What I should already know: Children will know about everyday materials.

Enquiry Questions:

- 1. Can we explore the formation and properties of igneous rocks?
- 2. Can we explore the formation and properties of sedimentary and metamorphic rocks?
- 3. Can we explain weathering and the suitability of rocks for different purposes?
- 4. Can we understand how water contributes to the weathering of rocks?
- 5. Can we describe how fossils are formed?
- 6. Can we explain the different types of soil?

Key Vocabulary

- ★ Acid rain rain which has been made too acidic by air pollution.
- ★ Amber a hard, translucent, orangey coloured fossil resin.
- ★ Chalky soil light brown and drains water well.
- ★ <u>Clay soil</u> heavy, sticky and does not let water through easily.
- ★ <u>Crystals</u> a solid, clear mineral formed when liquid is cooled into a solid.
- ★ <u>Decompose</u> the process where dead animals and plants break down into smaller parts.
- ★ Earth's Crust outer layer of Earth made up of rock.
- ★ Earth's Mantle a layer of rock between the crust and the outer core.
- **Earth's Outer Core** a fluid layer made up mostly of iron and nickel.
- ★ Earth's Inner Core the middle of the Earth, mostly a solid ball.
- ★ **Embedded** set firmly or imprinted within the surrounding material.
- ★ **Erosion** the wearing away of rocks by wind or water.
- ★ Extinct a species that is no longer alive.
- ★ Fossils remains of plants and animals that are preserved in rock.
- ★ Igneous Rocks rocks created from solidified lava.
- ★ Impermeable does not let water through.
- ★ <u>Limestone</u> a type of sedimentary rock.
- ★ <u>Marble</u> hard, impermeable and used for statues.
- ★ <u>Magma</u> hot liquid rock below the surface of the Earth. When a volcano erupts it is called Lava.
- ★ <u>Metamorphic Rocks</u> rocks that have changed from igneous or sedimentary through heat and pressure.
- ★ Mineral solid substances that occur naturally, e.g. gold and diamond.
- ★ Permeable lets water through.
- ★ <u>Pumice</u> a type of volcanic rock that is quite strong and has many uses.
- ★ Receding to move backwards.
- ★ Rocks grains that are pressed and stuck (packed) together.
- ★ <u>Sandy soil</u> pale, allows water through easily and easy to work with in gardens.
- ★ <u>Sandstone</u> a type of sedimentary rock made from layers of sand that

Scientific Skills

Pupils will:

Skills and Knowledge (Rocks)

- R1) Group together different kinds of rocks on the basis of their appearance and simple physical properties
- R2) Describe in simple terms how fossils are formed when things that have lived are trapped within rock.
- R3) Recognise that soils are made from rocks and organic matter.

(Working Scientifically)

Year 2 & Year 3
WS1) Ask simple questions and understand they can be answered in different ways/ ask

scientific enquiries to answer them.
WS2) Use straightforward scientific evidence to answer questions or to support findings

relevant questions and use different types of

WS3) Observe closely, using simple equipment / make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.

WS4) Perform simple tests / set up simple practical enquiries, comparative & fair tests. WS5) Identify & classify / identify differences, similarities or changes related to simple scientific ideas and processes.

WS6) Use observations & ideas to suggest answers or questions / use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.

WS7) Gather & record data to help answer

has built up over millions of years.

- ★ Sediment a mixture of sand and mud.
- ★ Sedimentary Rocks -
- ★ Soil a mixture of rocks, organic matter (from animals and plants), air and water.
- ★ Submerged to put under water or another liquid.
- ★ Weathering the wearing away of rocks which are broken down into smaller pieces.
- ★ Weathering (biological) the wearing away of rocks by animals or plants.
- ★ Weathering (chemical) the wearing away of rocks by chemicals such as acid.
- ★ Weathering (physical) the wearing away of rocks by sunlight, water or wind.

questions / record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. WS8) Gather, record, classify and present data in a variety of ways to help answer questions. WS9) Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Pupils should read and spell scientific vocabulary correctly.

Mary Anning

Born: 21st May 1799

Died:

Lived: Lyme Regis

Famous For: Discovering and collecting fossils. She discovered the Icthyosaur, a Plesiosaur and a Dimorphodon.



Igneous Rock





Far underground the temperature is so hot, rock melts into a liquid (molten rock). When the liquid is underground, it is called magma and it can cool to form igneous rock.

Metamorphic Rock



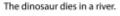
Metamorphic rocks are formed under the surface of the earth from the change (metamorphosis) that occurs under the intense heat and pressure (squeezing).

Sedimentary Rock

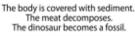


These rocks form under the sea. Rocks are broken into small pieces by wind and water (erosion). They settle as mud, sand, minerals and even remains of living things. Over time layers build up and the pressure turns this sediment into rock.

How fossils are formed.









The sediments become rock. The skeleton is pressed.



The earth's movements raise the lavers of the rocks to the surface.



The rock erodes. exposing the fossil.



Links to Other Areas of the Curriculum: Whole class reading (A Pebble in my Pocket), Writing, History and Geography.