

The "q&d" Guide to Electric Charge

"q&d" = "Quick 'n' Dirty"

- Charge may be either of two types, **POSITIVE** or **NEGATIVE**
- **Protons** are positive and **Electrons** are negative
- **Neutrons** are neutral (no charge present)
- **Unlike charges attract** (i.e. protons and electrons) while **like charges repel** (i.e. protons and protons, electrons and electrons)
- Charge may be transferred from one object to another by contact or induction
- The force of attraction (F) is inversely proportional to the square of the distance (d) by **Coulomb's Law**:

$$F = k \frac{(n^+ e)(n^- e)}{d^2}$$

n^+ = number of positive charges

n^- = number of negative charges

e = charge on an electron = 1.602×10^{-19} C

k = proportionality constant