

# Brough Primary School – Curriculum Intention

## Plan 2024 - 2025



Subject: Science Year Group: Year 2		Area of learning: Uses of Everyday Materials
Links to previous work/Remember when	<ul style="list-style-type: none"> <li>Children will have sorted materials based on their properties.</li> <li>Children have spent time sorting and classifying materials.</li> <li>Children will know a little about solids, liquids and gases and the difference between man-made and natural materials.</li> <li>Children will also have done some limited classification based on the uses of materials.</li> </ul> <p><u>Working Scientifically</u></p> <ul style="list-style-type: none"> <li>asking simple questions and recognising that they can be answered in different ways.</li> <li>observing closely, using simple equipment</li> <li>performing simple tests</li> <li>identifying and classifying</li> <li>using their observations and ideas to suggest answers to questions</li> <li>gathering and recording data to help in answering questions.</li> </ul>	
Term	Year 2	Key Skills to be taught
<b>Summer 1</b>  What the children should know at the end of this series of lessons		<ul style="list-style-type: none"> <li>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li> </ul> <p><u>Working Scientifically</u></p> <ul style="list-style-type: none"> <li>Asking simple questions and recognising that they can be answered in different ways</li> <li>Observing closely, using simple equipment</li> <li>Performing simple tests</li> <li>Identifying and classifying</li> <li>Using their observations and ideas to suggest answers to questions</li> <li>Gathering and recording data to help in answering questions</li> </ul>

### Vocabulary

Shape, changed, twist/twisting, squash/squashing, bend/bending, stretch/stretching, material, properties, material, properties, suitability, object, use, wood, metal, plastic, brick, rock, paper, cardboard, glass, fabric, change, hard, soft, shiny, dull, bendy, stretchy, strong, tough, breakable, squash, bend, twist, stretch, material, suitable, suitability, properties, rough, smooth, stiff, flexible, rigid, brittle, waterproof, transparent, opaque, translucent.

Sequence of learning	Learning objectives/outcomes	Suggested lesson outline
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1	<p><b>Learning Objective:</b> To identify materials and their uses.</p> <p><b>Key Knowledge:</b> An object is a material that can be seen and touched. A material is what an object is made of. Materials can be used in different ways. They need to be suitable for what they will be used for.</p> <p><b>Working scientifically</b></p> <ul style="list-style-type: none"> <li>• Observing closely, using simple equipment</li> <li>• Using their observations and ideas to suggest answers to questions</li> <li>• Gathering and recording data to help in answering questions</li> </ul>	<p><b>Recap:</b> Show the children some pictures of everyday materials or real life objects and ask them to name the material – different to the object. Repeat, but this time ask the children to describe the properties of the materials.</p> <p><b>Materials and their uses</b> Today we are going to investigate whether some materials are more suitable for objects outside compared to those inside. Which materials might you find outside? Which materials might you find inside? Are there any materials that you think might be used inside and outside? The suitability of a material describes whether a material is the right choice for a specific use. This depends on the properties of the material. Q – After walk around – discuss if cardboard would be a good material to make an outside bench from. Why?</p> <p><i>Children take a walk around inside and outside, listed the names of materials they have found and what object they are being used for.</i></p>
2	<p><b>Learning Objective:</b> To identify materials and describe their properties.</p> <p><b>Key Knowledge:</b> The properties describe what a material is like. We use properties of materials to help us decide which material to use for different objects.</p> <p><b>Working scientifically</b></p> <ul style="list-style-type: none"> <li>• Identifying and classifying</li> <li>• Using their observations and ideas to suggest answers to questions</li> </ul>	<p><b>Recap:</b> Show the children some different materials and ask them to list how many uses they can think of for each material.</p> <p><b>Material properties</b> Today we consider how the properties of materials are used by designers to select the most appropriate material. First consider how much light is let through materials. Then look at three different objects and list the properties of the material used as well as which properties are needed.</p> <p><i>Children carry out a mini investigation to decide if a selection of materials are</i></p>

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		<i>transparent, translucent or opaque. Children identify three objects, what the properties of the material are and what is needed (not all properties of a material are required for any given material)</i>
3	<p><b>Learning Objective:</b> To test materials and identify how they can be changed.</p> <p><b>Key Knowledge:</b> Many materials can be changed by squashing, bending, twisting and stretching. Some of those changes can then be reversed but not all.</p> <p><b>Working scientifically</b></p> <ul style="list-style-type: none"> <li>• Asking simple questions and recognising that they can be answered in different ways</li> <li>• Observing closely, using simple equipment</li> <li>• Performing simple tests</li> <li>• Using their observations and ideas to suggest answers to questions</li> <li>• Gathering and recording data to help in answering questions</li> </ul>	<p><b>Recap:</b> Show the children a number of different objects made from plastic and ask the children to say what properties are the same and which are different in terms of the uses of the plastic in each object.</p> <p><b>Changing materials by squashing, bending, twisting and stretching</b> Given a range of objects made from everyday materials, we will be planning, carrying out and recording an investigation into squashing, bending, twisting and stretching materials. The prediction, planning and question identification will all be done orally.</p> <p><i>Children carry out and record their findings about the simple investigation. They then take part in a discussion to answer questions like 'How did the objects change?' and 'Can you spot any patterns between how the objects change shape and the materials they are made from?'</i></p>
4	<p><b>Learning Objective:</b> To test and find out about the suitability of materials.</p> <p><b>Key Knowledge:</b> The suitability of materials describes whether a material is the right choice for a specific use, depending on its properties. Charles Macintosh was a scientist who invented waterproof fabric.</p> <p><b>Working scientifically</b></p>	<p><b>Recap:</b> In our last lesson we looked at materials that could be changed. Did you find any material that was squashy? Bending? Twisted? Stretched?</p> <p><b>Suitability of materials</b> Today, you will be carrying out a <b>comparative test</b> to find out what material is most suitable for a specific use.</p> <p>Just like Charles Macintosh, you</p>

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	<ul style="list-style-type: none"> <li>• Asking simple questions and recognising that they can be answered in different ways</li> <li>• Observing closely, using simple equipment</li> <li>• Performing simple tests</li> <li>• Using their observations and ideas to suggest answers to questions</li> <li>• Gathering and recording data to help in answering questions</li> </ul>	<p>will need to identify the properties that the material should have and test for them.</p> <p><i>Children select an object and the properties they are testing, they will then need to decide how to test for those properties. They can either test for properties that the material must have to make it suitable for its use or for properties that would make it unsuitable for its use. Children complete a simple investigation plan and record what is suitable and what is unsuitable for their object.</i></p>
5	<p><b>Learning Objective:</b> To demonstrate what has been learnt about the use of materials.</p>	<p><b>ASSESSMENT LESSON</b></p> <p>Children will complete an assessment task, which could be summative, or it could be a quiz which draws on the knowledge learnt.</p>

### Learning Outcome/product

Children will know some materials are used for more than one thing. For example, metal is used to make bridges, coins and cans. They will also know some objects can be made from more than one material – such as a spoon can be made from wood, plastic and metal. Some materials can change shape when you squash, bend, twist or stretch them. Materials that are soft, bendy or stretchy are often easier to change the shape of than materials that are hard, rigid or strong.

<b>Assessment records</b>	<b>List only those children who have not achieved the expected outcomes.</b>
	Assessment data should be entered onto Insight in line with the assessment timetable.