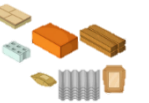
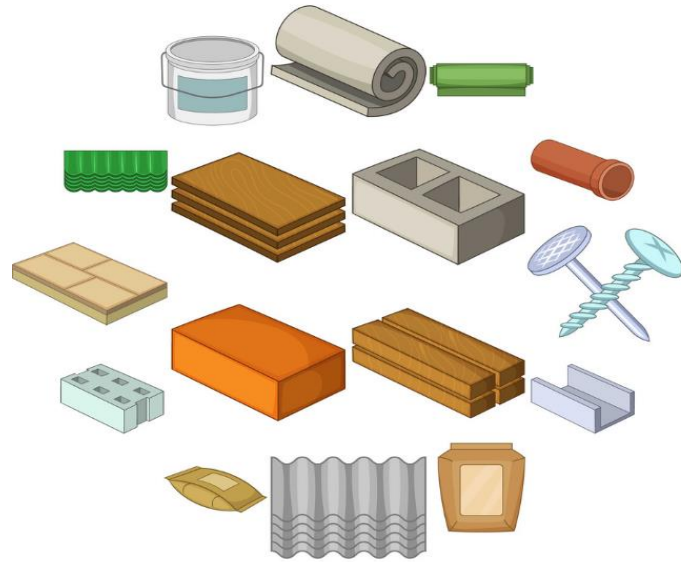


# Use of EVERYDAY MATERIALS

Assessment Question: Why are different materials used for different purposes?



## What you should already know...



- Materials are the substances that things are made from.
- We use lots of different materials every day, e.g. metal, plastic, wood, and glass.
- Different materials have certain properties, e.g. glass is see-through, metal is strong and often shiny, etc.
- Some materials are used to make many things.

## Development of Materials

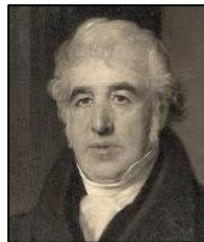
### John Dunlop

- John Dunlop is famous for developing the pneumatic (air-filled) tyre.
- He did this, at first, to improve the tyres on his son's bicycle!
- He used his understanding of rubber to fit it to a wooden disc. He then used an inflated tube of sheet rubber to blow up the tyre.



### Charles Macintosh

- Charles Macintosh is best known for inventing the raincoat.
- He discovered a way in which rubber could be placed between two layers of cloth, to make it waterproof.
- His name lives on today – a raincoat is often called a Macintosh or Mac.



### John McAdam

- John McAdam was the first person to think of tarmac roads.
- Roads used to be made from clay, earth, or chalk, but these materials were messy and not very smooth.
- He spread hot tarmac on a road, adding lime chippings & flattening.



## Properties of Materials

Material	Image	Properties	What could it be used for?
<b>Metal</b>		-Metals are often strong, shiny, hard and long-lasting. -Metals can be hammered into different shapes.	-Metals can be made into things like pots and pans. -Metals can stretched into wires and rods.
<b>Glass</b>		-Glass can be strong, but thin glass shatters. -Glass is transparent and waterproof. It can be made into different shapes.	-Glass is most often used to make windows and glasses. -It is also used in making mirrors, table-tops and windscreens.
<b>Wood</b>		-Wood is hard and strong; -Wood is long-lasting and is a natural product. -Wood is flammable.	-Wood is often used to build furniture, like benches and desks. -Wood can be used to build houses and cabins.
<b>Plastic</b>		-Plastics can be tough or flexible and can be made into any shape. Plastics can be dyed different colours and can be made transparent.	-Plastics can be used to make packaging, bottles and toys. -Plastics can be moulded into plates, knives and forks.
<b>Rubber</b>		-Rubber is extremely tough, but also very flexible. -Rubber is elastic and also waterproof. Rubber doesn't tear easily.	-Not including food and drinks, water is still used in many, many products. For example, it is used in making paints, toothpastes, shampoos and cement.
<b>Brick</b>		-Bricks are very hard and strong. They are difficult to break. Bricks are thick and store heat well.	-Bricks are normally attached together with mortar and are used to make buildings. -They are also used for paving.
<b>Paper</b>		-Paper is often thin and can be made into lots of different shapes. Paper can be torn. It goes soggy when wet.	-Paper is normally used for writing. Paper is used in diaries, notebooks and for printing on. Paper is used for posters/displays.
<b>Cardboard</b>		-Cardboard is often thin but is firmer and tougher than paper. Cardboard is more difficult to tear. It goes soggy when wet.	-Cardboard is often turned into boxes and is then used for packaging items. It can be used for protection, e.g. protecting floors when painting.

## Properties of Materials Vocabulary

Hard Squashy Smooth Absorbent Bumpy Bouncy Dull Flexible Flammable Translucent Waterproof Firm Soft