

### Background information

- **LAYERS OF SOIL** Half of soil is air and water. In soil you can find sand, small stones, bits of leaves and roots. There are also millions of micro-organisms in the soil which help break down the matter and make the soil healthy and full of life.
- **FOSSILS** When an animal or plant dies, it usually decays quickly or can be eaten. However, sometimes an animal's body sinks into thick mud where there is oxygen so the remains don't decay or aren't disturbed. The remains rest here for thousands/millions of years with more mud and pressure on them. Minerals in the mud turn the remains to stone.
- **TYPES OF ROCKS IGNEOUS ROCKS** - are very hard, dark and heavy. They are formed when molten magma from a volcano cools down. They tend to have interlocking grains giving the rock a crystalline appearance. **EXAMPLES:** granite, basalt, obsidian.
- **METAMORPHIC ROCKS** - are rocks which have been changed over time by pressure or heat. Fossils can be found in metamorphic rocks if plants and animals have been trapped in the rocks. They are hard but can be damaged by acids. **EXAMPLES:** slate, marble
- **SEDIMENTARY ROCKS** – are formed by sediment (which includes minerals, small pieces of plants and other organic matter) that is deposited over time. The sediment is compressed over a long period of time before it become solid layers of rock. **EXAMPLES:** sandstone, limestone, flint, chalk.

### Knowledge and Understanding

In this unit pupils will learn...

- To compare different types of rocks
- To use observable and other criteria to group, sort and classify in different ways
- To make systematic and careful observations when testing soil samples
- Describe in simple terms how fossils are formed when things that have lived are trapped within rock by explaining the fossilisation process

### Enquiry skills and Key concepts

- Use evidence to think and work scientifically
- Describe what is observed through first hand experiences
- Plan and carry out experiments and own enquiries
  - Present findings in creative ways
- Gather evidence to answer scientific lines of enquiry

### Key Vocabulary:

**Rock** – made up of grains that are packed together

**Mineral** – solid chemical substances that occur naturally

**Fossil** – the remains or impressions of a prehistoric plant or animal embedded in rock

**Igneous** – lava or magma that has turned from liquid to solid (forming a rock)

**Metamorphic** – an igneous or sedimentary rock that has been changed by extreme heat or pressure

**Sedimentary** – a rock formed from the build-up of sediment at the bottom of rivers or oceans

**Sediment** – dead animals, plants or pieces of rock that settles to the bottom of a liquid.

**Magma** – liquid rock inside a volcano

**Lava** – liquid rock which flows out of a volcano (ranges