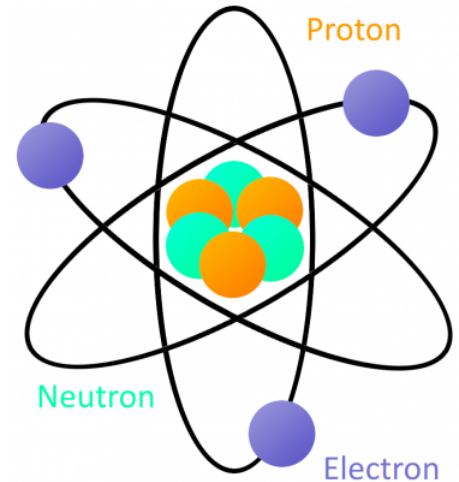


ELECTRICITY

Important concepts for more experiments and fun!

Electricity – a type of energy that we use to power all kinds of modern technologies and machines.

Electrons – subatomic particles that make up the outer layer of atoms. They have a negative charge, and are vital components of electricity and magnetism.



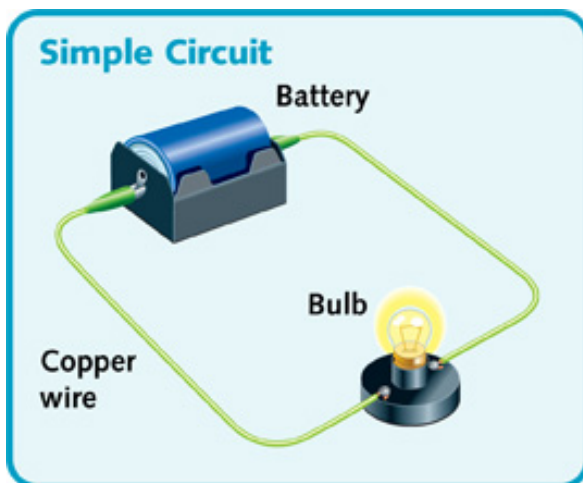
Charge – a positive or negative force, based on whether objects have extra electrons (negative) or no extra electrons (positive). Both batteries and magnets can have a positive and negative charge in different places on the same object!

Current – the flow of electrons. Electricity flows like water, through any conductive material.

Amperage – the measurement of current. The rate of electrons in motion in a current is measured in amperage or amps.

Voltage – the “pressure” pushing electrons along the current. Voltage is the difference in charge between two points.

Resistance – a material’s tendency to resist the flow of an electrical current.



Circuit – a completed system through which electricity can flow. The simplest circuits need a generator to create electricity, a load (like a light bulb or motor) to use the electricity, and wires to connect the two.

Battery – an electrical generator that uses chemical reactions to create electricity.

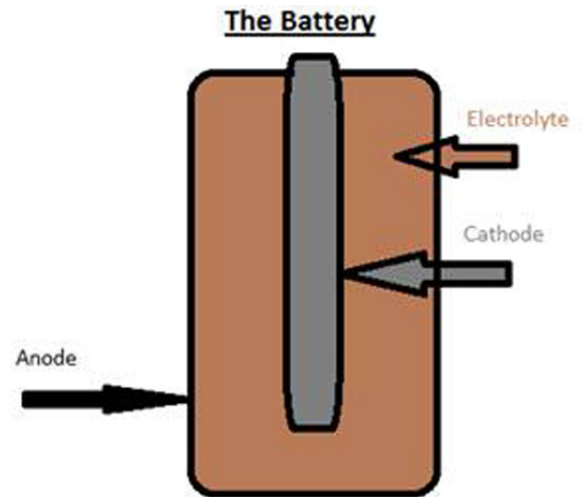
Anode – the part of a battery where an oxidation reaction releases electrons

Cathode – the part of a battery where a reduction reaction absorbs electrons

Electrolyte – a medium that allows charge to flow between the anode and cathode

Negative terminal – the end of a battery from which the electricity leaves

Positive terminal – the end of the battery where the extra electricity can be absorbed



RESOURCES

<http://science.howstuffworks.com/electricity.htm>

<http://electronics.howstuffworks.com/everyday-tech/battery.htm>

<http://www.explainthatstuff.com/electricity.html>

<http://electronics.howstuffworks.com/motor.htm>

And you can also check out books on electricity in your school or public library!