

Vocabulary: Electromagnetic Force & Electricity



Vocabulary

- electric force:** The attraction or repulsion between electric charges.
- Electric force causes static electricity and drives the flow of electric charge (electric current) in electrical conductors.
- electric field:** The region around a charged object where the object's electric force interacts with other charged objects.
- The electric force is caused by the electric field.
- magnetic force:** The attraction or repulsion between magnetic poles.
- A force is a push or a pull that can cause an object to move.
- magnetic field:** The region around a magnet where the magnetic force is exerted.
- The magnetic force is caused by the magnetic field.
- electromagnetism:** The relationship between electricity and magnetism.
- Wherever there is electricity, there is magnetism. An electric current produces a magnetic field.
- electric current:** The continuous flow of electric charges through a material.
- The amount of charge that passes through a wire in a unit of time is the rate of electric current—the unit name for the rate of current is the ampere (shortened to amp).
 - The number of amps describes the amount of charge flowing past a given point each second.
- electromagnetic force:** The electric and magnetic fields are so interconnected that they are referred to simply as the electromagnetic field.
- The presence of an electric field will actually produce a magnetic field.
 - A change in the magnetic field will produce an electric field.
- The electromagnetic force is the force exerted by the electromagnetic field on any charged particle.
- The electromagnetic force is based on charge and distance.
- Coulomb's law:** The law that describes the electric force between two charged particles:

- Charged particles exert a force on each other.
- Like charges repel each other; opposite charges attract each other.
- The greater the distance between charges, the less force they will exert on each other.

