

## Knowledge Organiser

### Subject: Science      Unit: Rocks and Soils

#### Overview:

During this sequence of learning, pupils will compare and group different rocks, understand how fossils and rocks are formed and recognise that soils are made from rocks and organic matter.

#### What should I already know?

- Rocks are a hard, solid material.
- There are many different properties of materials that we can use to describe them such as whether they are: hard, smooth, rough, shiny or dull etc.

#### What will I know by the end of the unit?

- The Earth has a solid crust made up of tectonic plates which cover a layer of molten rock.
- There are many different rocks and they all have different properties.
- There are three main types of rocks: igneous, metamorphic and sedimentary. They are all formed in different ways.
- Sedimentary rocks are formed over many years by the build-up of layers of sediment. You can normally see the layers in sedimentary rock.
- Limestone and sandstone are examples of sedimentary rock.
- Igneous rocks are formed when molten rock cools
- Granite and Basalt are types of igneous rocks.
- Metamorphic rocks are formed when sedimentary or igneous rocks get changed due to extreme heat or pressure below the Earth's crust.
- Marble and slate are examples of metamorphic rocks.
- Fossils are formed when an organism dies and is quickly covered by layers of mud or silt so that it cannot rot away or be eaten. Over millions of years, layers form and squash the mud so that it turns to stone around the organism. This leaves a rock in the shape of the organism that was there.
- Rocks are eroded or weathered and eventually break down into small pieces. These pieces of rock make up soil.
- Soil is made up of lots of different materials including: rock, sand, water, dead plants and animals.

#### Vocabulary:

igneous	Rock that has been formed from magma or lava.
metamorphic	Rock that started out as igneous or metamorphic and changed due to extreme heat or pressure.
sedimentary	Rock that has been formed by the build-up of layers of sediment that have been pushed down hard.
palaeontologist	A scientist who hunts for and studies fossils.
weathering	A process where rocks are broken down by weather such as wind and rain.
crust	The outer layer of the planet.
tectonic plates	A massive, solid piece of rock that makes up the Earth's surface.
fossil	The remains of an organism embedded in rock.
magma	Molten rock that remains underground.
porous	Allows liquid to be absorbed.

