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

**Photon Interactions with matter:**

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

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**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

