



Spring 1	Rocks					
Prior learning	EYFS learn about different materials – which is most absorbent and which is good for clothing; Year 1 Everyday materials and properties; Year 2 suitability of materials, manipulation of materials					
Lesson objective	Explore the formation and properties of igneous rocks	Explore the formation and properties of sedimentary and metamorphic rocks	Weathering and the suitability of rocks for different purposes	Explore how water contributes to the weathering of rocks	Understand how fossils are formed	Explore different types of soil
Key vocabulary	igneous rocks intrusive igneous rock extrusive igneous rock crystals magma	sedimentary rock metamorphic rock limestone marble sandstone	weathering chemical weathering physical weathering biological weathering acid rain	appearance texture submerged erosion receding	fossil extinct sediment embedded amber	decompose fragments clay soil chalky soil sandy soil
Creative context						
Substantive knowledge	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	Explore how and why [rocks] might have changed over time (non-statutory)	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
Disciplinary knowledge	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment,	Identifying differences, similarities or changes related to simple scientific ideas and processes	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment,



				including thermometers and data loggers		including thermometers and data loggers
Recorded learning	Write a paragraph to explain how each type of igneous rock is formed. Include a paragraph on how intrusive igneous rock is rock that has been formed inside the Earth.	Carry out some tests on a selection of rocks to investigate their durability, permeability and density. Use a microscope to see if the rocks contain crystals. Challenge Task: Once the children have carried out their tests, ask them to sort the rocks into igneous, sedimentary and metamorphic rock and explain their properties	Design a school plaque. Their plaque will be outside and must be made of rock. Draw and label what they have made it out of and why. Challenge Task: Can the children explain what causes chemical weathering, physical weathering and biological weathering?	Carry out an in depth investigation to discover the effect of water on different types of rocks.	Using the handout, explain how a fossil is created. Optional: Make a fossil following Developing Experts recipe.	Investigation to test 4 different samples of soil.
Future learning	Year 4 States of matter; Year 5 compare and group materials based on properties, understand some materials will dissolve, solids, liquids, gases					