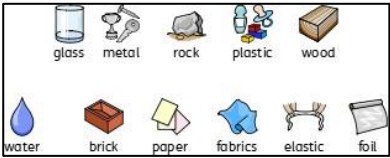


Year 2 – Uses of everyday materials	Main Outcomes: <ul style="list-style-type: none"> Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 	Focus: Science - physics
--------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------

What should I already know?	<table border="1"> <thead> <tr> <th style="background-color: yellow;">Vocabulary</th> <th style="background-color: yellow;">Meaning</th> </tr> </thead> <tbody> <tr><td>absorbent</td><td>soaks up liquid easily</td></tr> <tr><td>bendy/flexible</td><td>an object that bends/ flexes easily into a curved shape</td></tr> <tr><td>blunt</td><td>not sharp</td></tr> <tr><td>brick</td><td>rectangular blocks of baked clay used for building walls, which are usually red or brown</td></tr> <tr><td>brittle</td><td>fragile; easily broken</td></tr> <tr><td>dull</td><td>a colour or light that is not bright</td></tr> <tr><td>elastic</td><td>a rubber material that stretches when you pull it and returns to its original size and shape when you let it go</td></tr> <tr><td>fabrics</td><td>cloth or other material produced by weaving together cotton, wool or other threads.</td></tr> <tr><td>foil</td><td>sheets of metal as thin as paper</td></tr> <tr><td>glass</td><td>a hard transparent material</td></tr> <tr><td>magnetic</td><td>capable of being magnetised or attracted by a magnet</td></tr> <tr><td>man-made</td><td>things that are created by people</td></tr> <tr><td>material</td><td>the substance of which a thing is made</td></tr> <tr><td>metal</td><td>a hard substance such as iron, steel, gold, or lead</td></tr> <tr><td>natural</td><td>things that exist in nature and are not made by people</td></tr> <tr><td>opaque</td><td>if an object or substance is opaque, you cannot see through it</td></tr> <tr><td>plastic</td><td>a material which is light in weight and does not break easily</td></tr> <tr><td>properties</td><td>how a material behaves (its qualities)</td></tr> <tr><td>rock</td><td>the hard substance which the Earth is made of</td></tr> <tr><td>rough</td><td>uneven and not smooth</td></tr> <tr><td>sharp</td><td>having a fine point</td></tr> <tr><td>shiny</td><td>bright or glossy in appearance</td></tr> <tr><td>stiff/hard/ tough/rigid</td><td>difficult or impossible to bend, stretch or flex; firm to the touch; strong</td></tr> <tr><td>stretchy</td><td>an object that stretches easily</td></tr> <tr><td>transparent</td><td>easily seen through</td></tr> <tr><td>waterproof</td><td>material that does not soak up water</td></tr> </tbody> </table>	Vocabulary	Meaning	absorbent	soaks up liquid easily	bendy/flexible	an object that bends/ flexes easily into a curved shape	blunt	not sharp	brick	rectangular blocks of baked clay used for building walls, which are usually red or brown	brittle	fragile; easily broken	dull	a colour or light that is not bright	elastic	a rubber material that stretches when you pull it and returns to its original size and shape when you let it go	fabrics	cloth or other material produced by weaving together cotton, wool or other threads.	foil	sheets of metal as thin as paper	glass	a hard transparent material	magnetic	capable of being magnetised or attracted by a magnet	man-made	things that are created by people	material	the substance of which a thing is made	metal	a hard substance such as iron, steel, gold, or lead	natural	things that exist in nature and are not made by people	opaque	if an object or substance is opaque , you cannot see through it	plastic	a material which is light in weight and does not break easily	properties	how a material behaves (its qualities)	rock	the hard substance which the Earth is made of	rough	uneven and not smooth	sharp	having a fine point	shiny	bright or glossy in appearance	stiff/hard/ tough/rigid	difficult or impossible to bend, stretch or flex; firm to the touch; strong	stretchy	an object that stretches easily	transparent	easily seen through	waterproof	material that does not soak up water
Vocabulary		Meaning																																																					
absorbent	soaks up liquid easily																																																						
bendy/flexible	an object that bends/ flexes easily into a curved shape																																																						
blunt	not sharp																																																						
brick	rectangular blocks of baked clay used for building walls, which are usually red or brown																																																						
brittle	fragile; easily broken																																																						
dull	a colour or light that is not bright																																																						
elastic	a rubber material that stretches when you pull it and returns to its original size and shape when you let it go																																																						
fabrics	cloth or other material produced by weaving together cotton, wool or other threads.																																																						
foil	sheets of metal as thin as paper																																																						
glass	a hard transparent material																																																						
magnetic	capable of being magnetised or attracted by a magnet																																																						
man-made	things that are created by people																																																						
material	the substance of which a thing is made																																																						
metal	a hard substance such as iron, steel, gold, or lead																																																						
natural	things that exist in nature and are not made by people																																																						
opaque	if an object or substance is opaque , you cannot see through it																																																						
plastic	a material which is light in weight and does not break easily																																																						
properties	how a material behaves (its qualities)																																																						
rock	the hard substance which the Earth is made of																																																						
rough	uneven and not smooth																																																						
sharp	having a fine point																																																						
shiny	bright or glossy in appearance																																																						
stiff/hard/ tough/rigid	difficult or impossible to bend, stretch or flex; firm to the touch; strong																																																						
stretchy	an object that stretches easily																																																						
transparent	easily seen through																																																						
waterproof	material that does not soak up water																																																						
<ul style="list-style-type: none"> The difference between an object and the material it is made from. The names of different materials including; wood, plastic, glass, metal and rock. The basic physical properties of different materials. To compare and group materials based on these properties. 																																																							
What I will do																																																							
<p>I will have weekly or blocked science lessons. In lessons, I will be taught a skill and I will gain knowledge and understanding through the process of scientific enquiry (observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources).</p> <p><u>Possible lines of enquiry</u></p> <ul style="list-style-type: none"> Compare the uses of everyday materials in and around the school with materials found in other places (at home, the journey to school, on visits, and in stories, rhymes and songs). Become familiar with how some materials are used for more than one thing (metal can be used for coins, cans, cars and table legs; wood can be used for matches, floors, and telegraph poles) or different materials are used for the same thing (spoons can be made from plastic, wood, metal, but not normally, from glass). Observe closely, identifying and classifying the uses of different materials. Record observations. Find out about people who have developed useful new materials, for example John Dunlop, Charles Macintosh or John McAdam. 																																																							
Resources																																																							
<p>Hamilton Science planning: Everyday Materials (all planning also saved on SharePoint). https://www.hamilton-trust.org.uk/science/year-2-science/everyday-materials-materials-matter/ https://www.hamilton-trust.org.uk/science/year-2-science/everyday-materials-squash-bend-twist-stretch/</p>																																																							

