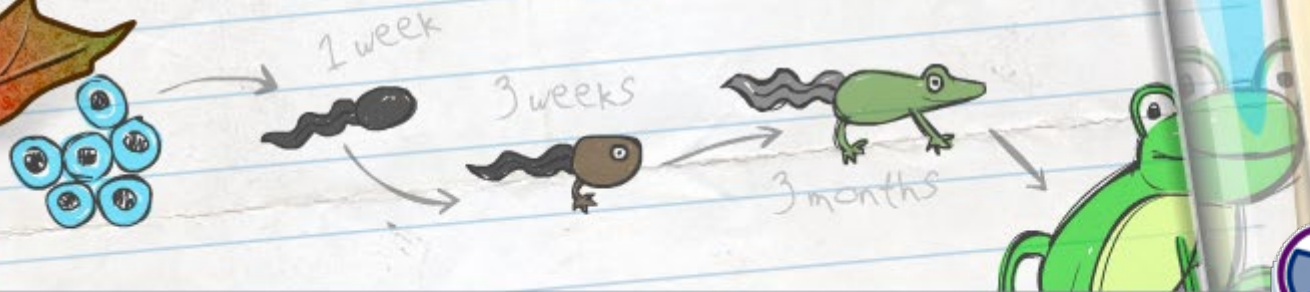


# Insulators and Conductors

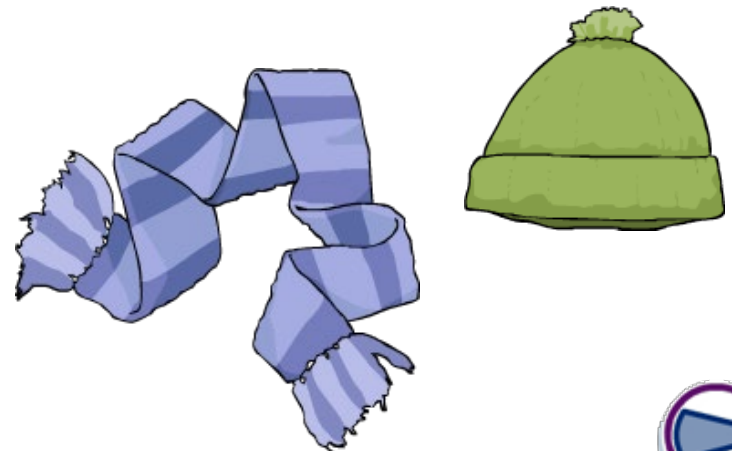


Materials that are good at keeping things hot or cold are called **thermal insulators**.

Thermal insulators trap the air around an object. If the object is hot, the thermal insulation prevents heat from escaping from the object, keeping it warm.

If the object is cold, the thermal insulation prevents outside heat from mixing with the object, keeping it cool.

During the winter, we wear fabrics that are thermal insulators to trap the heat around our bodies and stop it from escaping!



Think about the materials used to make a cooking pan. How are the properties of the materials used to make it good for cooking?

Materials that are thermal insulators, such as wood and plastic, are often used on the handles of cooking pans.

Because heat cannot easily travel through wood or plastic, the handles of these pans do not get too hot when the pan is on the stove.



Other materials are good at allowing heat to pass through them. These materials are called **thermal conductors**. Metal is an example of a thermal conductor.

Materials that are thermal conductors are often good **electrical conductors**.

A conductor allows energy to move easily, just like a train conductor keeps a train moving.

Metal is also a good electrical conductor. It is used for the pins and wires in this cord so that electricity can flow through it to operate an appliance.



