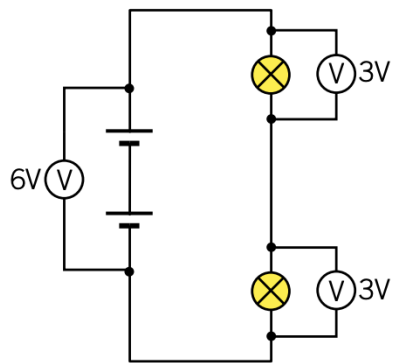


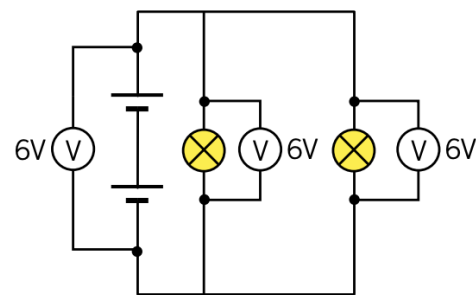
Must Remember

- Objects can be changed positively or negatively by transferring electrons.
- Like charges repel and unlike charges attract.
- An electric field is a region where there is a force on charged particles or materials.
- Electric current is the amount of charge flowing per second. You measure current in amps (A) using an ammeter.
- The potential difference of a cell tells you the size of the push on the charges and how much energy can be transferred by them.
- You measure potential difference in volts (V) using a voltmeter.
- Series circuits contain only one loop, and the current is the same everywhere.
- Parallel circuits have branches and the currents in all the branches add up to make the total current.

Series



Parallel



- A component with a high resistance has a small current through it.
- Magnets have a north and south pole. Like poles repel and unlike poles attract.

Nice to know that...

- All substances are made of atoms. These are often called particles. An atom is electrically neutral - has no overall electrical charge. However, each atom contains even smaller particles called electrons.
- When you rub two different materials against each other, they become electrically charged. This only works for electrically insulated objects and not with materials like metals, which conduct.
- A charged object creates an electric field. You cannot see an electric field, but it surrounds the charged object. If another charged object is moved into the electric field, a force acts on it. The force is a non-contact force because the charged objects do not have to touch for the force to be exerted.

Key Terms:

- **Ammeter** - A device for measuring electric current in a circuit.
- **Amps** - Units of measurement of electric current, symbol A.
- **Atom** - A neutral particle; everything is made of atoms.
- **Conductor** - A material that conducts charge or energy well, such as a metal or graphite.
- **Current** - The flow of electrical charge (electrons) around a complete circuit per second.
- **Electron** - A negatively charged particle found in atoms. Electrons flow through a wire when a current flows.
- **Insulator** - A material that does not conduct electricity or transfer energy well.
- **Negative** - The charge on an electron, or on an object that has had electrons transferred to it.
- **Ohms** - The unit of resistance, symbol Ω .
- **Parallel** - A circuit in which there are two or more paths or branches for the current.
- **Positive** - The charge on a proton, or on an object that has had electrons transferred from it.
- **Potential Difference** - A measure of the push of a cell or battery, or the energy that the cell or battery can supply.
- **Proton** - A positively charged particle found in atoms.
- **Resistance** - How difficult it is for current to flow through a component in a circuit.
- **Series** - A circuit in which components are joined in a single loop.
- **Voltage** - A measure of the strength of a cell or battery used to send a current around a circuit.
- **Voltmeter** - A device for measuring voltage.

Further Study

[BBC Bitesize – Electricity Revision](#)