





Science Focus:	Uses of everyday materials	Year 2	Spring 1st & 2nd Half-Term
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What? (Key Knowledge)	
Properties of Materials	
Wood	Hard, strong, stiff
Plastic	Strong, shiny, bendy
Glass	Transparent, smooth, stiff
Metal	Hard, strong, shiny
Water	Runny, wet, clear
Rock	Hard, strong
Uses of common materials	
Wood can be used for:	Doors, tables
Plastic can be used for:	Pens, rulers
Glass can be used for:	Windows, glasses
Metal can be used for:	Cars, coins
Rock can be used for:	Garden walls, old buildings
Brick can be used for:	Houses, walls
Paper can be used for:	School books, wrapping paper
Card can be used for:	Folders, birthday cards
Different materials for the same thing	
Some objects can be made from various materials	For example, a spoon can be made from: plastic, wood or metal.
Changing the shape of materials	
Squashing	Crush something so that it becomes flat, soft, or out of shape
Bending	Changing a straight object so that it is curved.
Twisting	Change the shape of an object by turning it.
Stretching	Made longer or wider without tearing or breaking
People we need to know	
John Dunlop	<ul style="list-style-type: none"> Born in 1840 An expert in rubber Invented the first inflatable tyre
Charles Macintosh	<ul style="list-style-type: none"> Born in 1766 Invented the first waterproof fabric The 'mac' raincoat is named after him
John McAdam	<ul style="list-style-type: none"> Born in 1756 He invented building roads with a smooth, hard surface.

What? (Key Vocabulary)	
Spelling	Definition/Sentence
Various	Lots of different kinds
Rubber	A tough material that can be shaped
Inflatable	Can be filled with air
Fabric	Cloth produced by weaving or knitting




Diagrams and Symbols	
Squashing	
	
Bending	
	
Twisting	
	
Stretching	
	

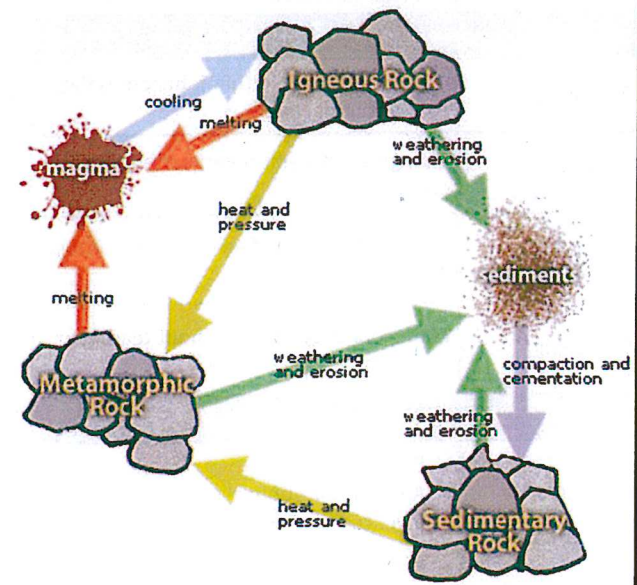
Possible Experiences
<ul style="list-style-type: none"> Spot and group the materials you see on the way to school Find an object in your house that exists in three or more different material forms Find an object that is made from more than three materials

Science Focus:	Rocks	Year 3	Spring 1
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What? (Key Knowledge)	
Types of Rocks	
There are three main types of rock	<ul style="list-style-type: none"> Sedimentary Metamorphic Igneous
Sedimentary	Sedimentary rocks are formed from particles of sand, shells, pebbles, and other fragments of material. Together, all these particles are called sediment. Gradually, the sediment accumulates into layers and over a long period of time hardens into rock.
Metamorphic	Metamorphic rocks are formed under the surface of the earth from the metamorphosis (change) that occurs due to intense heat and pressure (squeezing).
Igneous	Igneous rock is formed when magma cools and solidifies, it may do this above or below the Earth's surface.
How to spot each type of rock	
Sedimentary	<ul style="list-style-type: none"> Usually crumbly and allow water through them Made of layers and stuck together with mineral crystals They can contain fossils within their layers
Metamorphic	<ul style="list-style-type: none"> Usually hard May contain tiny crystals or fossils
Igneous	<ul style="list-style-type: none"> Very hard Contain crystals
How fossils are formed	
How are fossils formed?	<ul style="list-style-type: none"> An animal dies, its skeleton settles on the sea floor and is buried by sediment. The sediment surrounding the skeleton thickens and begins to turn to stone. The skeleton dissolves and a mould is formed. Minerals crystallise inside the mould and a cast is formed. The fossil is exposed on the Earth's surface.
How is soil made	
What is soil made from?	<ul style="list-style-type: none"> Minerals (small stone fragments: clay, silt or sand) Organic Matter (decaying plants and animals) Water (which the nutrients in the minerals and the organic matter dissolve into) Air (which fills the gaps between the mineral and organic matter parts).
Types of soil	<p>Sandy soil is pale in colour with lots of small air gaps. Water drains through sandy soil easily so it usually feels quite dry.</p> <p>Clay soil is an orange or blue-ish sticky soil with very few air gaps. Water does not drain through it easily. When it rains, puddles stay on top of clay soil for a long time.</p> <p>Chalky soil is a light brown soil. Water drains through it quickly.</p> <p>Peat is different from other soils because it does not contain any rock particles. It is made from very old decayed plants and is dark, crumbly and rich in nutrients (chemicals plants need to grow).</p>

What? (Key Vocabulary)	
Spelling	Definition/Sentence
Erosion	The gradual wearing away of something.
Magma	Hot fluid below or within the earth's crust from which lava and other igneous rock is formed on cooling.
Tectonic plates	A layer under the ground made up of large, moving pieces called plates. All of Earth's land and water sit on these plates.
Solidify	To become solid or hard.
Dissolve	To become part of a liquid

Diagrams and Symbols		
		
Sedimentary	Metamorphic	Igneous

The Rock Cycle


Possible Experiences
<ul style="list-style-type: none"> Trips to Clent to hunt for different rock types. (Small groups by minibus) Make your own rock. (Crayon rocks) How to erode rocks experiment.