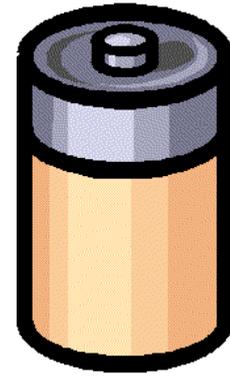


# Battery



What's a battery?

A battery is a store of chemical energy. The stored energy turns into electrical energy when the battery is used. Inside the casing, different chemicals are stored which react together to create an electrical current.

If you look at a battery you will notice that it has two terminals. One of them will be marked + (positive) and the other will be marked - (negative). On an AA battery the terminals are at each end of the battery but on some bigger batteries both terminals are at the same end.

Electrons collect on the negative terminal of the battery. If you connect a wire between the positive and negative terminals the electrons will flow from the negative terminal to the positive terminals as fast as they can. This will wear out your battery very quickly. This is also very dangerous especially with big batteries. This is because the electrons flow so quickly they start to heat up the battery. Usually you would put something like a light bulb or a motor to it.

Inside a battery a chemical reaction is what makes the battery work. The electrons must flow from the negative terminal for the reaction to work. The electrons flow through the wire, into your item and back to the battery. This is called a circuit. Unless electrons are flowing from the negative terminal the reaction will not work. That is why you can leave a battery on a shelf and it will not lose its power.

You can make your own battery by using very basic things. You need one copper-coated and one zinc-coated nail, some thin insulated wire (about 50cm), a compass and a container of salty water or watered-down vinegar.

One of the simplest batteries you can make is out of a lemon, a copper coin and a galvanised nail (galvanised nails are coated in zinc). To make the battery, insert the coin into a slot in one side of the lemon. Press the nail into the other side, taking care to make sure that the nail and coin do not touch each other. These batteries only create a voltage of .906 volts but you can wire two or more of them together to produce more volts.

The first battery was created by Alessandro Volta in 1800.