



What should I already know?

- Distinguish between an object and the material from which it is made.
- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.
- Describe the simple physical properties of a variety of everyday materials.
- Compare and group together a variety of everyday materials on the basis of their simple physical properties.

- **What will I know and by the end of the unit?**

- 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.

- **What will I be able to do by the end of the unit?**

- Can name an object, say what material it is made from, identify its properties and make a link between the properties and a particular use
- Can label a picture or diagram of an object made from different materials
- For a given object can identify what properties a suitable material needs to have
- Whilst changing the shape of an object can describe the action used
- Can use the words flexible and/or stretchy to describe materials that can be changed in shape and stiff and/or rigid for those that cannot
- Can recognise that a material may come in different forms which have different properties
- Can sort materials using a range of properties

Key Knowledge	
John McAdam	John McAdam was a Scottish engineer who experimented with using new materials to build roads, inventing a new process called 'macadamisation'.
John Dunlop	John Dunlop was a Scottish inventor who invented the air-filled rubber tyre. It was originally invented in 1887 to use with bicycles, and then became very useful when automobiles were developed.
Charles Macintosh	Charles Macintosh was a Scottish inventor and chemist who invented waterproof fabrics in 1818. The Mackintosh raincoat was introduced in 1824.
Macadamisation	Macadamisation was the name given to John McAdam's construction process of building roads. The name tarmac means a road made like this using tar.

People who developed new materials:

John McAdam's process was so successful that roads were built in this way right across the world.

John Dunlop originally used rubber to make tyres for his son's tricycle.

Charles Macintosh invented the first waterproof fabric by painting a dissolved rubber solution onto cloth.

To look at all the planning resources linked to the Uses of Everyday Materials unit. [Click here](#)

Key Vocabulary	Key Knowledge	
materials	Materials are what objects are made from.	
suitability	Suitability means having the properties which are right for a specific purpose.	
properties	This is what a material is like and how it behaves (soft, stretchy, waterproof).	
Squash an object by pushing both hands together.	Bend an object by grabbing both ends of the object and bringing the ends inwards together.	Twist an object by turning your hands in opposite directions.
Stretch an object by pulling your hands slowly and gently apart.	wood: hard, stiff, strong, opaque, can be carved into any shape.	glass: waterproof, transparent, hard, smooth.
plastic: waterproof, strong, can be made to be flexible or stiff, smooth or rough.	metal: strong, hard, easy to wash.	paper: lightweight, flexible.
cardboard: strong, light, stiff.	fabric: soft, flexible, hard-wearing, can be stretchy, warm, absorbent.	rubber: hard-wearing, elastic, flexible, strong.

Agreed Real-life outcome:

- Can explain using the key properties why a material is suitable or not suitable for a purpose
- Can begin to choose an appropriate method for testing a material for a particular property