Overview – Year 3 Autumn 2 Rocks

Note: Rocks and the rock cycle also form part of the Key stage 3 syllabus. This unit goes beyond 'appearance' to explain simple physical properties. For example, it is difficult for pupils to understand how fossils are formed and how things can be trapped in rocks without an understanding of how sedimentary rocks are made through formation of layers. Equally, it is important for children to understand that the heat and pressure used to form other types of rocks mean fossils would not have been preserved. Therefore, pupils also learn about the formation of igneous and metamorphic rocks.

Simple models are used to embed meaning of these physical processes.

Lesson	Objectives	Scientific enquiry	Equipment list
1 What are some properties of rocks?	• Identify some properties of rocks • Investigate some properties of rocks • Give some uses of rocks	Set up simple practical procedures, make a prediction, observe over time, comparative test, ***can make a conclusion based on predictions and draw a bar chart. Pupils will follow-up in year 5, looking at hardness test in Properties and changes of materials***	Rocks, container, water, magnifying glass Rocks, coin, nail
2. How do volcanoes make igneous rocks?	• Know what happens in a volcanic eruption • Know how cooling time affects size of crystals • Know some uses of igneous rocks	Investigate crystal size Set up simple practical procedures, make a prediction, observe over time, pattern-seeking, comparative testing, make a conclusion based on evidence	Epsom salts, hot water, food colouring, windowsill, fridge
3.Where can we find fossils?	• Know how sedimentary rock is made • Know how fossils are formed • Know examples of sedimentary rocks and their uses	Make models of fossils Follow a simple practical procedure	1 cup salt, 2 cups plain flour, ¾ cup water, small dinosaur toys, oven

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4. Can rocks be changed?	• Know some examples of metamorphic rocks • Know the properties of metamorphic rocks • Know how metamorphic rocks are formed	Model metamorphic rock Follow a simple practical procedure, observation over time, making a conclusion based on evidence	2 different colours of playdough
5. Can rocks be recycled?	• Know the stages of the rock cycle • Know how to create a model of the rock cycle • Know how to compare the different types of rocks in the rock cycle	Model how rocks are made in the rock cycle Follow a simple practical procedure, observation over time, making a conclusion based on evidence	dark chocolate, milk chocolate, white chocolate, food bag, hot water
6. Why is soil important?	• Know some different types of soil • Know the different layers of soil • Know how soil structure affects its function	Make an edible soil profile Follow a simple practical procedure, observation over time, making a conclusion based on evidence	Oreos or other dark biscuits (bourbons), clear plastic cup/ mason jar, insect/plant sweets, biscuits