

St Bernadette's Catholic Primary Voluntary Academy
Science Medium Term Planning - LKS2 Term Pentecost Cycle A - Caveman to Iron Warrior



	Learning Objective	Activity	Key Knowledge (By the end of the lesson)		Vocabulary (Tier 3)
			Substantive	Disciplinary	
Lesson 1	L.O. 22 To be able to compare and group together different kinds of rocks on the basis of their appearance and physical properties. (NC3) <u>Year 3</u> L.O. 3 <i>To be able to make careful observations</i>, and, where appropriate, take measurements using standard units, using a range of equipment. <u>Year 4</u> L.O. 3 <i>To be able to make systematic and careful observations</i>, and where appropriate to take accurate measurements.	Focus-careful observations of different rocks Discuss children prior learning of rocks and mind map together. What rocks do we know where are they found, what are they like etc? Look at slides which explain the different characteristics. Children to carefully examine rocks and their appearance, using magnifying glasses. Children to draw observational sketches and write a description. Use vocabulary to describe e.g. soft, chalky, rough, smooth, shiny, dull.	- Know that rocks have different appearances and textures. - Begin to identify some names of rocks e.g. chalk, slate.	<u>Observing and measuring</u> Using senses and measuring equipment to make observations about the enquiry	Smooth Rough Course grainy
Lesson 2	L.O. 22 To be able to compare and group together different kinds of rocks on the basis of their appearance and physical properties. (NC3) <u>Year 3</u> L.O. 6 to gather, record, classify and present data in a variety of ways. L.O. 7 to be able to report on findings, including oral and written explanations. <u>Year 4</u>	Focus-fair testing of the properties of rocks and recording findings. Explain that we are going to group rocks according to their properties-what they are like. The three properties we are going to test are density, permeability and hardness (durability) Children to test the rocks by performing careful tests. Record findings in a table. (3 way differentiated) Write up their findings to the	Recognise the properties of igneous, metamorphic and sedimentary rocks.	<u>To recognise and apply</u> <u>Setting up tests</u> Deciding on the method and equipment to use to carry out an enquiry. Fair testing focus	Igneous Metamorphic Sedimentary Density Permeability Hardness

	L.O. 5 To be able to gather, record, classify and present data in a variety of ways to help in answering questions.	experiment. Use model sentences. HA children to link the properties of rocks to their uses.			
Lesson 3	L.O. 22 To be able to compare and group together different kinds of rocks on the basis of their appearance and physical properties. (NC3)	Focus-how the three different kinds of rocks are formed. Explore the make up of the earth, showing a cross sectional diagram. Look at how the crust is formed of different plates, for how the different kinds of rocks are formed. Look at slides of how each kind of rock is formed, including examples of these rocks. Show video of volcano howing the lava exploding and cooling.	● Recognise the properties of igneous, metamorphic and sedimentary rocks. ● To understand how rocks were formed		Metamorphic Sedimentary igneous
Lesson 4	L.O. 23 To be able to describe in simple terms how fossils are formed.	In groups, to match up dinosaur pictures, skeletons and fossils. Look at video and slides of how fossils are formed. Talk about each stage. Look at the different examples of fossils on the google slides. Have the children ever seen a fossil? Pupils to complete zig zag (twinkl) book of how fossils are formed. Extension research fossils on chrome books	● Recognise different fossils and match to skeletons.		Fossil Pressure

Lesson 5	L.O. 24 To be able to recognise that solids are made from rocks and organic matter.	Explore the different layers of soil Look at a picture book of soil under the visualiser. Look at google slides of soil. Children to label each layer of soil on the diagram. Adapted task for HA - to describe in more detail the characteristics of each layer.	● Know that soil is formed of rocks, decayed plants and animals. ● Know in simple terms how soil is formed.		Organic Clay subsoil
Lesson 6	L.O. 24 To be able to recognise that solids are made from rocks and organic matter.	Explain that different soil has different consistency based on where the location, water, plants/trees in the area. This can affect gardening. Look at the three main kinds of soil and what they are like. Children to produce an extended piece of writing describing each type of soil. Use the factsheet to help them. LA to only discuss 3 types of soil with word banks. MA to focus on 4 types of soil in detail HA to focus on all 6 types of soil in detail.	● Recognise the different properties of clay, sandy and rocky soil.	<u>Making predictions</u> Using prior knowledge to suggest what will happen in an enquiry.	Clay Sandy Rocky
Lesson 7 New Topic	L.O 25. To be able to compare and group materials together,	What is a Solid, Liquid and gas? Put out a glass with beads in it, a glass with water in it and a glass with	● Identify solids, liquids. and gases.		

	according to whether they are solids, liquids or gases.	air in it. In groups discuss which is they think is the solid, liquid or gas. The children discuss why they have labelled them this way. Build up some definitions of what a solid, a liquid and a gas are on the board. Stick picture of group work in their book.			
Lesson 8	L.O 25. To be able to compare and group materials together, according to whether they are solids, liquids or gases.	Look at how to group together solids, liquids and gases. How do you know? Draw and label solid, liquid and gas. Explain what the particles are like. Create a list of solid, liquid and gas. Purple pen – how can something be all 3 – water, ice, steam.	Understand the properties of solids, liquids and gas and how they affect the particles.		Particles Vibration Force of attraction
Lesson 9 Double lesson	L.O 26. To be able to observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)	Lesson 9 Freezing experiment Children to plan and write up the experiment in their book and predict the outcome. Use Outstanding Science Resources.	Observe the effects of cooling a liquid. Measure the freezing point.	<u>Making predictions</u> Using prior knowledge to suggest what will happen in an enquiry.	Reversible Irreversible Freezing point
Lesson 10	L.O. 26 To be able to observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)	Lesson 10 Melting and cooling experiment. Children to observe how chocolate can be melted over 100 degrees and how it solidifies when put the bowl into icy water to see it solidify. Record their findings in their book	- Observe the effects of heating a solid, and measure the melting point. - Observe the effect when cools below this temperature.	<u>Recording data</u> Using tables, drawings and other means to note observations and measurements.	Reversible Irreversible Melting point Solidifying
Lesson 11	L.O. 26 To be able to observe that some materials change state when they are heated or cooled, and measure or research the	<u>Evaporation demonstration.</u> Observed over 5 working days. Children to observe two jars of water, one with a lid and one without. Mark each day the level the water is at on	Understand the effect of evaporation on the amount of liquid in a jar.	<u>Interpreting and communicating results</u> Using information from the data to say what you found out.	Evaporation

	temperature at which this happens in degrees Celsius (°C)	the jar. (use foil to the cover any air gaps under the lid) Children to write up the experiment in their book and write their predictions and their findings.			
Lesson 12	L.O. 27: To be able to identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	Look at the water cycle slides. Focus on the scientific process of evaporation, and condensation. Water is evaporated from the sea, it is also produced by plants. (Dew in the morning) Refer to the experiment from the previous lesson and how condensation occurred in the jar with the lid on.	To know that water is evaporated by the sea and then when condensed falls as rain.	<u>Asking questions</u> Asking questions that can be answered using a scientific enquiry.	Evaporation Condensation Cloud formation