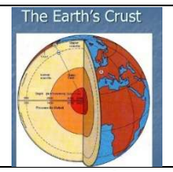
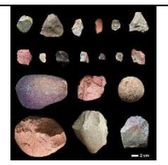
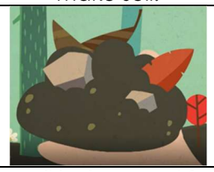
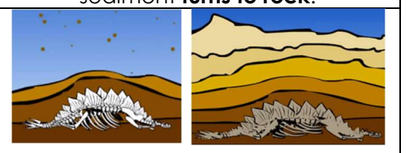
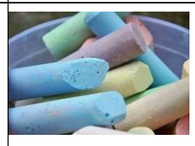
Year 3: Rocks – Science Knowledge Organiser

Enquiry Journey:

1) What are Rocks?	2) How are rocks formed?	3) What are rocks used for?	4) Which rocks are the most permeable?	5) What is soil?	6) How are fossils formed?
Rocks are naturally occurring.	There are three types of naturally occurring rocks, **Igneous**, **Sedimentary** and **Metamorphic.**	Humans have been using rocks as **tools** for 3 and a half million years.	Permeability is the ability of a substance to allow **liquids to pass** through it.	Soil is made up of very small bits of rock. The small bits of **rock** mix with **decaying plants** and **animal**s to make soil.	A fossil is the **preserved remains** or trace of a plant or animal that lived long ago.
					
Racks are made of **minerals.**	**Igneous rocks** are formed when molten rock, magma or lava cool and harden.	Rocks and minerals are used in many ways in our everyday lives.	Some rocks like **sandston**e are **permeable**	Chalky soil is **stony** and found in areas with lots of chalk, **water drains** through it quickly.	The remains get covered in **sediment**, over millions of years, the sediment **turns to rock**.
					
Rocks can be many different shapes and sizes.	**Sedimentary rocks** are made under the sea. Tiny pieces of rock settle on the seabed and are **pressed** together over many years, forming **layers of rock**.	**Hard** rocks are more durable, and **soft** rocks are easier to shape. E.g. **chalk** is used for drawing; **granite** is used for building.	Some rocks like **quartz** are **impermeable**	Sandy soil is **light and dry, water drains** through it quickly as there are lots of air gaps.	Fossils help us learn about plants and animals that lived in the past.
 		 			
	Metamorphic rocks are formed under the ground. **Heat and pressure** cause a chemical change in the minerals inside the rock.	Minerals from rocks are used to make **toothpaste**, **glass** and **ceramics**.	Geologists need to know the permeability of rocks so they can choose the correct rock for the job.	Clay soil is **heavy,** water does not drain through it quickly.	**Mary Anning** was a famous fossil hunter who discovered important fossils on the Jurassic Coast.
					
Scientific Lens:	**Scientific Lens:**	**Scientific Lens:**	**Scientific Lens:**	**Scientific Lens:**	**Scientific Lens:**
Key Vocabulary: **Minerals –** Natural substances found in rocks. **Natural –** Made by nature, not by humans. **Human Made –** Made by people.	**Key Vocabulary:** **Igneous rock –** Rock that has been formed by magma or lava. **Sedimentary rock –** Rock that has been formed by layers of sediment being pressed down. **Sediment –** Natural solid material that is moved by water or wind. **Metamorphic –** Rock that started out as sedimentary or igneous but has changed due to exposure to heat or pressure.	**Key Vocabulary:** **Hardest –** The most difficult to scratch break or dent. **Softest –** The easiest to scratch, break or dent. **Durable –** Strong and long lasting.	**Key Vocabulary:** **Permeable –** Allows liquids to pass through it **Impermeable –** Does not allow liquids to pass through it	**Key Vocabulary:** **Soil –** A mixture of rock, air, water and organic matter. **Organic Matter –** Dead plants and animals in the soil. **Decaying –** Breaking down or rotting.	**Key Vocabulary:** **Fossil –** Preserved remains or traces of a living thing. **Fossilisation –** the proccess of becoming a fossil.