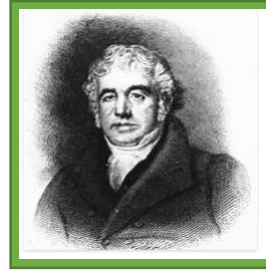




**John McAdam**

McAdam noticed that highways were in poor condition and carried investigations to improve the condition of roads. He recommended using large rock, smaller stones and covering these with fine gravel to make them smoother. It took 30 years for him to improve all the roads in the United Kingdom!



**Charles Mackintosh**

Mackintosh experimented with various chemicals and found that a by-product of coal tar was able to dissolve India rubber. This paste was able to repel water, creating waterproof fabric.

Materials	Properties	Uses
Wood	A hard material from a tree.	Door, chair.
Metal	A solid material which is hard and shiny.	Coin, fork.
Glass	A transparent material used for windows.	Window.
Plastic	A man-made material that can be used to make toys.	Water bottle, toys.

Vocabulary	Definition
Waterproof	An object that keeps out water.
Rubber	A tough elastic material.
Impermeable	Not allowing liquid to pass through.
Rough	An uneven surface.
Smooth	An even and regular surface
Transparent	Let's light through, can be seen through.
Opaque	Blocks light, cannot be seen through.
Shiny	Reflects light.
Stretchy	Able to stretch.
Rigid	Not easy to bend or change.
Repel	Do not absorb liquid, liquid stays on the surface.
Absorbent	Let's in water.