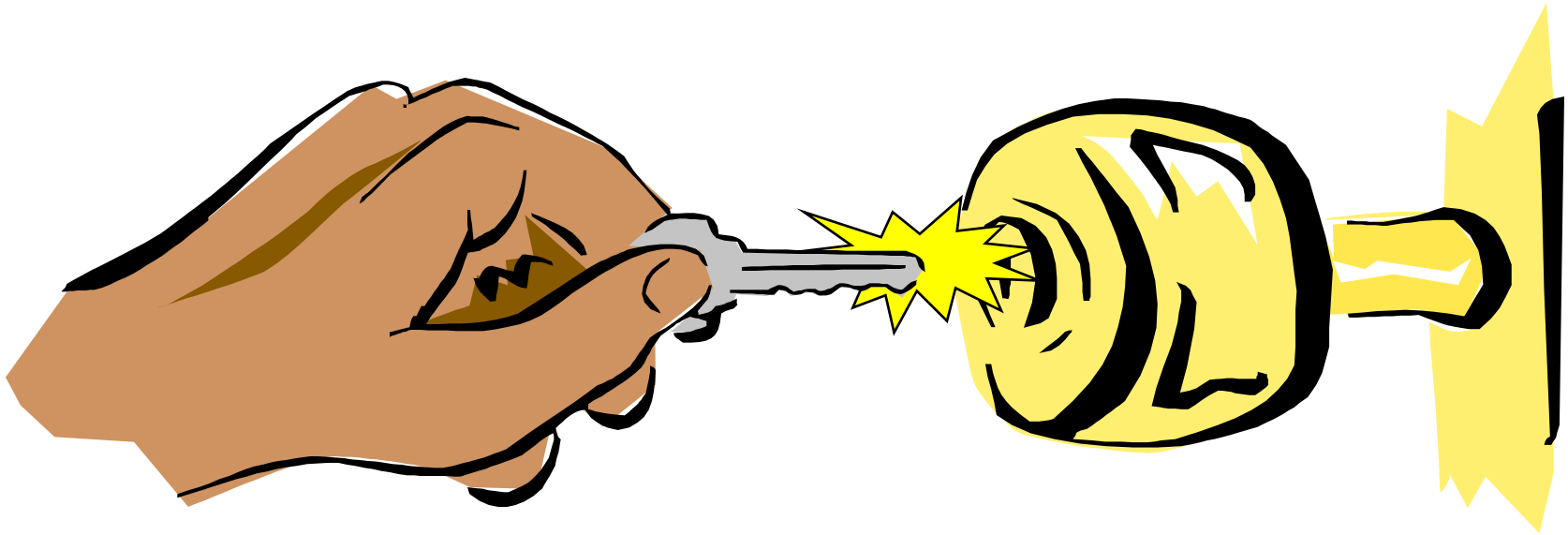


Static Electricity

A build up of electrons

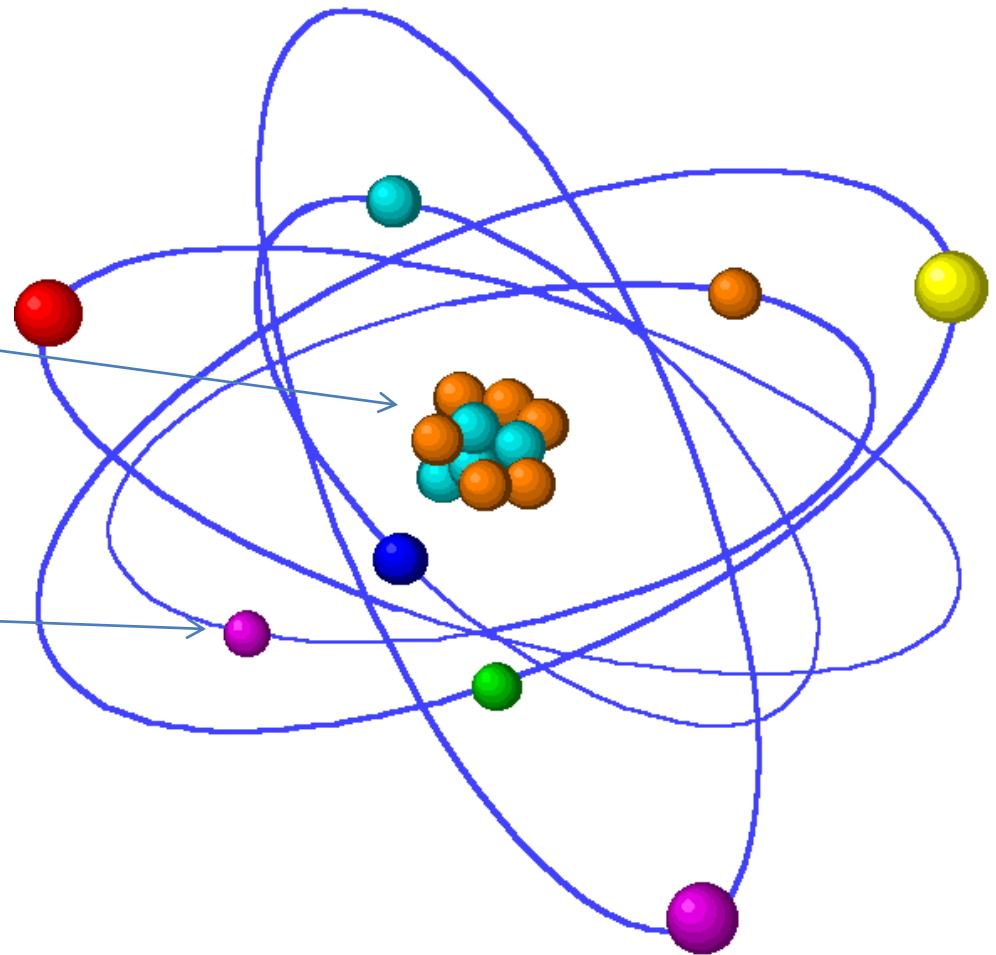


The **shock** you get from rubbing our shoes on the carpet and then touching something metal like a door knob.

