

## Y3 ROCKS AND FOSSILS PLANNING for Rocks and fossils box

### INTRODUCTION:

This free scheme of work is intended to complement the hire of our rocks and fossils box from [www.mytopicbox.co.uk](http://www.mytopicbox.co.uk), which contains a range of exciting rare fossils to handle as well as exclusive online videos and 360 views, a whole class fossil sorting task and lots of supplementary planning. The planning is only for 4 lessons as the box already comes with at least 4 lessons of its own depending on how you use it, meaning you can easily get a half term's worth of work in total.



### HOW TO USE:

While all our topic boxes are intended to work as standalone resources without the need for additional planning, this supplementary scheme of work is a great way to reinforce pupils' learning and in fact covers most of the NC2014 content (apart from inheritance, which you can easily cover in class with a brief lesson or discussion on inherited eye colour etc.).

As such, this planning can be used before, during or after the box hire and its related activities, depending on your preference. Alternatively you can pick and choose lessons to suit your own pupils' needs. Please note however that you will need to leave a full day at least for your box activities in order to get the most from the experience.

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WK	LESSON TITLE/OBJECTIVES	LESSON PLAN / SUGGESTED ACTIVITIES (INCLC. CROSS CURRICULAR)	NOTES
1	<p><b>WHAT ARE FOSSILS AND HOW ARE THEY MADE?</b></p> <p><b>Sc3/3.1b</b> describe in simple terms how fossils are formed when things that have lived are trapped within rock</p> <p><i>Pupils will learn ..</i> How fossils are formed</p> <p>What the fossil record is</p>	<p><b>INTRODUCTION:</b></p> <ul style="list-style-type: none"> <li>Learn how fossils are made using our powerpoint presentation of the same name (also lots of good youtube videos available that are child friendly or see BBC link in notes)</li> </ul> <p><b>SUGGESTED MAIN ACTIVITIES:</b></p> <ol style="list-style-type: none"> <li>Use the lesson resource 'FOSSILS PICTURE PACK.PDF' to play a matching game – can pupils match the fossils? (Can also be used on whiteboard at front of class)</li> <li>Ask pupils to draw a cartoon sequence of a fossil forming (links to Literacy instructions text) from dying to being dug up</li> <li><b>ART ACTIVITY:</b> Make plaster casts to make 'fossils' of everyday objects - use damp sand to make an impression then fill it with plaster to make a cast. Display these in the classroom on a bed of sand, titled 'future fossils?'. This is a good opportunity to discuss how materials degrade. For example, plastic can take thousands of years to rot away, so how would this affect future fossils of our modern life? Would there be more modern materials left behind?</li> <li><b>HOMEWORK SUGGESTION:</b> research how the way the fossil record is layered creates an ongoing chronological record of the changes in living things over time – draw a diagram of a cross section of a cliff with the fossils changing as it goes higher through the layers</li> <li>Wordsearch – use the supplied 'how fossils are formed.pdf' wordsearch from our y6 evolution wordsearch pack</li> </ol> <p><b>PLENARY:</b> Ask pupils what fossils will be left behind in the future – will it be different than the current fossil record? Give reasons for their answers.</p>	<p><b>LESSON RESOURCES, AVAILABLE FROM OUR WEBSITE:</b></p> <p>Lesson 1 'How fossils are made' powerpoint fossils picture pack.pdf how fossils are formed wordsearch (available as a full wordsearch pack on website)</p> <p><b>EXTERNAL RESOURCES:</b> Types of rocks link (optional): <a href="http://www.kidsloverocks.com/html/types_of_rocks.html">http://www.kidsloverocks.com/html/types_of_rocks.html</a> BBC fossils page: <a href="http://www.bbc.co.uk/nature/fossils">http://www.bbc.co.uk/nature/fossils</a></p>

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2	<p><b>MARY ANNING: the unsung hero of fossil collecting (also revisited in y6 evolution topic but increasingly popular in y3)</b></p> <p><b>AS PER LAST LESSON .. Sc3/3.1b describe in simple terms how fossils are formed when things that have lived are trapped within rock</b></p> <p><i>Pupils will learn ..</i> Who Mary Anning was and what she did</p> <p>Why her work was so important to our understanding of evolution</p>	<p><b>INTRODUCTION:</b></p> <ul style="list-style-type: none"> <li>Allow pupils to research Mary Anning on the internet, or use our Lesson 2: Mary Anning powerpoint to introduce her</li> </ul> <p><b>SUGGESTED MAIN ACTIVITIES:</b></p> <ol style="list-style-type: none"> <li><b>DESIGN A PERSUASIVE POSTER:</b> (INSTRUCTIONS TO PUPILS CONTAINED IN POWERPOINT) ask pupils to design a poster using persuasive language, to encourage people to visit Mary's stall</li> <li><b>CARTOON STRIP:</b> Draw a cartoon strip of Mary's life, using either the powerpoint or other information gathered (the BBC has a really good section, in notes)</li> <li><b>WRITE AN INSTRUCTION TEXT:</b> work as a group to plan a set of instructions for uncovering a fossils from the ground. Discuss what you would need to include e.g. take care to uncover it gradually; don't use hammers when you get close to the fossil; log down exactly the position of every piece and where it was found. Then write the instructions independently and come back to compare the versions.</li> <li><b>GEOGRAPHY/ICT:</b> Find Lyme regis on the map and see where it is along the 'Jurassic Coast' heritage site. Find out why the coast is called this and draw it on a map of Britain. The website <a href="http://jurassiccoast.org">http://jurassiccoast.org</a> has some good information on this.</li> <li><b>WORDSEARCH:</b> use the supplied Mary Anning pdf wordsearch from our y6 evolution wordsearch pack</li> </ol> <p><b>PLENARY:</b> Work through the Mary Anning quiz at the end of the powerpoint.</p>	<p><b>LESSON RESOURCES, AVAILABLE FROM OUR WEBSITE:</b> Mary Anning lesson 2 powerpoint Mary Anning wordsearch</p> <p><b>EXTERNAL RESOURCES:</b> BBC Mary Anning page - <a href="http://www.bbc.co.uk/schools/primaryhistory/famouspeople/mary_anning/">http://www.bbc.co.uk/schools/primaryhistory/famouspeople/mary_anning/</a>  <a href="http://jurassiccoast.org">http://jurassiccoast.org</a></p>

