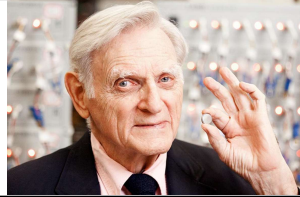


Knowledge Organiser Y5

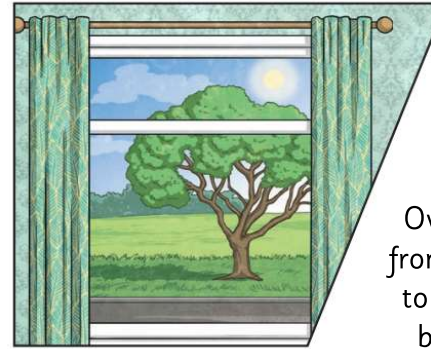
Properties of Materials: Classifying materials

Notable Scientist:
John Goodenough
Inventor of the lithium-ion
battery



Key Knowledge:

Different materials are used for particular jobs based on their properties: electrical conductivity, flexibility, hardness, insulators, magnetism, solubility, thermal conductivity, transparency.

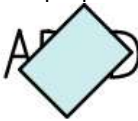


For example,
glass is used
for windows
because it is hard
and transparent.
Oven gloves are made
from a thermal insulator
to keep the heat from
burning your hand.



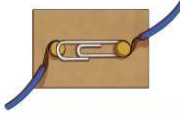
Vocabulary:

properties	Characteristics to describe a material, e.g. hard, soft, transparent	material	The substance that something is made out of, e.g. wood, plastic, metal.
conductor	A conductor is a material that heat or electricity can easily travel through. Most metals are both thermal conductors (they conduct heat) and electrical conductors (they conduct electricity).	insulator	An insulator is a material that does not let heat or electricity travel through them. Wood and plastic are both thermal and electrical insulators.
permeable	A material which allows liquids or gases to pass through it.	flammable	A material which will catch fire and burn easily.
translucent	A material which will let light but not detailed shapes pass through them.	opaque	A material which you can not see through. The opposite of transparent.

opaque


translucent


transparent


	Good Conductors allow energy to pass through	Insulators stop or slow down energy
Electrical	Metals e.g. copper, silver, gold, iron, steel, aluminum tap water 	rubber wood plastic glass paper cotton distilled water polystyrene fabric 
Thermal	Metals e.g. copper, silver, gold, iron, steel, aluminum 	plastic wood rubber fabric polystyrene 