

Working Scientifically skills (Years 3 and 4)

Ask Scientific questions	Plan an inquiry	Making predictions	Observe closely	Taking measurements	Gathering and recording results	Presenting results	Interpreting results	Drawing conclusions	Evaluating		
Enquiry Type											
Comparative and Fair testing		Observing over time Lesson 4, Lesson 5		Classifying, grouping and sorting Lesson 1, Lesson 2, Lesson 3, Lesson 6		Pattern Seeking		Research using Secondary sources			
National Curriculum		Prior Learning		Future Learning		Sticky Knowledge (Golden Threads)		Vocabulary			
<ul style="list-style-type: none"> Compare and group together different types of rock based on their appearance and simple physical properties Describe in simple terms how fossils are formed when things that have lived are trapped within rock Common recognize that soils are made from rocks and organic matter 		<p style="text-align: center;">Year 1 Everyday Materials</p> <p>Between an object and the material from which it is made. Identify and name a variety of everyday materials Describe the simple physical properties of a variety of everyday materials Compare and group together everyday materials on the basis of their physical properties</p>		<p style="text-align: center;">Year 6 Evolution</p> <p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</p>		<ol style="list-style-type: none"> There are different types of rock – sedimentary igneous and metamorphic There are different types of soil, peat, chalk, clay. Soils change over time Different plants grow in different soils Fossils tell us what has happened before Fossils provide evidence that living things have changed over time Paleontologists use fossils to find out about the past 		<p>Rock Stone Pebble Boulder Gran Crystals Hard Soft Texture</p> <p>Diagram Similarity Difference Information</p>		<p>Absorbent Fossil Bone Flesh Mineral Chalk Granite Sandstone Slate Soil</p>	
Misconceptions		Enquiry Questions		Learning opportunities				Famous Scientist			
<p>Children may think: Rocks are all hard in nature Concrete, bricks are manmade materials that have been shaped or polished for use. They are not rocks as they are not natural Fossil re an actual piece of an extinct animal or plant therefore pottery and coins or other artefact are not fossils Soil and compost are the same</p>		<ol style="list-style-type: none"> How many different ways can I sort objects Are rocks different? Do different types of rocks have different properties What is a fossil? What is a soil? How are soils different? 		<ol style="list-style-type: none"> Sort chocolates according to appearance and texture Sort rocks according to appearance and texture using a Carroll diagram and compare and contrast table TAPS assessment lesson Children to rub rocks on sandpaper and collect scrapings onto white paper. Ask children to order the rocks and justify their selection of strongest rock. Make own fossil and write what happened in each step Collect soil from different areas, feel it, smell it, observe what's in it. Write a description about the soils. Mix it with water and observe what happens Sort different types of soil 				<p>Mary Anning</p>			
								Assessment			
								<p>Low Stake quiz Recap Starter Retrieve and connect</p>			

Resources

ASE planning matrices
ASE Working Scientifically progression document

ASE Vocabulary progression document
ASE assessment exemplifications