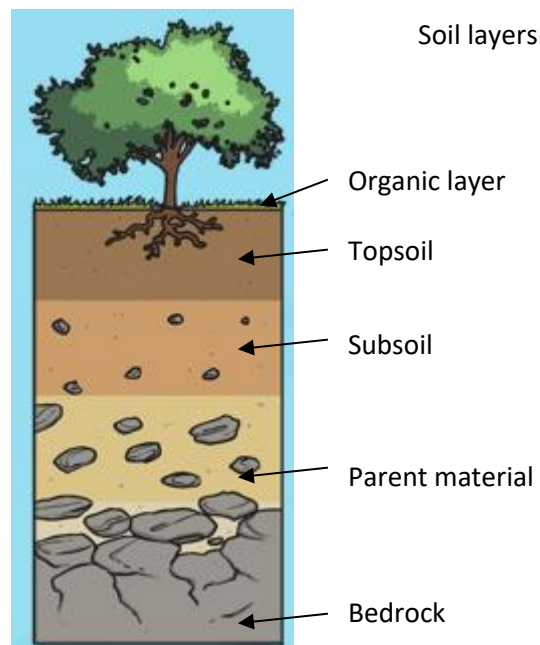
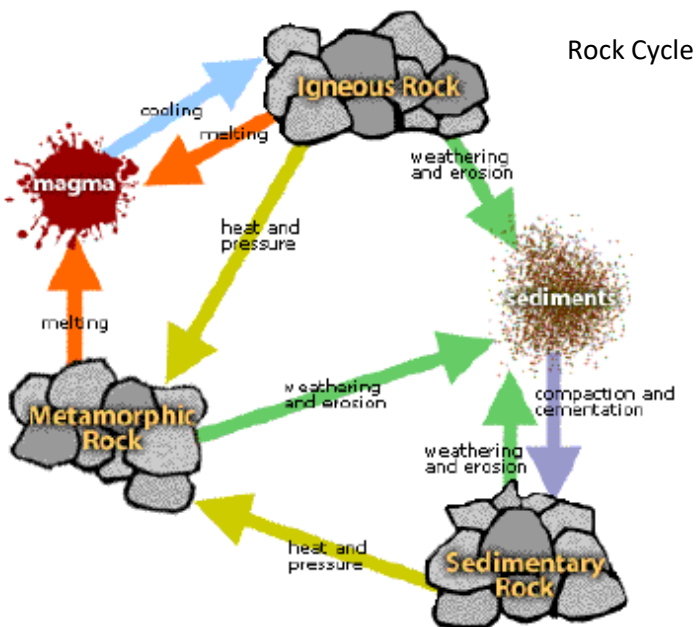


Year 3 Rocks

Key Enquiry Questions	Key Facts
<ul style="list-style-type: none"> • What different types of rocks are there? • How is soil made and why is it important? 	<ul style="list-style-type: none"> • There are three main types of rocks- metamorphic, igneous and sedimentary. • Soil is often described using several characteristics including texture, structure, density, temperature, colour, consistency, and porosity. One of the most important properties of soil is the texture. Texture is a measure of whether the soil is more like sand, silt, or clay. The more like sand a soil is the less water it can hold. On the other hand, the more like clay a soil is, the more water it can hold. • Soil is important for a number of reasons. <ul style="list-style-type: none"> - Plants: Nutrients in the soil help plants to grow and anchor roots in the ground. - Atmosphere: Soil releases gases such as carbon dioxide in to the air - Living organisms: Many animals, fungi and bacteria live in the soil - Nutrient cycles: Soil is important in recycling nutrients - Water: Soil helps to filter and clean water • Soil is made up of layers: <ul style="list-style-type: none"> Organic layer (also called the humus layer)- this is a thick layer of plant remains such as leaves and twigs. Topsoil- this is a fairly thin layer made up of organic matter and minerals. This layer is where plants and organisms live. Subsoil- this layer is made mostly of clay, iron and organic matter Parent material- This is where the upper layers of the soil have developed from. It is made up mostly of large rocks. Bedrock- the bottom layer can be a few metres below the soil surface. The bedrock is made up of a large solid mass of rock.
<ul style="list-style-type: none"> • What is a fossil and how are they made? 	<ul style="list-style-type: none"> • A fossil is the preserved remains or impressions of a living organism such as a plant, animal, or insect. Some fossils are very old. Studying fossils helps scientists to learn about the past history of life on Earth. • Fossils can form when an organism dies, soon after the death the organism needs to be covered with layers of sediment. If this doesn't happen soon after death a fossil will not be formed. Over millions of years the sediment is compressed and forms new layers of sedimentary rock. The shape of the organism creates a shape in the rock. When the rock is broken (either naturally or deliberately) the fossil is discovered. • Fossils can also be formed in other ways: <ul style="list-style-type: none"> - Insects are often preserved like this in harden tree sap which is called Amber - Carbonisation can form a fossil when all the elements of the organism has dissolved apart from the carbon leaving an outline. - Organisms can be preserved in ice, especially in glaciers - When an organism dries out quickly the remains can be preserved. This is called mummification and was common in ancient Egyptian times. • Fossils are found all over the world. Most fossils are found in sedimentary rock such as shale, limestone and sandstone.



Key Vocabulary	
bedrock	The solid rock underneath soil or loose rocks, the lowest of the three main layers of soil.
decay	rot or decompose through the action of bacteria and fungi.
erosion	The process of transporting and wearing away rocks of soil as loose articles that are moved by water, wind, ice or gravity.
extinct	Has no living examples, there are none of them left alive e.g. dinosaurs.
fossil	The remains of an organism that turned to stone over a long period of time.
igneous rock	Rock formed by the cooling and hardening of hot magma or lave. Formed by volcanoes e.g. basalt, granite.
metamorphic rock	Rock formed when any type of rock goes through changes caused by extreme heat and pressure e.g. marble, slate.
mineral	A solid, natural material that does not come from a living thing e.g. salt.
organic	Having to do with or coming from living organisms.
organism	A living thing such as an animal or a plant.
palaeontologist	A scientist who studies the ancient past.
permeable	Allowing liquids or gases to pass through.
process	To cause something to go through steps that will change or improve it.
properties	A characteristic of something.
refine	To remove unwanted materials from a substance.
rock	A hard, solid material that is made of minerals and is found in nature.
rock cycle	The series of changes that rock undergoes over time as it shifts between different types.
sediment	Loose materials that settle and form new layers of rock.
sedimentary rock	Rock formed when sediment is pressed together over time over time. Formed over a long period of time e.g. shale, limestone, sandstone.
soil	The top layer of the earth, in which plants grow.
subsoil	The middle layer of soil, which contains more rocks than topsoil.
top soil	The top layer of soil, in which most plants have their roots.
weathering	The process of wearing away or otherwise changing earth's surface, caused by natural forces.