Year 3 - Term 2 – Science - Rocks

Articles 12 & 13

Final Outcome: To design and carry out an investigation into the permeability of different soils.

Component 6:
What we will know after this sequence:

What equipment is necessary to conduct a practical investigation using soil.

How to observe how much water has filtered through different types of soil.
How to record findings using scientific language, including results and conclusions.
How to present findings confidently to a group.
Vocabulary:
Soil, formation, rock, rock type, igneous, sedimentary, metamorphic, properties, permeability, permeable, impermeable, semi-permeable, rapid, moderate, slow.
SEN:
Working in mixed ability groups for the experiment to allow scaffolding from peers.

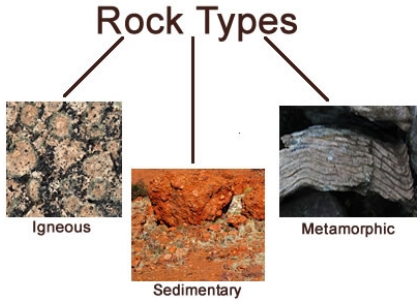
Component 4:
What we will know after this sequence:
What a palaeontologist does.
How to identify changes related to simple scientific ideas in the context of theories about fossils.
What Mary Anning's contribution to Palaeontology was and why her findings were important.
Vocabulary:
Mary Anning, fossils, ichthyosaur, trace, fossils, coprolite, dinosaurs, Jurassic, Lyme Regis, seaside, beach, poverty, scientists, William Buckland.
How will this feed into my next learning:
Pupils will then learn about the different components of soil and compost.
SEN:
Watch a YouTube video about Mary Anning prior to the lesson.

Component 5:
What we will know after this sequence:
That soil is composed of different things.
What happens in each of the 4 processes of soil formation.
What compost is and why people choose to compost.
Vocabulary:
Soil, formation, formed, rock, organic matter, animals, top soil, sub soil, base rock, additions, losses, translocations, transformations.
How will this feed into my next learning:
Pupils will apply their learning to create their own investigation into soil types.
SEN:
Watch a YouTube video on the process of making compost before the lesson.

Component 3:
What we will know after this sequence:
The order of steps in which a fossil is formed.
How to describe in simple terms how fossils are formed when things that have lived are trapped within rock by explaining the fossilisation process and by comparing fossils to the animals they belong to.
The difference between a fossil and a bone.
Vocabulary:
Fossil, sedimentary, fossilisation, animals, bones, chemical fossils, change, body fossils, trace fossils, layers, pressure, coprolite, trackways, footprints.
How will this feed into my next learning:
Children will learn about palaeontologists and how scientists have contributed to our understanding.
SEN:
Pre-teaching of key vocab and a visual diagram printed to show fossilisation prior to the lesson.

Component 2:
What we will know after this sequence:
How to group together different kinds of rocks on the basis of their simple physical properties in the context of natural rocks.
How to test the buoyancy of different rocks.
To make systematic and careful observations by examining different types of rocks.
Vocabulary:
Igneous, sedimentary, metamorphic, rocks, group, properties, permeable, impermeable, hard, soft, durable, buoyancy, split.
How will this feed into my next learning:
Pupils will then move on to learn about how fossils are formed.
SEN:
Mixed ability groupings for the experiment. Sentence stems provided for write up.

Component 1:
We should know:
That rocks are found outside.
That rocks are hard and were used as tools in the Stone Age.
What we will know after this sequence:
The names of the three different types of rocks.



The differences between natural and human-made rocks.
How to use the appearance of rocks to group and compare them.
Vocabulary:
Rocks, igneous, sedimentary, metamorphic, form, formation, volcano, sea, seabed, changes, compare, types, natural, human-made, strata, anthropic.
How will this feed into my next learning:
Children will then look at how to group different rocks based on specific criteria.
SEN:
Word banks with accompanying pictures for new vocabulary.