

ROCKS

Pupils should be taught to:

- 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 of rocks and organic matter.

National Curriculum

Essential characteristics of scientists:

- The ability to think independently and raise questions about working scientifically and the knowledge and skills that it brings.
- Confidence and competence in the full range of practical skills, taking the initiative in, for example, planning and carrying out scientific investigations.
- Excellent scientific knowledge and understanding which is demonstrated in written and verbal explanations, solving challenging problems and reporting scientific findings.
- High levels of originality, imagination or innovation in the application of skills.
- The ability to undertake practical work in a variety of contexts, including fieldwork.
- A passion for science and its application in past, present and future technologies.

Chris Quigley Education Ltd

SPRING TERM 2018-19 - MEDIUM TERM PLANNING - SCIENCE THEME

<p>INDIVIDUAL LEARNING OBJECTIVES (See individual pupil IEPs for their actual individual targets)</p>	<p>ESSENTIAL LEARNING OBJECTIVES (Chris Quigley)</p>	<p>ESSENTIALS FOR PROGRESS (Chris Quigley)</p>
<p><u>P7:</u></p> <ul style="list-style-type: none"> - to explore what he can find in soil - to communicate simply what he found in soil - to record what he found in soil - to suggest what else he might find in soil - to observe and simply describe differences between wet and dry sand - to match photos of different rocks/minerals with photos - to use shiny, dull, hard and rough to describe rocks/minerals - to look and feel rocks in the environment and use appropriate terms for what he sees - to list where he has found rocks 	<ul style="list-style-type: none"> • To investigate materials. 	<ul style="list-style-type: none"> • Compare and group together different kinds of rocks on the basis of their simple, physical properties. • Relate the simple physical properties of some rocks to their formation (igneous or sedimentary). • Describe in physical terms how fossils are formed when things that have lived are trapped within sedimentary rock.
<p><u>Level 1:</u></p> <ul style="list-style-type: none"> - to list things they think they will find in soil - to explore a sample of soil with a magnifying glass - to list living things they have found in soil - to list non-living things they have found in soil - to compare and describes different soil - to experiment to see how fast water passes through different soils, e.g. sandy/clay - to talk about the importance of soil and what living things depend on it - to sort different kinds of rocks into groups based on size, colour and texture - to use a magnifying glass 		

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LEARNING ACTIVITIES	
ROCKS	SOILS
<p><u>WHERE ARE ROCKS IN OUR ENVIRONMENT?</u></p> <ul style="list-style-type: none"> Children look for naturally occurring rocks in their environment. Children look for rocks that have been used by humans for a purpose in their environment. Children create a collage of photos of rocks they have found in their environment. 	<p><u>WHAT IS IN SOIL?</u></p> <ul style="list-style-type: none"> Children investigate samples of soil looking for what they can find within it. Children discuss the living and non-living things that they are finding. Children make a simple table showing living and non-living things they have found in the soil.
<p><u>WHAT ARE ROCKS USED FOR?</u></p> <ul style="list-style-type: none"> Children think about where rock is used in their environment eg buildings, walls, steps and bollards. Children consider the properties of rock eg hard, tough, waterproof and durable. Children consider why rocks are used for those objects. Children label a photo of rock being used for a purpose with a reason why. 	<p><u>WHY IS SOIL IMPORTANT?</u></p> <ul style="list-style-type: none"> Children discuss what soil is used for and why this is important. Children write why they think soil is important.
<p><u>ARE THERE DIFFERENT KINDS OF ROCKS?</u></p> <ul style="list-style-type: none"> Children explore samples of rocks. Children describe the rock samples for their colour and texture. Children sort the rocks for their colour and texture. Children match the rock samples with named photos of those rocks. Take photos while the children are sorting the rocks. 	<p><u>SOIL INVESTIGATION</u></p> <ul style="list-style-type: none"> Children plan an investigation to explore which soil drains water quickest. Children carry out their investigation. Children complete an investigation sheet showing their process and result.
OUTDOOR LEARNING/ENVIRONMENTAL LEARNING OPPORTUNITIES	
<ul style="list-style-type: none"> Looking for natural rock, visit the beach and look at rock formations. Visit the beach. Searching for and collecting different types of stone. Looking for rock being used by humans eg walls/buildings/steps 	<ul style="list-style-type: none"> Looking for where soil is used in their community. Comparing the soil near the beach with soil in the garden.