Electricity

Electricity

- Electricity is an essential property of matter
- Electricity is best understood by looking at matters smallest practical state…the atom

Electricity

- An atom is comprised of basically three distinct particles.
  - _____
  - _____
  - _____

Electricity

- Electrons have a _____ (-) charge.
- Protons have a _____ (+) charge.
- Neutrons have NO charge.

Electricity

- Normally an atom has an equal number of electrons and protons. Thus the atom has no net charge since the charges cancel out.
- If an atom has lost or gained an electron then the atom is no longer balanced.
- An atom that has an unbalanced number of protons and electrons is called an _____

Electricity

- Free electrons can move through many materials such as metals and gases at nearly the speed of light.
- Free electrons can also just rest on a surface.

Electricity

- An atom that looses an electron and thus has more protons than electrons is called a _____

Electricity

- An atom that picks up a stray electron and thus has more electrons than protons is called a _____

Electricity

- A group of electrons on a surface causes the surface to be negatively charged. Since the electrons are not moving, the surface is said to have a _____ Static Electrical Charge

Electricity

- Mechanical friction, light, heat or a chemical reaction may remove electrons from a surface. This causes the surface to have a net positive charge. This is referred to as a _____Static Electrical Charge

Electricity

- Opposite and like charges - Just like magnets, like charges repel and opposites attract.

Electricity

- The Electroscope lab