A **transfer of electrons** to equalize (stabilize) negative electrons and positive protons.

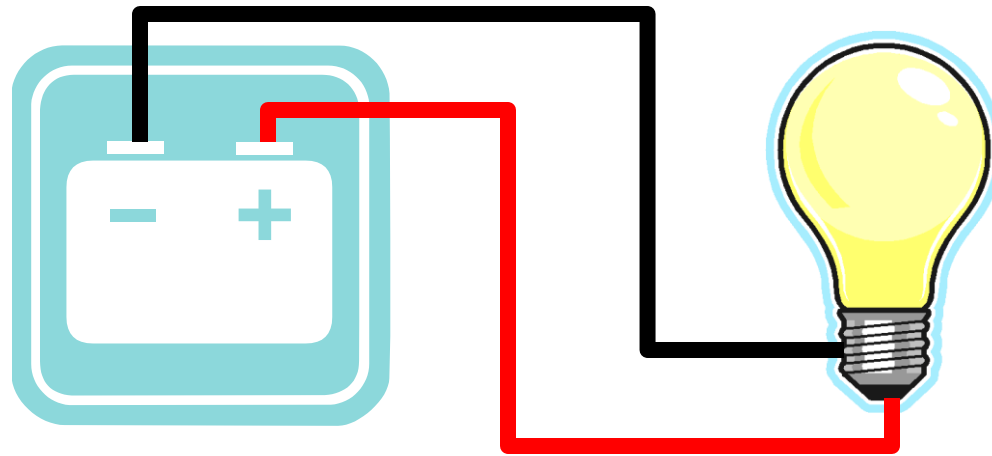
Atom

- The smallest component of all things
- Made of:
 - Nucleus
 - Protons (+)
 - Neutrons (no charge)
 - Electrons (-)

