Atoms and their structure
Protons
Electrons – Found in outer ring, current flow from atom to atom.
Nucleus
Valence Ring

Voltage
Potential Energy
Potential Difference – required for current flow.
Separation of Charges

Current
6.242 x 10^{18} electrons = 1 Coulomb
Q = It

Electrical Safety – Body resistance, jewelry, high voltage, insulations, fuses, circuit breakers

Voltage Sources
Batteries
Primary Cells
Lead Acid Secondary Cells
Solar Cells
Generators
Power Supplies

Conductors
Gold – Number of valence electrons
Silver -Number of valence electrons
Aluminum -Number of valence electrons
Copper -Number of valence electrons

Insulators
Paper- Number of valence electrons
Rubber -Number of valence electrons
Plastic- Number of valence electrons

Semiconductors
Silicon- Number of valence electrons
Germanium- Number of valence electrons