

Year 5 Knowledge Organiser - Why aren't teapots made of chocolate?

What will I learn?

In this topic we will learn to:

- compare and group materials based on a wide range of properties including conductivity, magnetism, solubility, states and transparency.
- conduct a comparative test to provide evidence for why a particular material is best suited for a particular purpose.
- apply knowledge of the property of materials to design a new product.

Previous learning	You should already know:
Y3- What do you know about rocks?	how to compare and group materials based on their attraction to magnets be able to identify some magnetic materials
Y4 - Electricity - science week	some materials that are conductors of electricity and some materials that are insulators of electricity
Y4- Where does water come from and where does it go?	the 3 states of matter - solid, liquid and gas - and be able to group materials based on their states the water cycle
Y5 - Who stood up to the Romans?	Materials are chosen for their properties. Roman sandals were made from flexible materials to fit the foot and ankle. They were hard-wearing and durable for walking on rough ground.

Useful Weblinks



<https://www.bbc.co.uk/programmes/p01193lz>

What different materials are needed to make a bike?



<https://www.bbc.co.uk/programmes/p011n8yz>

How do you test properties of materials?

Vocabulary Dozen & Key Knowledge

Conductor-a material that heat, sound or electricity can pass through. A metal saucepan allows heat to pass through, this helps to cook the food inside, this is a conductor of heat. Inside electric cables is copper wire, which the electricity can pass through. They are conductors of electricity.

Durable- something that is hard-wearing

Flexible- a material capable of bending easily without breaking. Such as a leather belt.

Fragile - a material that is easily broken or damaged

Insulator- a material that heat, sound or electricity cannot pass through. The plastic handle of a saucepan does not allow heat to pass through, this is an insulator. A hot pan handle would be dangerous so the materials used are carefully selected. An electric cable on a lamp has plastic on the outside- so that you don't get a shock when you touch the cable.

The plastic is an insulator of electricity.

Magnetic - a property of a material which shows magnetism

Opaque- not able to see through

Clear glass is a perfect choice for a window as it allows light into the house and you can see clearly through it. For a bathroom window, where more privacy is needed, translucent glass is more appropriate as it still allows light through but you can't see through it clearly

Property (of a material) - a characteristic of something

Recyclable- a material that can be recycled

Translucent- allows light through, but objects cannot be seen clearly

Transparent- allows light through so objects can be seen.

Waterproof -impervious to water (water cannot go through).

