Science Knowledge Organiser

Term 1 – Year 3/4 – Rocks, soil and fossils

Key Enquiry Question: What are the properties and use of rocks, soils and fossils?

National Curriculum Objectives:

- compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- describe in simple terms how fossils are formed when things that have lived are trapped within rock
- recognise that soils are made from rocks and organic matter.

Key vocabulary	
Word	**Meaning**
Sedimentary	A build-up of multiple layers of rock and as this progresses, water is squeezed out and causes the sediment to 'cement' together.
Metamorphic rocks	Are created from heat and pressure.
Igneous rocks	Are formed when magma cools and crystalizes.
Permeable	Allows water to pass through
Impermeable	Does not allow water to pass through.
Humus	Part of soil made from dead plants and animals

Key vocabulary	
Word	**Meaning**
Soil	Small particles of rock mixed with decayed plants and animal material.
Sand	Is a granular material composed of finely divided rock and mineral particles.
Clay	IS composed of fine-grained minerals, which show plasticity through contact with water and can be hardened when dried and/or fired.
Silt	Silt is made up of particles of rock and mineral particles. It can be transported and deposited by water, ice and wind.
Fossil	The prehistoric remains of a plant or animal
Palaeontologists	Scientists who studies fossils.

Sticky Knowledge

There are lots of different types of rocks – Sedimentary, metamorphic and igneous (see key vocab).

Some rocks are permeable while others are impermeable.

Worms enrich topsoil by feeding on organic material in the soil and converting it into nutrients for plants.

Fossilisation occurs when an animal dies and decays. The skeleton is covered with sand, earth, rock or seabed and then over time the bones break down and leave an empty mould that is slowly filled by minerals. The minerals harden and when erosion happens the fossil is exposed.