

Year 2/3 Knowledge Organiser Science – Raw and Synthetic Materials

Vocabulary

1	material	A material is any substance that has a name.
2	raw material	A material that is found in nature and that has not been changed by humans.
3	synthetic material	A material that has been made by a human
4	properties	The features of a material that could make it suitable or unsuitable to be used in a particular object.
5	function	The use for which an object has been designed.
6	recycling	The process of collecting and reusing materials to make new synthetic materials.
7	malleable	Where a material can be hammered or pressed into shape without breaking or cracking.
8	durable	Where a material can withstand wear, pressure, or damage; hard-wearing
9	flexible	Where a material can bend easily without breaking.
10	sustainable	To live in a way that means humans will have enough materials to live in the future

Raw Materials from underground

Coal and Oil	Used as fuel for vehicles
Sand and clay	To make ornaments or for building
Copper and iron	Used to make hard objects

Raw Materials from living things

Plants	Rubber – tyres, balloons, shoe soles Wood – Hard objects and as fuel Cotton – For clothes, towels and sheets
Animals	Wool - To make cloth Leather – For clothing, footwear and bags Silk – To make clothing and decorations

Synthetic Materials

Plastic made from oil	Used as fuel for vehicles	Glass made from sand	Used to make hard objects
Paper made from wood	For writing or packaging	Brick made from clay	Strong, see-through objects

How to make synthetic materials - examples

To make glass: <ol style="list-style-type: none"> 1. Sand can be mixed with some other materials. 2. The mixture is heated until it gets very hot and becomes liquid 3. The liquid glass is pushed or knocked into the right shape 4. The liquid cools down to become solid glass 	To make paper: <ol style="list-style-type: none"> 1. Trees are cut down and tripped of their bark 2. The trees are chopped up into wood chips 3. Wood chips are boiled with water to make a paste 4. The paste is squeezed and flattened to remove water 5. The flattened paste is dried and cut to make paper
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Recycling – the process of collecting and reusing materials to make new synthetic materials

It is important to recycle for 3 reasons:

1. Raw materials will eventually run out
2. Collecting raw materials can destroy natural habitats
3. Throwing away materials fills up landfill sites

Live Sustainably by:

1. Recycling as many materials as we can
2. Only throwing away biodegradable materials
3. Using less fossil fuels by using less electricity, use motorised transport less and buy food grown locally