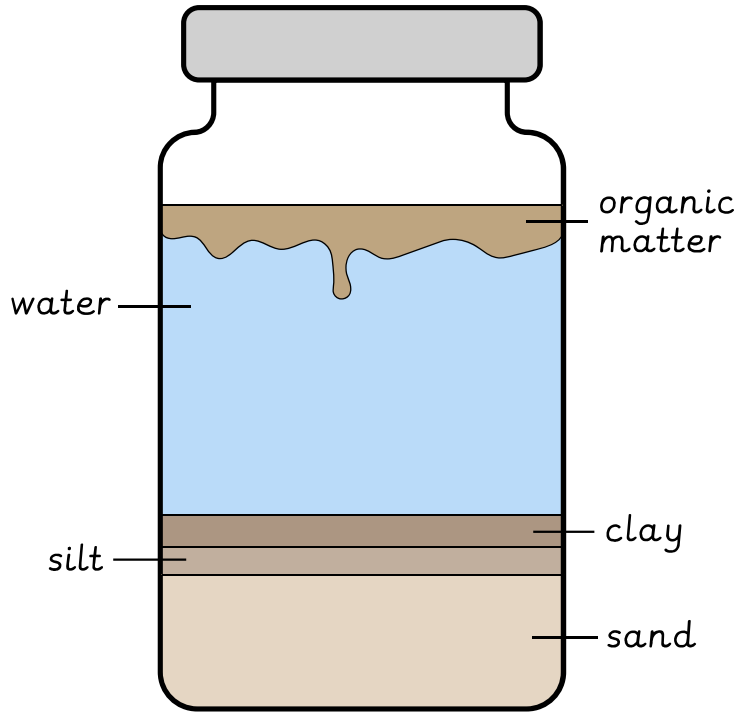
Rocks are formed in different ways and from different mixtures of minerals, other rocks and **organic materials**. This means their appearance and physical properties can vary.

Drainage rate is how quickly water passes through a soil.



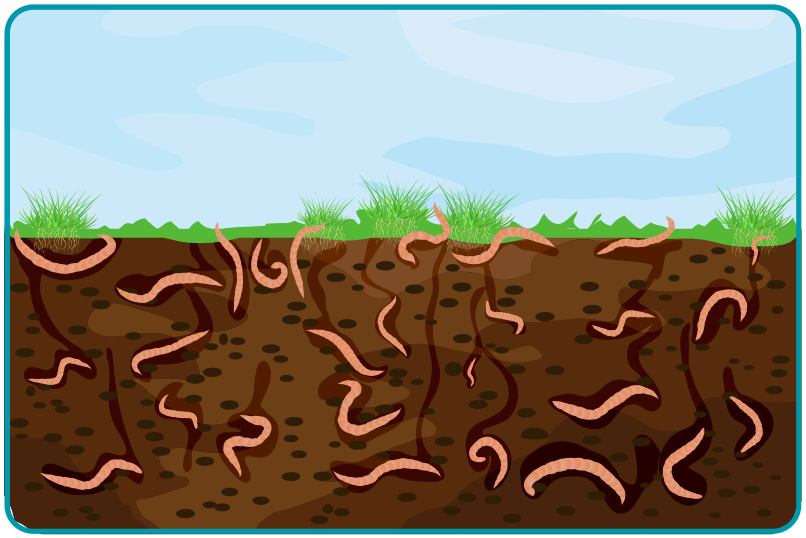
Soil can be separated using sedimentation (mixing with water).

Peaty soil
- Consists of mainly organic matter.
- Medium drainage.

Clay soil
- Consists of mainly clay grains.
- Drains slowly.

Loam soil
- Consists of even amounts of sand, clay, silt and organic matter.
- Medium drainage.

Sandy soil
- Consists of mainly sand grains.
- Drains quickly.

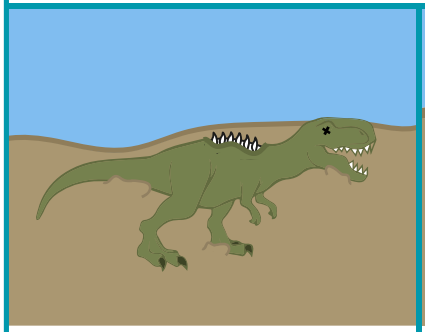


Rock can be broken down into small pieces called **sediment** by forces of nature like wind, rain, rivers, animals and plants.

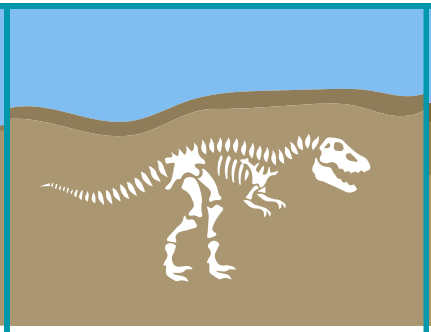
Soil is made from **grains** of sediment, organic matter, water and air. Soil contains different sized grains of sediment:

- Clay (smallest).
- Silt (medium).
- Sand (largest).

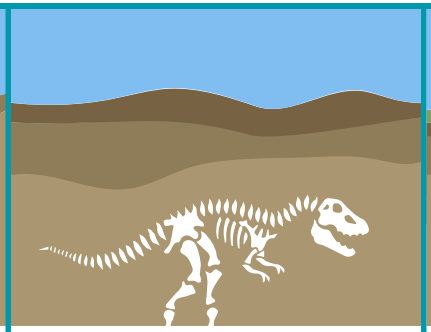
A paleontologist is a scientist who studies fossils. Fossils can tell us about the living things from Earth's past.



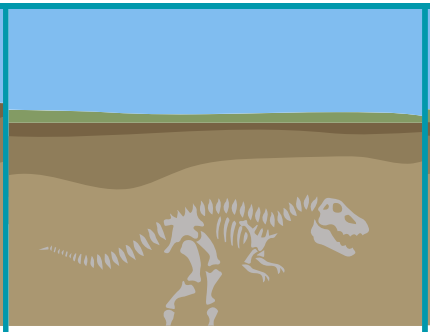
A living thing dies.



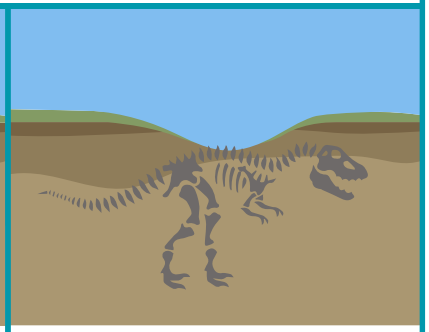
It is buried under a layer of sediment.



Layers of sediment build up on top and squash it.



Water seeps in and minerals replace the parts of the living thing.



It has been turned to rock and is now a fossil.

Rock type	Appearance	Physical properties
granite	 crystals	• impermeable • no reaction to acid • hard
marble	 crystals	• impermeable • reacts to acid • medium
chalk	 no crystals	• permeable • reacts to acid • soft
slate	 no crystals	• impermeable • some react to acid • medium
sandstone	 no crystals	• permeable • some react to acid • soft