



Key Stage 1

Topic: Materials

Question: Could I build a school out of paper?

Previous learning - What should I already know:

- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.
- Name and describe physical properties of a variety of everyday materials.

Knowledge - What I need to know:

- Name and describe the properties of a range of everyday materials.
- Find out about famous people who have developed useful new materials.
- Know that and understand why the same materials can be used for more than one purpose.
- Know and describe how the shapes of solid objects made from some materials can be changed by squashing, pulling, twisting and bending.
- Understand the impact of scientists on developing useful new materials.

Skills – What I will be able to do:

- Sort and classify different materials based on their physical properties.
- Compare and contrast the suitability of materials for particular uses.
- Observe and test materials for suitability for example waterproofing, being a spoon using simple equipment.
- Ask simple questions about materials and recognise that they can be answered in different ways.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help in answering questions.
- Research and explain the impact of scientists on developing new materials (e.g. John Dunlop, John McAdam, Charles Macintosh)

Marvellous Materials

There are a variety of materials out there and they are all used for different purposes.

<p>Metal</p> <ul style="list-style-type: none"> • Strong • Shiny • Used to make cans and coins etc 	<p>Plastic</p> <ul style="list-style-type: none"> • Transparent/ opaque • Waterproof • Strong • Used to make bottles, toys and bags etc 
<p>Glass</p> <ul style="list-style-type: none"> • Transparent • Strong • Used to make windows, drinking glasses and reading glass etc 	<p>Wood</p> <ul style="list-style-type: none"> • Strong • Solid • Used to make doors, pencils, cupboards and paper etc. 
<p>Fabric</p> <ul style="list-style-type: none"> • Absorbent • Flexible • Fabric is used to make clothes. 	<p>Brick and Stones</p> <ul style="list-style-type: none"> • Strong • Solid • Used to make walls and buildings 

Sometimes the shapes of materials can be changed by:



squashing, bending, twisting and stretching.

Vocabulary

Absorbent	Can soak up liquid
Bend	A curve or angle put into an object by shaping it
Brittle	Hard but likely to break easily
Elastic	Spring back to shape when stretched.
Flexible	Easily bend without breaking
Rigid	Can not be bent easily and may break when bent
Opaque	Cannot be seen through
Properties	A feature of an object.
Transparent	Can be seen through
Waterproof	Do not let any water in or soak up water

Famous Inventors



John Dunlop invented the first inflatable tyre. The famous tyre company, Dunlop, gets its name from this famous inventor!

John McAdam invented a process called 'macadamisation', which is a method used to construct roads.



Charles Mackintosh invented waterproof fabrics. This is where we get the name rain mac from!

