

Previous Knowledge

In Year One the children have described the simple properties of materials like hard, soft, stretchy, rough, smooth, shiny, dull, bendy, not bendy, opaque and transparent when thinking about the materials that were used to build the three little pigs houses. They have tested materials to see which is the most waterproof.

Project Hook or ‘Wow’ memory

Create artwork by exploring the textures of materials .

The key skills we want pupils to use during this topic:

Ask simple questions and recognise that they can be answered in different ways.

Observe closely using simple equipment.

Perform simple tests. Identify and classify.

Use observations and ideas to suggest answers to simple questions.

Gather and record data to help in answering questions.

Key vocabulary

Material	What objects are made from.
Suitability	Suitability means having the properties which are right for a specific purpose.
Property	This is what a material is like and how it behaves (soft, stretchy, waterproof)
Transparent	A material that allows light to pass through it so that objects can be seen clearly.
Opaque	A material which blocks light passing through it.
Absorbent	A material that is able to soak up a liquid easily.
Flexible	A material that is able to bend easily without breaking
Stiff	A material that is not bent easily or changed in shape.
Twist	To turn something repeatedly.

Learning Steps	Key Knowledge (answers)
What are everyday materials used for? Why? (Identify and classify)	To be able to name objects made from wood, metal, plastic, glass, brick, rock, paper and cardboard. Explain why they are used for these things by naming the properties of the materials.
Why are everyday materials used for specific things? (Identify and classify)	Everyday materials are used for their properties of being: hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, not bendy, absorbent, not absorbent, waterproof, not waterproof, transparent and opaque. Explain why some materials are made from more than one material based on what they are used for e.g. rulers—plastic, metal of wooden, spoons—plastic, metal or wooden etc.
Which materials change shape when bending, squashing, twisting or stretching? (Comparative testing)	To be able to name some objects/materials that change shape when twisted, squashed, bent and stretched. Explain the properties of the materials that change shape and the properties of materials that do not change shape.
Which material is the best for blowing noses? Testing strength and absorbency of materials. (Comparative testing)	To be able to conduct a comparative test to find out the absorbency and strength of a material. Children are to plan and carry out the experiment in groups. Each group decides what they are going to do. They must predict with reasons why, say why their test is fair, record the results and explain what they have discovered.
Who were John Dunlop, Charles Macintosh and John McAdam? (Changes over time)	To know that products are improved and changed over time. John Dunlop invented the pneumatic tyre to make an easier bike ride for his son. Charles Macintosh discovered how to make fabric waterproof (the macintosh). John McAdam made roads smoother by using macadamisation (tarmac).

Statutory Requirements

Pupils will be taught to: |

- 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.

