Beech Hill Primary School Knowledge Organiser

Topic:	Year group	Term
Fossils	3	Spring

Background knowledge

A fossil is described as the remains or trace of a living thing that lived a long time ago. Fossils have led scientists to discover important information about living things from the past, such as dinosaurs. Children should understand that fossils are usually formed from the shells or bones of living things, but can also be formed from animal tracks and footprints. Children should be given opportunities to observe replicas of fossils, as well as pictures, to allow them to group fossils and describe their features. Additionally, children could suggest what animals and plants in the past may have looked like and compare this to modern-day animals and plants.

Children should understand that after an animal dies, the soft parts of the animal's body break down, leaving behind the hard parts, such as the skeleton and teeth. The hard parts become buried by sediment. Sediment contains soil, sand, gravel and small pieces of rock. Over time, many layers of sediment build up on top of the skeleton, which leads to a lot of pressure. Eventually, sediment surrounding the skeleton begins to compact and turn to rock. Water seeps into the rock, causing the bones to break down and be replaced by minerals in the water. This leads to the formation of a fossil, which is a rock replica of the original bones or teeth.

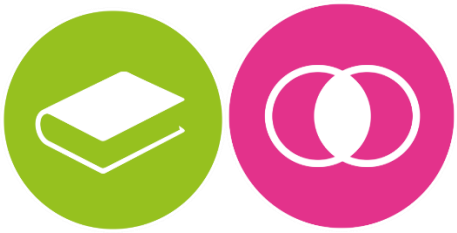
Common misconceptions

- Children may think that fossilisation always occurs when an animal or plant dies. Explain that it is a very rare process that only happens under certain conditions.
- Children may think that only the remains of animals can become fossils.
- Children may think that a fossil can be formed in a short period of time. Explain that it takes thousands of years for a fossil to form.

What should I already know?

I can distinguish between an object and the material it is made from.
I can explain the materials an object is made from.
I can name wood, plastic, glass, metal, water and rock.
I can describe the properties of everyday materials. (hard, soft, stretchy, stiff, shiny, dull, rough, smooth etc.)

I can group objects based on the materials they are made from. (year 1 materials)

National Curriculum Objectives / Key Skills	The Journey
• Describe in simple terms how fossils are formed when things that have lived are trapped within rock. **<u>Working scientifically</u>** Asking relevant questions and using different types of scientific enquiries to answer them. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. **<u>Scientific enquiry</u>** 	1. Explore fossils 2. Fossil formation

Outcomes
Working towards: Can identify a fossil but needs support to describe how it is formed or understand that something once lived. Expected: Describe in simple terms how fossils are formed when things that have lived are trapped within rock.

Exceeding: Describe in simple terms how fossils are formed when things that have lived are trapped within rock and give examples.

Key Vocabulary	Timeline / Diagrams
Fossil – the remains or trace of a living thing that lived a long time ago Rock – a natural material found on or underneath the Earth's crust Skeleton – a collection of bones Shell – a hard covering on the outside of an animal's body Fossilisation – the process through which a fossil is formed Sediment – small pieces of soil, gravel, sand and small rocks	  

Key people / places
STEM jobs; geologist

Assessment questions / outcomes
• What is a fossil? • What could this animal have looked like? • What could this plant have looked like? • Which parts of an animal usually turn into a fossil? • How long does it take for a fossil to form? • Why are fossils useful for scientists? • What is fossilisation? • What is sediment? • What are the key stages of fossilisation? • What conditions are needed for fossilisation to occur? • How has this animal turned into a fossil? • How long does fossilisation take?