Knowledge to understand		Skills to learn	
<p>Which materials are some objects made from?</p> <p>(recap)</p>	<p>Objects are things that you can see or touch. They are made from different materials.</p> 	<ul style="list-style-type: none"> ➤ asking simple questions and recognising that they can be answered in different ways ➤ observing closely, using simple equipment ➤ performing simple tests ➤ identifying and classifying ➤ using their observations and ideas to suggest answers to questions ➤ gathering and recording data to help in answering questions ➤ drawing diagrams to explain something 	
<p>What words can I use to describe materials?</p> <p>(recap)</p>	<p>Materials have different properties. Properties describe how a material behaves (its qualities).</p> <p>bendy, stretchy, flexible, stiff, hard, bright, shiny, dull, rough, bumpy, flat, smooth, soft, tough, strong, brittle, sharp, blunt, transparent, opaque, waterproof, absorbent, magnetic, non-magnetic.</p>	<p>Cross-curricular (maths)</p> <ul style="list-style-type: none"> ➤ comparing, describing and solving practical problems for lengths and heights (including using hoops as Venn diagrams for sorting) ➤ measuring and beginning to record lengths and heights ➤ begin to construct simple pictograms, tally charts, block diagrams and tables 	
<p>What properties make the material suitable for their use?</p>	<p>Which material would you use to make a teapot? <i>Hint: it has to be able to withstand heat.</i></p> <p>Which material would you use to make a window? <i>Hint: You have to be able to see through it.</i></p> <p>Which material would you use to make a chair? <i>Hint: it has to hold a person's weight</i></p> <p>Which material would you use to make a cloth? <i>Hint: it has to absorb water</i></p> <p>Can you make a material waterproof? <i>Hint: wax (crayons)</i></p>	<h3 style="background-color: yellow;">Equipment to become familiar with</h3> <p>Magnets</p> <p>Pasteur pipettes/syringes (for dropping water onto materials to test for absorbency)</p> <p>Beakers</p> <p>Timers/stopwatches</p> <p>Rulers to measure to the nearest cm/mm (with support)</p>	
<p>What solid objects can be bent, squashed, stretched or twisted?</p>	<p>Ruler String Playdough Pencil Elastic band Tissue</p> <p>What is a prediction? What is a conclusion? Did they match?</p>		

Evidence of Learning	How will I know what I've learnt?
<p>Science books Photos Videos Pupil conferencing Teaching and learning observations Learning walks Data analysis</p>	<p>See KS1 teacher assessment exemplification for science https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/763062/2018_key_stage_1_teacher_assessment_exemplification_science.pdf</p> <p>See also Hamilton Science_Assessment_Y2 (saved in planning folder on Sharepoint).</p> <p>KS1 science quizzes: https://gcequiz.com/quiz/ks1-science-quizzes https://www.woodendprimaryschool.com/year-2/</p>