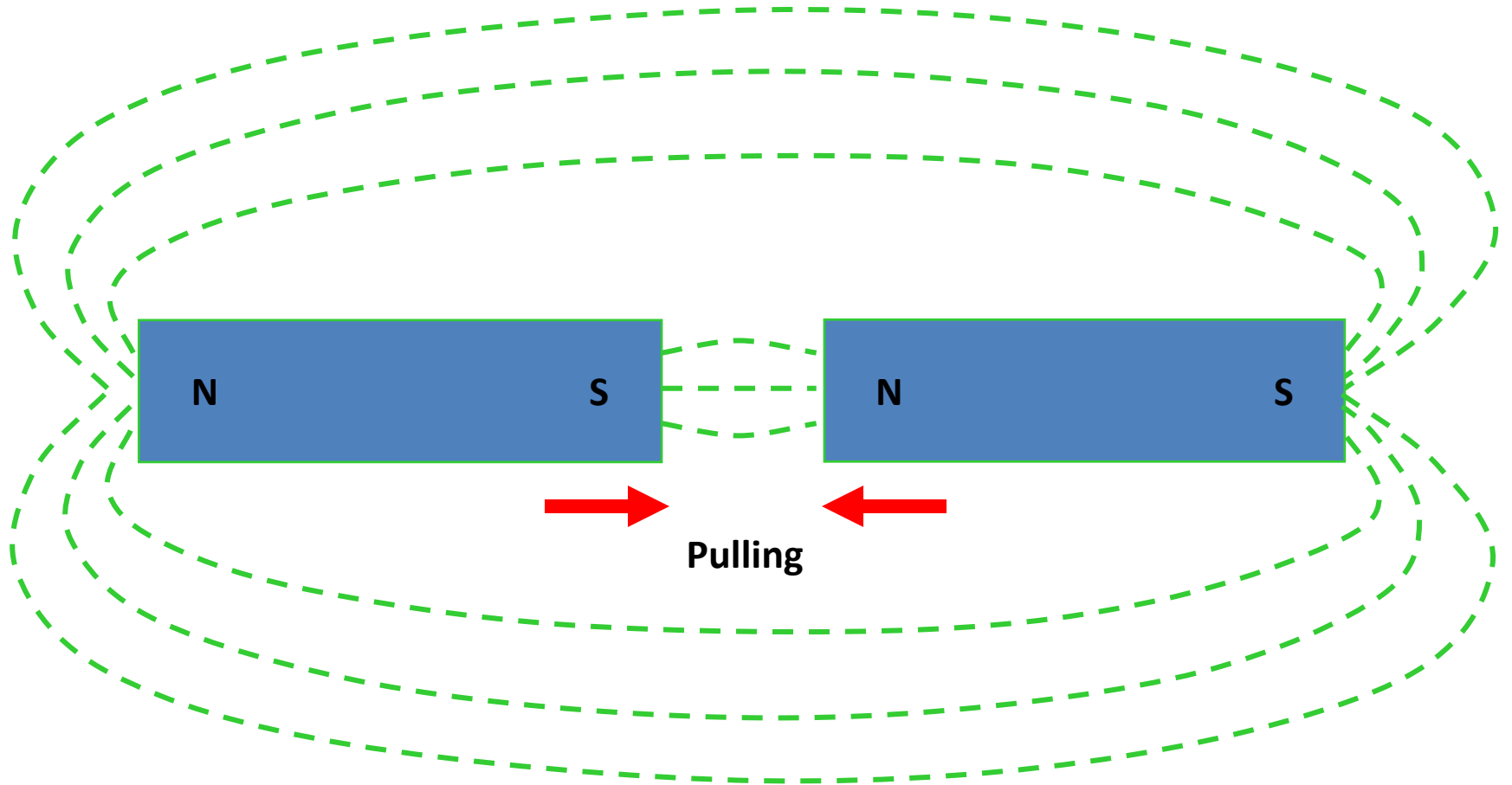


Current Electricity

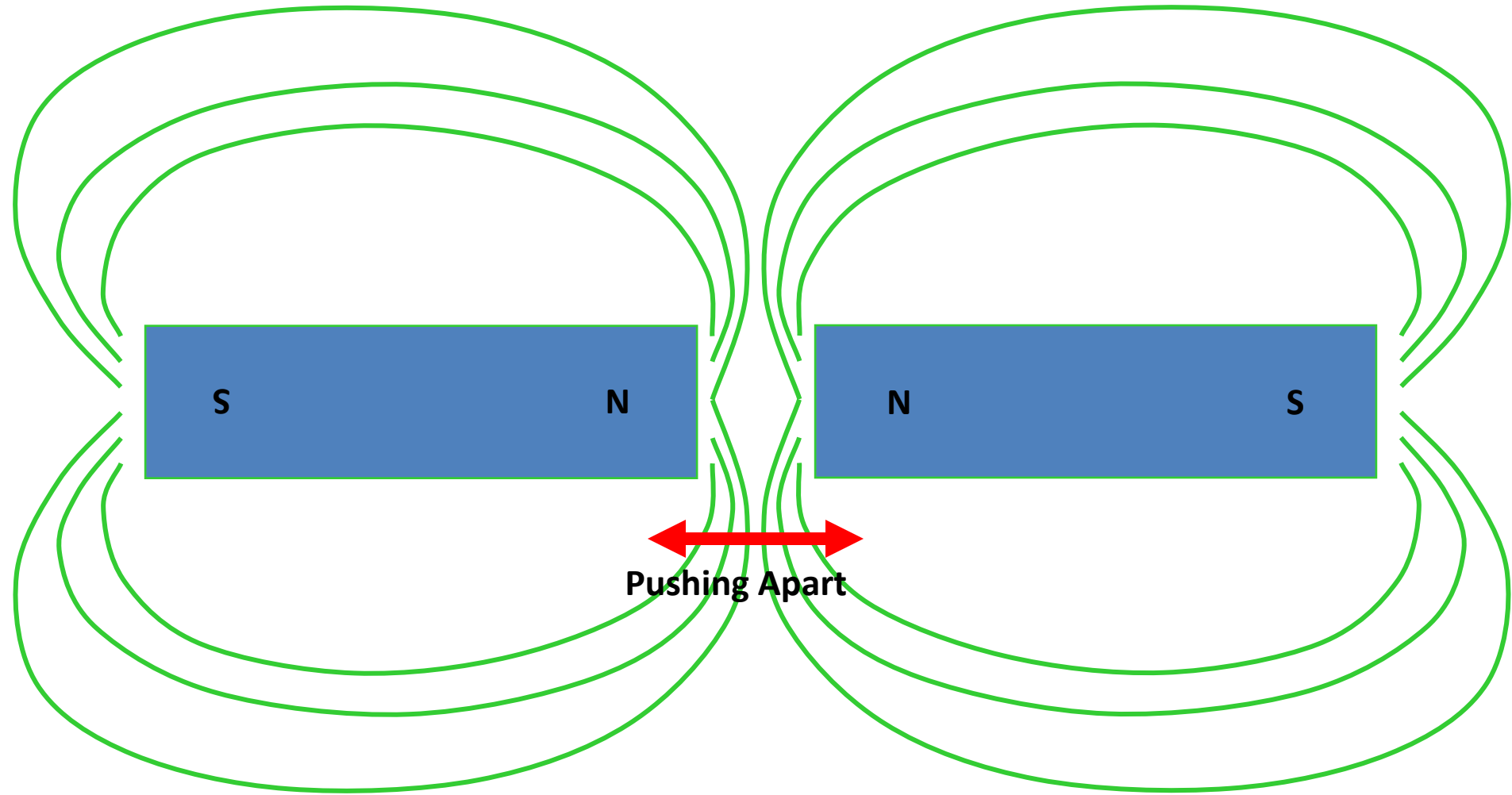
Electric current is the movement of free electrons from atom to atom



