Advent 1 Science Year 3:Rocks (Physics)			
Scripture Link: 1 Samuel 2:2/ Psalm 18:2			
National Curriculum Objective •			
Enquiry Question: What are rocks and fossils?			
	Lesson 1	Lesson 2	Lesson 3
Learning intention for each lesson	To investigate different rocks.	To compare and group different types of rock.	To test the different qualities of various rocks
Recall and Retrieval	what opaque means what transparent means That natural materials are those found in nature such as plants, rocks and water. Synthetic materials are man made	know what a rock is That the shape of some materials can be changed when they are stretched, twisted, bent and squashed.	know the three main rock types: igneous, metamorphic and sedimentary and can describe their features
Sequence of substantive knowledge throughout the lesson	I know what a rock is I know that rocks vary in appearance.	I know how to classify rocks using appearance I know how to classify rocks using simple physical properties. I know the three main rock types: igneous, metamorphic and sedimentary	I know that some rocks are hard/durable and others will crumble I know that some rocks absorb water and others do not. I know that some rocks are acidic.
Key Skills/disciplinary knowledge	• **asking relevant questions and using different types of scientific enquiries to answer them;** • **identifying differences, similarities or changes related to simple scientific ideas and processes;**	• **asking relevant questions and using different types of scientific enquiries to answer them;** • **gathering, recording, classifying and presenting data in a variety of ways to help in answering questions;** • **reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions;** • **identifying differences, similarities or changes related to simple scientific ideas and processes;**	• **asking relevant questions and using different types of scientific enquiries to answer them;** • **setting up simple practical enquiries, comparative and fair tests;** • **making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers;** • **gathering, recording, classifying and presenting data in a variety of ways to help in answering questions;** • **recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables;**

			• **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;**
Key Vocabulary	Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb, water, soil, fossil, marble, chalk, granite, sandstone, slate,	Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb, water, soil, fossil, marble, chalk, granite, sandstone, slate, igneous, metamorphic, sedimentary	Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb, water, soil, fossil, marble, chalk, granite, sandstone, slate,
Main teaching activity ***If the school has another short term planning format, this does not need to be included.***	- Introduce rocks –what do children know? what do they want to know? - Explain that rocks are solid materials made of minerals - Children investigate different rocks using a magnifying glass identifying key features. - Children		
Scaffolding	Use STEM sentences to structure talk.	Provide choice over how to record their results. Teacher to model how to complete each form (Venn or Carrol-Maths link).	Teacher to model how to do each test and explain how to use equipment safely.
Challenge	Children to write their knowledge or questions on post it notes- this could be done in pairs.	Children to work in groups to identify the rocks they have classified.	Challenge – can weigh the rocks, leave in water overnight and then re-weigh in the morning.
Diversity Links			
Catholic Social Teaching Principles		Stewardship – Seeing God in creation	Stewardship – Seeing God in creation All things are connected
British Values			
Wider links			

Advent 1 Science Year 3: Rocks (Physics)			
	Lesson 4	Lesson 5	Lesson 6
Learning intention for each lesson	To explore fossils.	To compare how rocks and fossils are made.	To understand what soil is.
Recall and Retrieval	know the three main rock types: igneous, metamorphic and sedimentary and can describe their features	know what a fossil is know how fossils are formed can name some objects that float and some that sink – can explain why.	know what a rock is know how rocks are made know what opaque means know what transparent means
Sequence of substantive knowledge throughout the lesson	I know what a fossil is I know how fossils are formed	I know how rocks are made I can compare the two processes	I know that there is more than one type of soil I know that soil is made from rock and organic matter.
Key Skills/disciplinary knowledge	• **asking relevant questions and using different types of scientific enquiries to answer them;** • **gathering, recording, classifying and presenting data in a variety of ways to help in answering questions;** • **recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables;** • **reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions;** • **identifying differences, similarities or changes related to simple scientific ideas and processes;**	• **asking relevant questions and using different types of scientific enquiries to answer them;** • **recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables;** • **reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions;** • **identifying differences, similarities or changes related to simple scientific ideas and processes;**	• **asking relevant questions and using different types of scientific enquiries to answer them;** • **making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers;** • **gathering, recording, classifying and presenting data in a variety of ways to help in answering questions;** • **recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables;** • **reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions;** • **identifying differences, similarities or changes related to simple scientific ideas and processes;**

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Main teaching activity ***If the school has another short term planning format, this does not need to be included.***			
Scaffolding	Children to work individually following the process. Children to interpret what has happened using picture cards.	Teacher to model and question the process.	Teacher to model each step emphasizing the variable of keeping things the same.
Challenge	Children to complete their interpretation of the process. Extra support for less able learners.	Challenge – use ICT to investigate the work of geologists.	
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Wider curriculum links			