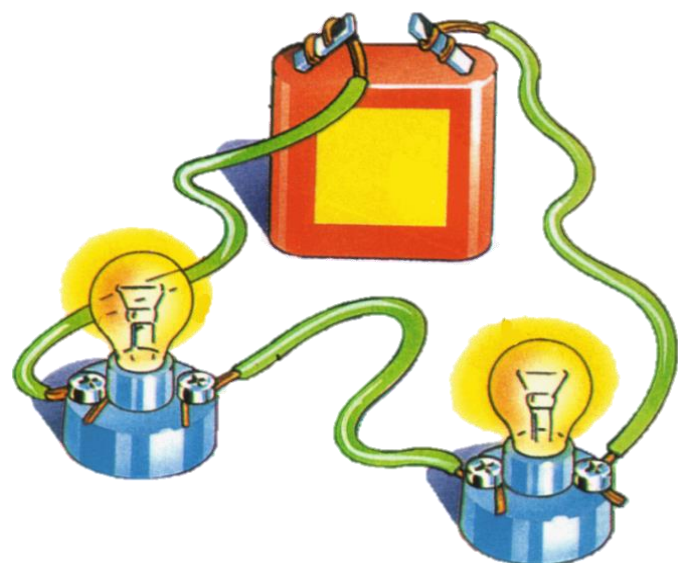


# ELECTRICITY KNOWLEDGE ORGANISER

Assessment Question:  
What is electricity?



## Overview



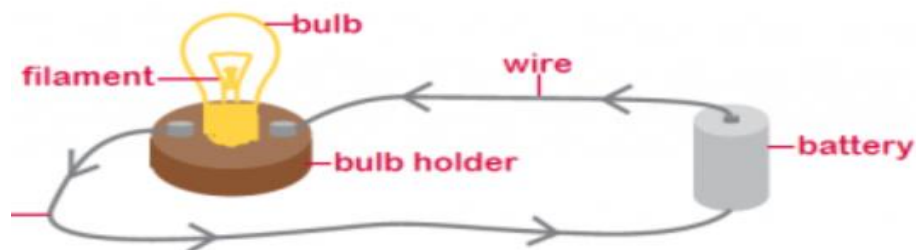
- Electricity is a type of energy.
- It is used to power lots of different things, including many items that we use in everyday life.
- Electricity can flow through wires and cables, and can be stored in batteries (sometimes called cells).
- Electricity can flow in simple series electrical circuits.

## Creation and Uses of Electricity



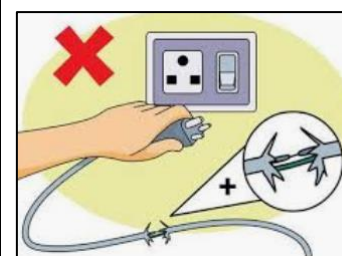
- Electricity is created in a number of different ways:
- Burning fossil fuels (oil, gas, etc.) in power stations;
  - Using solar power generated from the sun;
  - Using wind power from wind turbines;
  - Using water power (hydroelectric power).
- Electricity is used to power many appliances.

## Series Electric Circuit



- A **closed circuit** has no breaks so electricity can flow.
- An **open circuit** has a break that stops electricity flowing.
- A **battery** (or cell) is something in which electricity can be stored.
- Wires** and cables are thin flexible threads that transport electricity.
- Conductors** allow electricity to flow through freely.
- Insulators** do not allow electricity to flow through freely.
- A **switch** opens and closes a circuit.
- A **buzzer** makes a buzzing sound.
- A **lamp** (bulb) makes light from electricity.

## Electrical Safety



Electricity can be extremely dangerous if it is not used safely. It can cause burns, shocks, serious injury and (in extreme cases) even death. There are many electrical dangers, both in the home and outdoors.

### Some Important Electrical Safety Trips

- Do not put fingers and other objects in an outlet;
- Never use anything with a cord or plug around water;
- Keep metal objects away from toasters;
- Stay away from power stations and power lines;
- Never pull a plug out by its cord;
- Never touch or climb trees near power lines;
- Go indoors when there is thunder and lightning.
- Look out for signs like the one on the left.



### Conductors

Silver      Gold      Copper      Steel      Sea Water

### Insulators

Rubber      Glass      Oil      Diamond      Dry Wood