay** (rot).
- There are three types of rock:

Metamorphic ( hard texture)	Sedimentary (softer texture, absorbs water)	Igneous (very hard texture)

- \* **Metamorphic** rock is formed when tiny pieces of rock and animal skeleton are pressed together in **layers** e.g. **chalk, sandstone**.
- \* **Sedimentary** rock forms when tiny pieces of rock and animal skeleton are pressed together in **layers** e.g. **chalk, sandstone**.
- \* **Igneous** rocks formed when magma or lava from a volcano cools, e.g. **granite**.

## 3. Fossils and Mary Anning

- Fossils** were formed millions of years ago.
- When plants and animals died, they fell to the seabed.
- They became covered and squashed by other material, which leaves an imprint on the rock. This is a **fossil**.
- Mary Anning** discovered the first fossil of a dinosaur in 1823. Anning found it difficult to be taken seriously because she was a woman.



## 4. Pompeii

- Pompeii** was a Roman town in Italy. On the 24<sup>th</sup> August 79AD, the volcano **Mount Vesuvius** erupted and the whole town was buried in ash and rock.
- Roman historians **Pliny** and **Cassius Dio** wrote about Pompeii.
- People still live on **Mount Vesuvius** because **lava** helps soils become rich & fertile for crops.

## Parts of a volcano