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<p>Please note that this lesson is designed to work in conjunction with the practical activity of sorting rocks using the equipment in our topic box, which contains a variety of mineral samples for pupils to investigate.</p>			
3	<p><b>ROCKS AND MINERALS INVESTIGATION</b></p> <p><b>Sc3/3.1c</b> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p><i>Pupils will learn ..</i> - About the three different types of rock, GNEOUS, SEDIMENTARY and METAMORPHIC and how they are formed - how to identify different types of rocks and minerals</p>	<p><b>INTRODUCTION:</b></p> <ul style="list-style-type: none"> <li>Do the topic box rock sorting task either before or after this lesson</li> <li>Watch the BBC bitesize video ‘what is a rock?’ which describes the three types of rock, IGNEOUS, SEDIMENTARY and METAMORPHIC</li> </ul> <p><b>SUGGESTED MAIN ACTIVITIES:</b></p> <ol style="list-style-type: none"> <li><b>IN THE TOPIC BOX:</b> Box mineral sorting task, where pupils examine minerals with magnifying glasses and sort them according to their properties</li> <li><b>ICT:</b> research the meanings of the three rock types and complete the ‘Lesson 3 Rock Types Research Sheet.pdf’ from our website</li> <li><b>GEOGRAPHY/ICT:</b> research which rock types come from different countries/regions/parts of a country e.g. sedimentary closer to the sea, igneous from volcanoes</li> <li><b>ART:</b> Do a drawing of the rock cycle, from sedimentary through to metamorphic to igneous (or vice-versa, it works all ways!)</li> <li><b>ICT:</b> make a powerpoint presentation about the three types of rock</li> </ol> <p><b>PLENARY:</b> Can pupils give a description or presentation of the three different types of rock?</p>	<p><b>LESSON RESOURCES, AVAILABLE FROM OUR WEBSITE:</b> Lesson 3 Rock Types Research Sheet.pdf</p> <p><b>EXTERNAL RESOURCES:</b> BBC bitesize ‘what is a rock?’: <a href="https://www.bbc.co.uk/bitesize/articles/zsgkdmn">https://www.bbc.co.uk/bitesize/articles/zsgkdmn</a></p>

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4	<p><b>SOIL INVESTIGATION</b></p> <p><b>Sc3/3.1c</b></p> <p><b>Recognise that soils are made from rocks and organic matter.</b></p> <p><i>Pupils will learn ..</i></p> <p>That soils are made from rocks and organic matter</p> <p>Which soil is best to grow plants in</p>	<p><b>INTRODUCTION:</b></p> <ul style="list-style-type: none"> <li>Watch the BBC bitesize ' what is soil made from?' <a href="https://www.bbc.co.uk/bitesize/articles/ztvbk2p">https://www.bbc.co.uk/bitesize/articles/ztvbk2p</a> and complete the two short activities on the same page</li> <li>Emphasise how soil is made like a cake of different components and layers and come in different types such as SANDY (large particles, dries quickly), CLAY (small particles, dries slowly), CHALKY (light brown, drains quickly) and PEAT (just decaying plants, no rock)</li> </ul> <p><b>SUGGESTED MAIN ACTIVITIES:</b></p> <ol style="list-style-type: none"> <li><b>SOIL INVESTIGATION 1 – ‘Which is the best soil to grow plants in?’:</b> (equipment: 3 types of soil, e.g. SANDY, CLAY, PEAT – NOTE, these can easily be prepared beforehand by mixing amounts of art clay or sand to some standard peat-based garden compost) 3 funnels, 3 beakers, a measuring jug, water, stopwatch. <b>METHOD:</b> Discuss how soil for plants needs to be not too thick (which will drown plants) or not too porous (which will dry them out), leading to the following investigation: a) put three samples of soil into different funnels above a beaker b) pour the same amount of water in each c) time how long it takes for the water to pass through. Finally, discuss the outcome, which should be that the compost is the best.</li> <li><b>SOIL INVESTIGATION 2 – ‘What is soil made from?’:</b> (equipment needed per group, container to collect soil, trowel or spoons to gather it, tray or similar to tip it out in class, magnifying glasses). <b>METHOD:</b> Tell pupils to go into the school grounds to gather two or three different soil samples from different areas (or provide it yourself). Ask them to look at the soil through magnifying glasses until they can separate different parts, such as grass, wood, creatures, leaf material. Encourage them to come up with their own categories.</li> </ol> <p><b>PLENARY:</b></p> <p>Feedback from one of the tasks</p>	<p><b>EXTERNAL RESOURCES:</b></p> <p>BBC bitesize ' what is soil made from?' <a href="https://www.bbc.co.uk/bitesize/articles/ztvbk2p">https://www.bbc.co.uk/bitesize/articles/ztvbk2p</a></p>