James Clerk Maxwell – discovered light consists Correction - lenses (glasses, contacts) are used to of electromagnetic waves

Photoelectric Effect – movement of electrons as a <u>CHAPTER 8: ATOMS & PERIODIC PROP.</u> result of energy acquired from light

Planck – introduced quantized energy **Einstein** – light made up of quantized protons

Planck's Constant – light was made of discrete unites called "quanta"

- Einstein applied Planck's quantum concept to the problem of the photoelectric effect
 - described the energy in a light wave as quanta of energy called *photons*

E = h x f*h* (constant) *f* (freq. Or wavelength)

Relativity -

- treats motion at a constant velocity ٠
- length contractions and time dialations
- law of physics

Special Relativity

Concern of with events as object different points of view

from

Shows that measurements of length, time, and mass are different in different moving reference frames

The Human Eye



Nearsightedness (myopia) - images form in front of retina

Farsightedness (hyperopia) - images form behind retina

move images onto retina

Electrons – negatively charged particles **Protons** – positively charged particles Neutrons – no charge

Atomic Number – number of protons in an atom

Isotopes – same number of protons; different number of neutrons

Atomic Weight – equivalent to the number of protons and neutrons in the atom (weighted average of the isotopes based on their mass compared to carbon-12 and their relative abundance found on Earth)

Orbitals – defines the space where velectron is likely to be found

change when light, sound, or other Reflect on vares bounce backward off a boundary

most used element

- 1 proton, 1 neutron, 1 electron
- highly reactive



Carbon

Indr 6

6 protons, 6 neutrons, 6 electrons