# Insulators and conductors

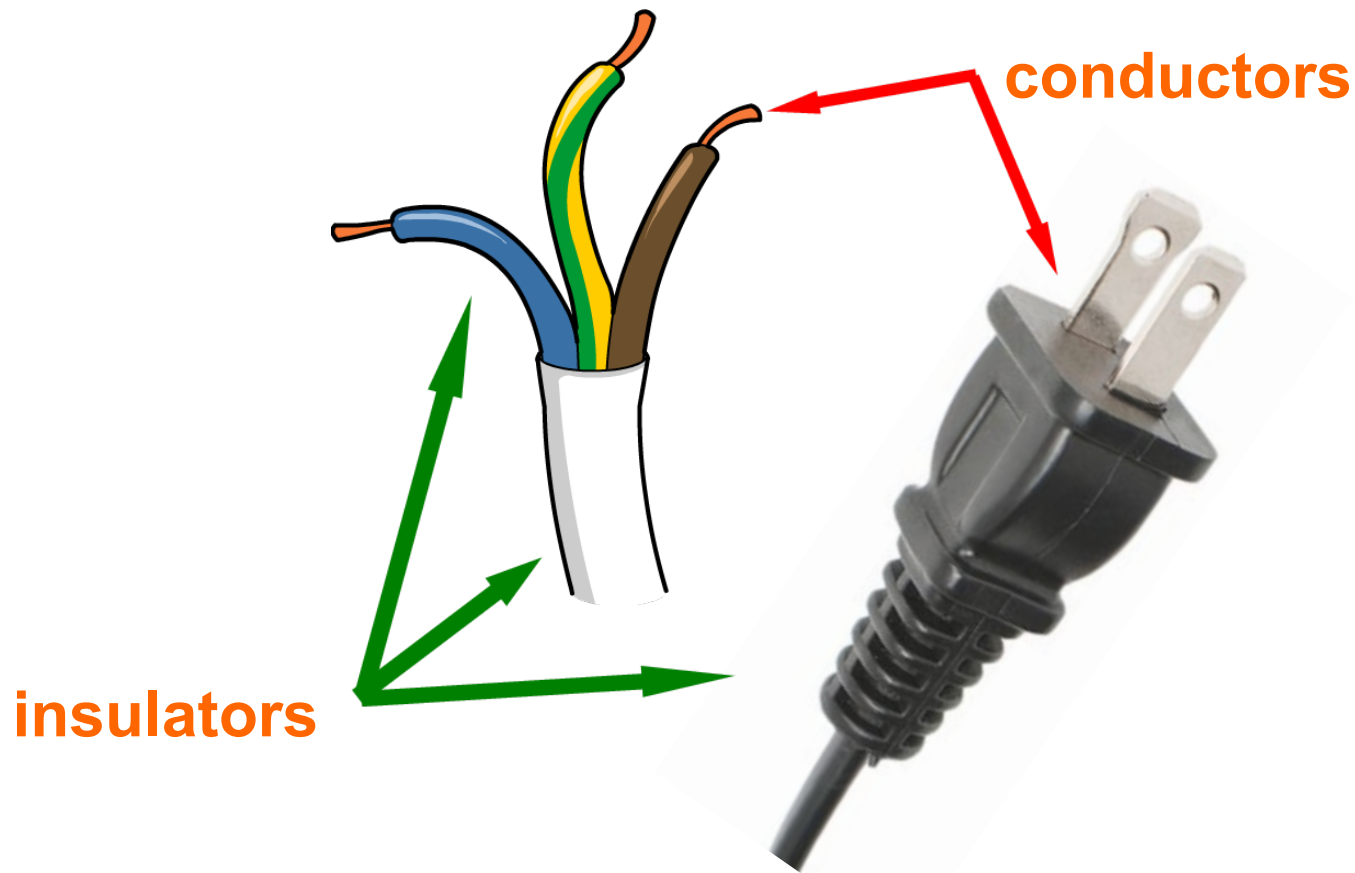


# Insulators and conductors





Plastics are **electrical insulators**, which is why they are used to cover wires, plugs and switches.



# Insulators and conductors

Look around the room and building.  
List materials that are being used as insulators  
(thermal or electrical).  
List materials that are being used as conductors  
(thermal or electrical).

