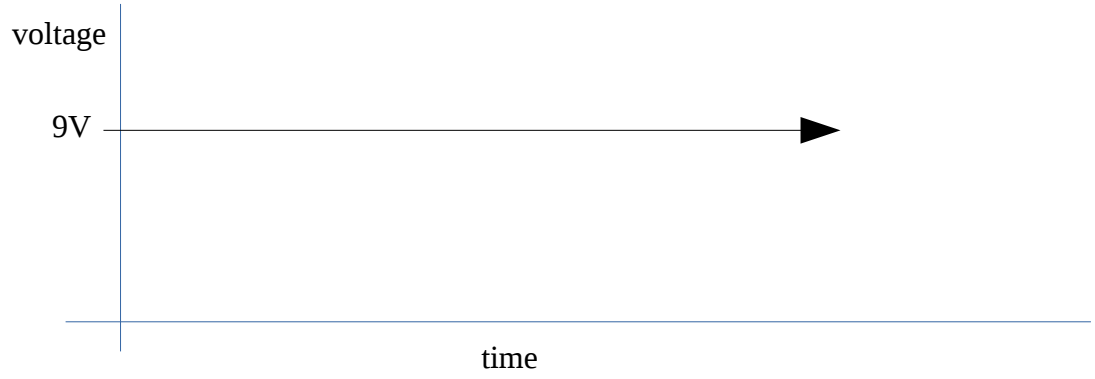
AC and DC

DC stands for *Direct Current*.

➔ what this means is that the current flows continually in one direction.

➔ **The voltage is constant over time.**

Here's the voltage from a 9V battery:

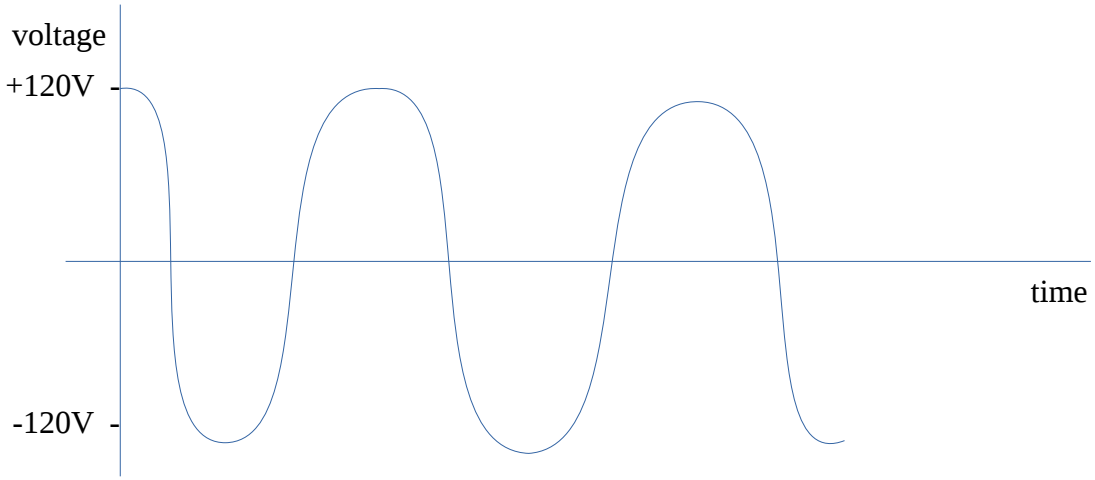


AC stands for *Alternating Current*.

➔ what this means is that the current flows back and forth.

➔ **The voltage also reverses.**

Here's the voltage from an electrical outlet:



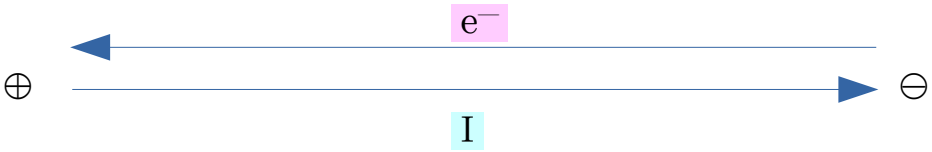
AC	DC
produced by generators	produced by batteries and solar cells
	Adapters change AC to DC (as well as drop the voltage a lot)
often required for large motors	required for all electronics
Small motors can be either DC or AC. Incandescent lights work with either.	

- Because cell phones, laptops, etc are electronic, you need an adapter to change AC to DC in order for you to charge them.
- Computers are also electronic, but they have a large power supply inside them that does the conversion to DC
- Things like hair dryers, toasters, vacuum cleaners work just fine on AC

Direction of Current Flow

Since electrons are NEGATIVE, they are attracted to positive. This means that electrons come out of the negative terminal of a battery and flow into the positive terminal.

We call this current "electron current" and indicate it with an e- (and an arrow)



In most of life, we like to think of things going from positive to negative, like water flowing downhill. We imagine a current that flows like this and we call it conventional current. It is indicated with an I (and an arrow)