Attract



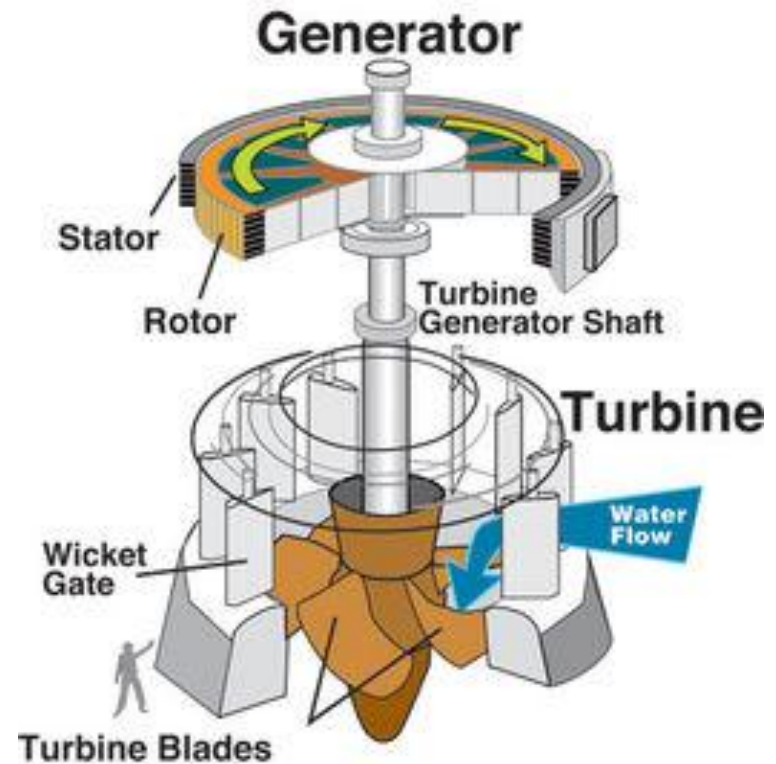
Repel



Generator

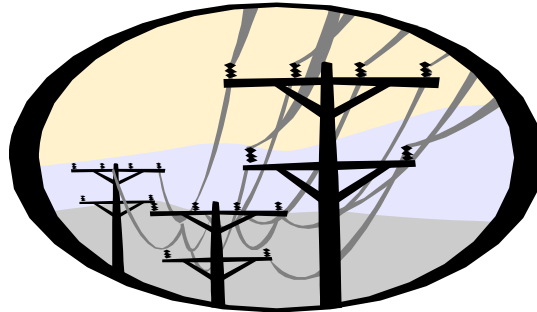
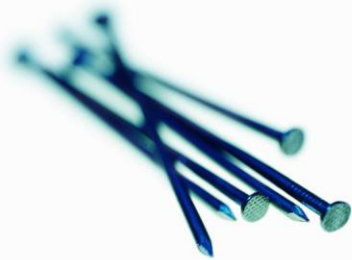
A generator is a machine that uses wind, fossil fuel, or water to turn the turbine and generate electricity.

Generators make large amounts of electricity like what is needed for your city!



Conductor

Objects that electrons **can move through** to transfer electricity



Insulator

Objects that electrons cannot flow through (do not connect a circuit)



string



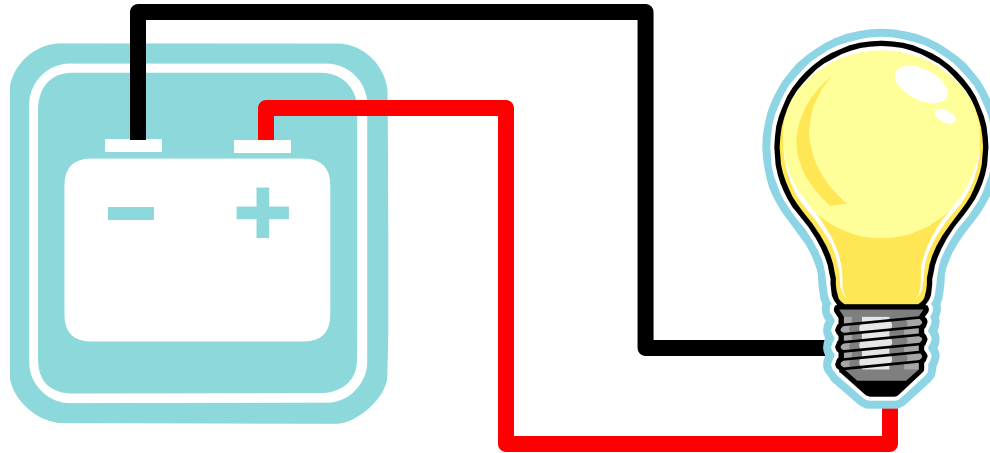
rubber



plastic

Circuit

The route around which an electrical current can flow, beginning and ending at the same point.

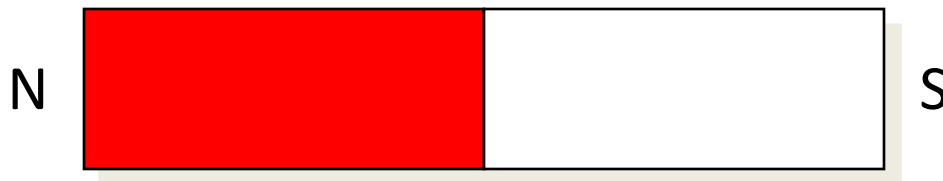
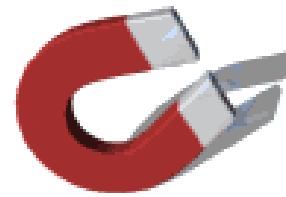


A **closed circuit** is a completed circular flow.

An **open circuit** is an incomplete circuit in which there is an interruption in the flow of electrons.

Magnet

- Any material that attracts iron, steel, cobalt and nickel
- All magnets have 2 poles
 - Opposite poles attract
 - Like poles repel



Lines of Flux

- All magnets have *lines of force* extending from one pole to the other in the 3 dimensional space around them
- Magnetic lines do not cross each other
- The lines go from North to South on the magnet.

