

Tuesday 20th October 2020
LO: To compare and group
materials

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Starter stick in books-

	True/False
Dissolved substances cannot be seen because they become part of the water	✓
Substances which do not dissolve are called soluble	✗
Only white powder dissolves	✗
Some solids dissolve	✓
All materials dissolve	✗
Dissolved substances are called soluble	✓
Only powders dissolve	✗

Insulators are materials which do not conduct heat very well and so we can use them to control heat and keep things hot or cold. Thermos flasks are made from insulating materials. Conductors are the opposite of insulators. Heat passes quite easily through them. We can use conductors to move heat, for example, radiators are made from metal. That's because metal is a good conductor of heat and so metal radiators warm rooms or cool engines much more quickly than wooden ones would!

Some materials let electricity pass through them easily. These materials are known as electrical conductors. Many metals, such as copper, iron and steel, are good electrical conductors. That is why the parts of electrical objects that need to let electricity pass through are always made of metal. Metal is used in plugs to allow electricity to transfer from the wall socket, through the plug, and into a device such as a radio or TV. In a light bulb, the metal filament conducts electricity and causes the light bulb to light up.

Some materials do not allow electricity to pass through them. These materials are known as electrical insulators. Plastic, wood, glass and rubber are good electrical insulators. That is why they are used to cover materials that carry electricity. The plastic covering that surrounds wires is an electrical insulator. It stops you from getting an electrical shock.

**I
do**

Thermal insulators are...
materials that keep the
heat in. They do not conduct
heat easily. A thermos flask
is an example of a good insulator.

Thermal conductors are

we
do

Thermal insulators are

you
do

Thermal conductors are

Electrical insulators are

Electrical conductors are

Thermal insulators are...

materials that keep the heat in. They do not conduct heat easily. A thermos flask is an example of a good insulator.

<https://www.bbc.co.uk/bitesize/topics/z2882hv/articles/zxv482p>



 <https://www.bbc.co.uk/bitesize/clips/z27w2hv>

Watch the clip and list all the materials you can see

List materials:

copper

clay

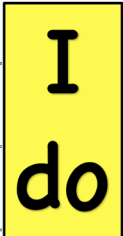
cotton wool

aluminum

glass

lead

wood



List materials:

Properties of materials

copper

clay

cotton wool

aluminium

glass

lead

wood

hardness

solubility

transparency

conductivity (electrical and thermal)

magnetic

Hardness

opaque

copper

aluminium

lead

wood

Transparency

Glass

The other materials are

On the large piece of paper, group the materials from the video

	<i>On the large pieces of paper, with your partner, group the materials from the video</i>	
	Properties of materials	we do <i>Picture for book</i>
	hardness	
	solubility	
	transparency	
	conductivity (electrical and thermal)	
	magnetic	

Quick game!

Fill out as many of these as you can
with your partner!

Thermal insulator	
Thermal conductor	
electrical insulator	
Electrical conductor	
change of state	
mixture	
dissolve	
solution	
soluble	
insoluble	
filter	
sieve	
Reversible change	
Non- reversible change	
burning	
rusting,	

