

Y3 Rocks – Spring 1

Ladders:

I can compare different kinds of rocks based on their appearance

I can compare different kinds of rocks based on their simple physical properties

I can describe how fossils are formed

I can describe the fossils I have observed

I can describe how soils form.

I can research the different kinds of living things whose fossils are found in sedimentary rock

I can observe how rocks change over time

Week	Order of Study
1	<u>LI: I can compare different kinds of rocks based on their simple physical properties.</u> <u>LI: I can compare different kinds of rocks based on their appearance.</u> Big Question: What are rocks? Scientific enquiry: Identifying, classifying and grouping. https://www.bbc.co.uk/bitesize/topics/z9bbkqt/articles/zsgkdmn What do you already know about rocks? If you dig down anywhere on Earth you will find rock. Rocks can be hard, soft, permeable or impermeable, depending on what type of rock it is. Slate, marble, chalk and granite are all different types of rock and all have different uses. New Word Alert! permeable – allows liquids or gases to pass through impermeable – Can you predict what this means? The Earth's crust is made of rock. We can find rocks over every part of the Earth's surface, although many are covered by water or soil. Rocks are solid and made from different combinations of minerals. We use rocks in lots of different ways. They are useful building materials, and are often used in the construction of roads and buildings. We mine rocks to obtain minerals such as diamonds, as well as metals such as copper, iron and platinum. Some of you might have even mined for your own rocks on Minecraft! <u>Sorting activity:</u> You have a number of different rocks on your table. Look at them carefully. You can use magnifying glasses to look at them closer. Can you group them into different groups based on their appearance? Write the name of your two groups at the top of each column in your table and then place the rocks (or photos of rocks) in the correct column. <u>Sorting activity 2:</u> Now that you have sorted your rocks into your two chosen groups, discuss your groups with other people on your table. Have they grouped the rocks differently? Why do you think they grouped the rocks that way? Can you think of any other ways you could have grouped

	the rocks? Task. Some of you have a table that will help you to organise your rocks. Some of you will create your own table. How will you sort the rocks? Help yourself to next steps when you are ready... Under our feet is a layer of rock. This layer of rock is under every town and city, under fields and forests and even under the sea! This layer of rock is called the Earth's crust. Below the crust is the mantle. The mantle is made of rock too, but this rock is so hot that it has melted! It is called magma. It is thick and runny, like syrup. How are rocks formed? Go through the slides and discuss the 3 types of rocks – metamorphic, igneous and sedimentary. Discuss the Rock Cycle Independent Task: Look at variety of tasks.
2	LI: I can describe how fossils are formed Big Question: How are rocks formed? Start the lesson with a recap – can we remember any of the names of the rocks that we learnt about last week? Ask the children: • What do you think of when you hear the word “rock”? Are small stones or pebbles rocks? • Are boulders, rocks, stones and pebbles all made of the same things? What is under your feet right now? Under our feet is a layer of rock. This layer of rock is under every town and city, under fields and forests and even under the sea! This layer of rock is called the Earth's crust. Below the crust is the mantle. The mantle is made of rock too, but this rock is so hot that it has melted! It is called magma. It is thick and runny, like syrup. Look at the three types of rocks. Look at The Rock Cycle
3	Fossils: How are fossil made and where would we find them? https://www.bbc.co.uk/bitesize/topics/z9bbkqt/articles/zt3ntrd <u>LI: I can describe how fossils are formed.</u> <u>LI: I can research the different kinds of living things whose fossils are found in sedimentary rock.</u> Discuss the sequence with the class:

	1. An animal, such as a dinosaur, dies and falls to the bottom of a riverbed. 2. The flesh of the animal rots away or is eaten by smaller creatures, leaving only the bones (skeleton) behind. 3. Mud and sand (sediment) cover the skeleton. 4. Over many years, layers of soft mud and sand are pressed into hard rock. 5. The bones slowly wash away by little trickles of ground water, leaving open spaces (natural molds) in the exact shape of the old dinosaur bones. 6. After millions of years, tiny pieces of rock flowing in ground water fill the mold. 7. Over time, the entire skeleton mold becomes solid rock. 8. The rock surrounding the skeleton eventually rises to Earth's surface during earthquakes or the natural rising of mountains. 9. Top rock layers wear away by rain and wind, revealing the fossils. Or, palaeontologists (scientists who study fossils) dig deep down into Earth's surface to find these fossils. Research fossils https://www.dkfindout.com/uk/dinosaurs-and-prehistoric-life/fossils/ As the children research, they should fill in the answers on the 'Fossils Quiz'. PowerPoint. Watch videos and read info http://www.planet-science.com/categories/under-11s/our-world/2011/10/what-makes-fossils.aspx https://www.bbc.co.uk/bitesize/topics/z9bbkqt/articles/z2ym2p3 Look at this info http://www.oum.ox.ac.uk/thezone/fossils/intro/form.htm (could print this for children to read through together). Stages of fossil (comic strip with descriptions or cut and stick activity.) Extra info about why fossils form in sedimentary rocks: https://howtofindrocks.com/why-are-fossils-found-in-sedimentary-rocks/
4 Covered in literacy	Who was Mary Anning and what did she find that made her so famous? LI: I can describe the fossils I have observed. Research: Who was Mary Anning and what did she discover? (Covered in Literacy.) Give the children the three pictures. For each picture, they should: Describe the fossil in three words. Say what they think the animal was and what clues they had. Read info about Mary Anning. Watch video https://www.bbc.co.uk/teach/class-clips-video/ks1-ks2-mary-anning/zn7gd6f If you could ask Mary Anning anything, what would you ask her? You could do the palaeontology reading comprehension here if you wanted to. Optional: Making a fossil https://www.bbc.co.uk/cbeebies/makes/presenters-making-a-fossil
5	How is soil formed? LI: I can describe how soils form.



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<https://www.bbc.co.uk/bitesize/topics/z9bbkqt/articles/zgqkcmn>

Twinkl have a great PPT that goes through the steps of making their own soil in a plastic bottle – children could sequence this in their books using imperative verbs through literacy teaching and then gather the resources for making their own – they include worms but they could take their bottle home and add worms!

Pre-assessment will need to be carried out. Allow children time to look through their work and look over the KO.