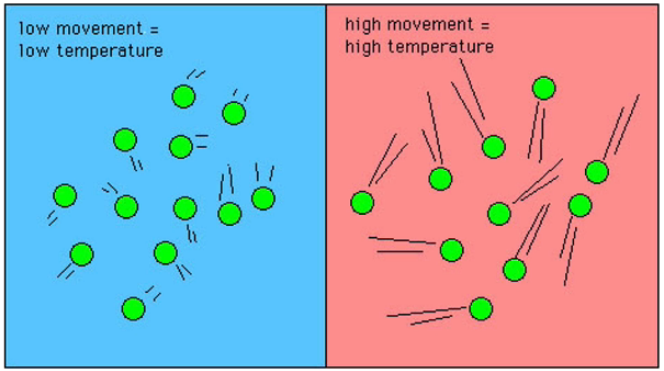
Radiation Laws

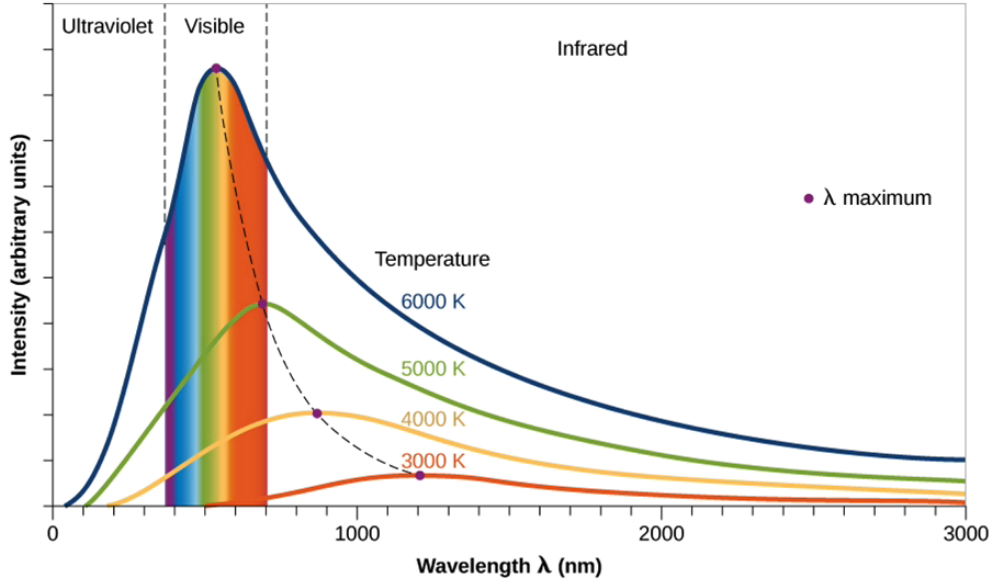
1 In hot substances, particles move rapidly in random directions



This jostling causes the particles to emit a type of electromagnetic radiation known as thermal radiation

2 A blackbody is an idealized object that absorbs all incoming radiation and converts it into thermal radiation. Many astrophysical objects (stars included) behave like a blackbody

3 The spectrum of a blackbody (how intense the radiation at each wavelength) depends only its temperature (measured in Kelvin)



4 Wien's law gives the wavelength-maximum of blackbody spectrum

The Stefan-Boltzmann law gives the overall power of the blackbody