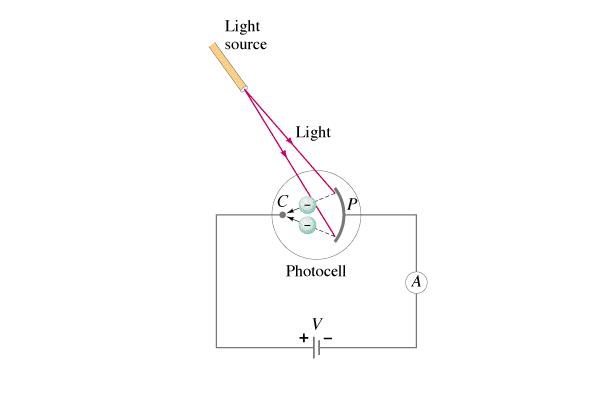
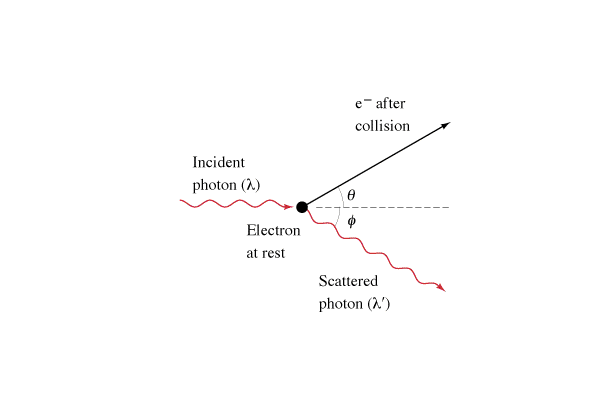
**Noteguide for Photon Interactions - Videos 27D1 Name**

**Photon Interactions with matter:**

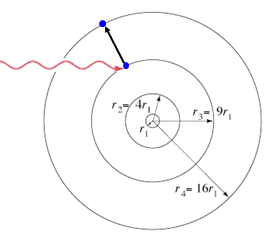
**Photo-electric Effect** - photon ejects electron from a metal surface

****

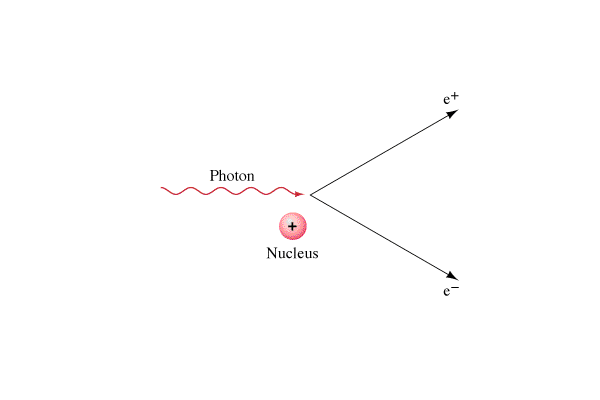
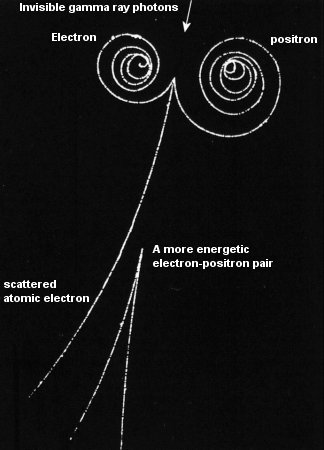
**Compton Scattering** - Photon scatters (bounces) off an electron. Electron and photon go off in different directions, and photon's wavelength goes down. (Loses energy...)



**Absorption** - Photon energy is the same as a transition energy, so it bumps an electron up an energy level and is absorbed



**Pair Production** - A photon passing by a mass (nucleus, or electron) spontaneously creates a matter-anti matter pair.

**Complementarity** - Either the wave model, XOR the photon model explains light

