Electrical Conductors and Insulators

Whole Class

Electricity can travel easily through **electrical conductors**, but some materials do not let electricity pass through them. These are known as **electrical insulators**.

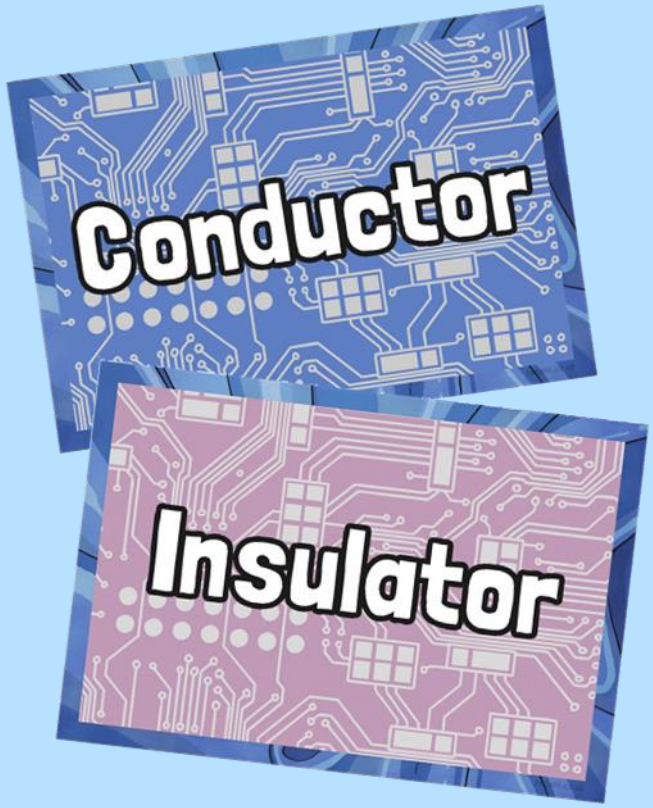
Watch this clip to see some materials that are electrical conductors or insulators.

Electrical Conductors and Insulators

We know that metals are electrical conductors, but which other materials conduct electricity?

You are going to play a game to identify electrical conductors and insulators.

- Look at each material and decide if it is an electrical conductor or insulator.
- Hold up your conductor card or your insulator card to show your choice.
- Your teacher will reveal the answer.



Electrical Conductors and Insulators

Tap water

Electrical Conductor

Electrical Conductors and Insulators

Whole Class

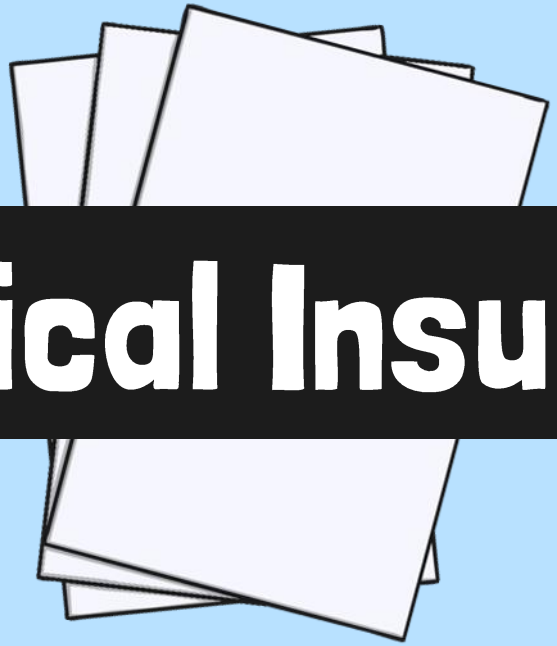
Drinks Can

Electrical Conductor

Electrical Conductors and Insulators

Whole Class

Paper



Electrical Insulator

Electrical Conductors and Insulators

2p Coin

Electrical Conductor

Electrical Conductors and Insulators

Whole Class

Rubber Gloves

Electrical Insulator

Electrical Conductors and Insulators

Whole Class

Glass Window

Electrical Insulator

Conductors and Resistance

These items are all electrical conductors.

Some conductors make it easier for electricity to pass through them than others.
All materials have some electrical resistance.

Resistance is the opposition to the flow of electricity through a material.
Electrical insulators have a very high resistance and it is very hard for electricity to travel through these objects.

Electrical conductors have very low resistance and it is very easy for electricity to pass through them.

Different conductors have different levels of resistance, so even through they can all conduct electricity, some allow electricity to flow through easier than others.