

Science: Materials



Ellel St John's CofE Primary School

Subject Knowledge Organiser



Working Scientifically

Ask simple questions and recognise they can be answered in different ways	Observing closely using, simple equipment	Perform simple tests	Identifying and classifying	Use observations and ideas to suggest answers to questions	Gathering and recording data to help in answering questions
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Vocabulary

Material	A substance used to make things
Property	A characteristic of something
Transparent	Objects behind can be seen clearly.
Translucent	A material which allows light to pass through but is not clear.
Opaque	A material which does not allow light to pass.


Key Questions and Facts

What are materials used for?	We use different materials for different objects depending on their purpose. Materials are used for more than one thing (e.g. metal can be used for coins, cans, cars and table legs, wood can be used for tables, chairs, plastic can be used for toys).
How can materials change shape?	Changing the shape of a material can be done by: Squashing is to crush something so that it becomes flat, soft, or out of shape. Bending is to change a straight object so that it is curved. Twisting is to change the shape of an object by turning it. Stretching is to make an object longer or wider without tearing or breaking.

Properties of Materials

Wood	strong, opaque, stiff, hard
Plastic	bendy, smooth, translucent, stretchy
Glass	transparent, hard, smooth, waterproof
Brick	rough, strong, opaque, dull
Paper	translucent, flexible, not waterproof
Cardboard	rough, dull, opaque, not waterproof
Metal	Shiny, strong, opaque, hard
Rock	Rough, strong, opaque, hard

Significant Individual

 John McAdam	John McAdam was a Scottish engineer born 1756. He invented a process called macadamisation . This process was used to make hard and smooth surfaces for roads and pavements.
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