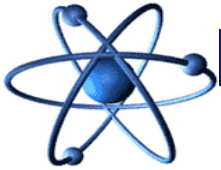


# Thermal Energy and Heat

## **Radiation**

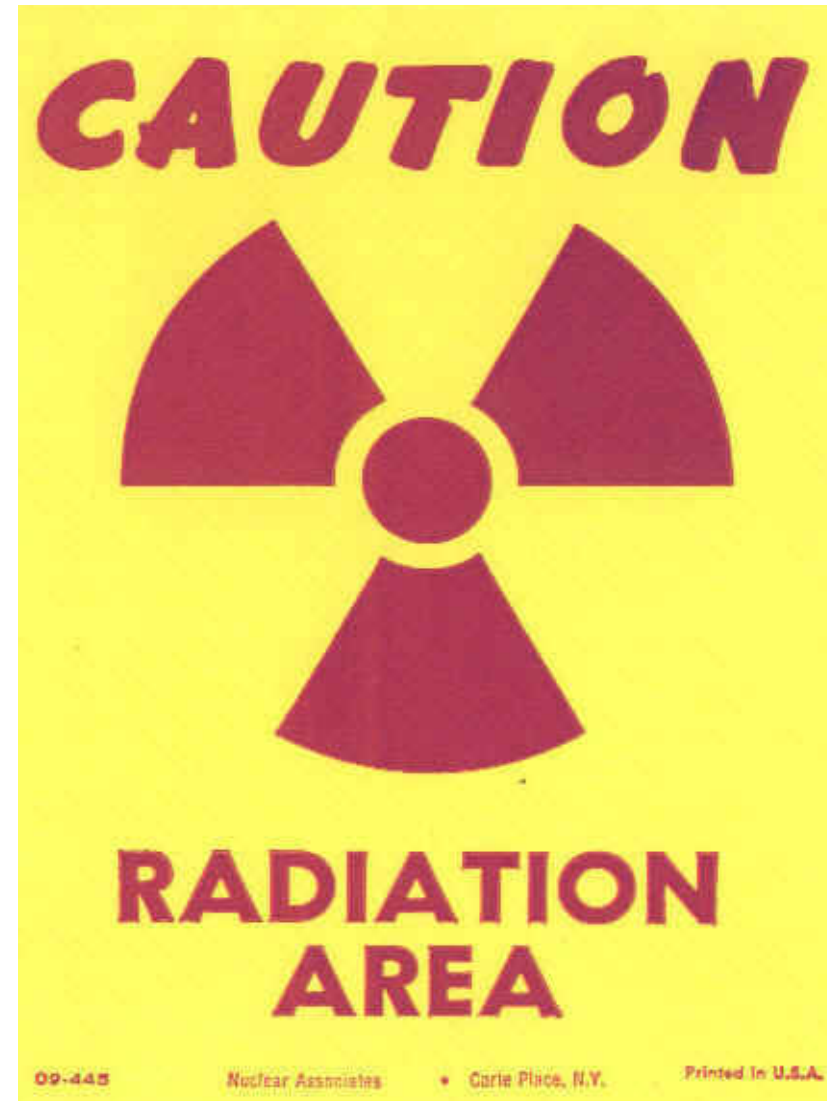


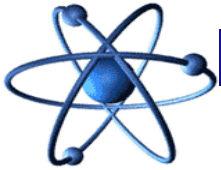


# Radiation?

**What do you think of  
when you hear the  
word radiation?**

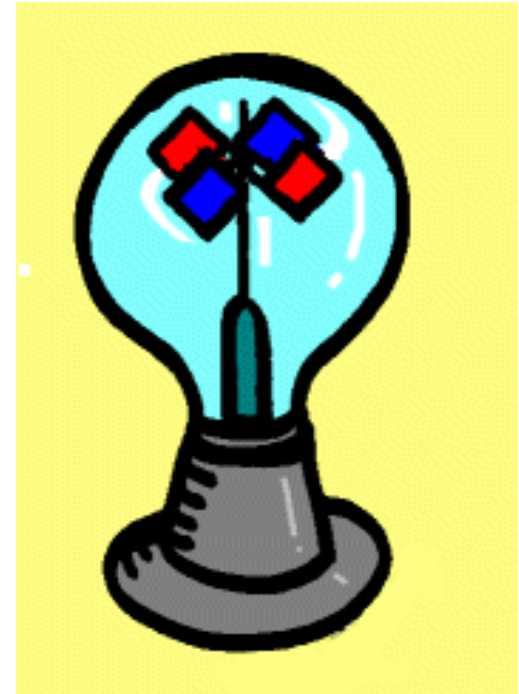
**What words pop into  
your head?**

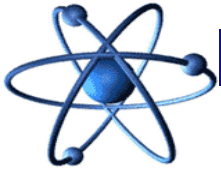




# Radiometer

**What do you think  
radiation is now?**





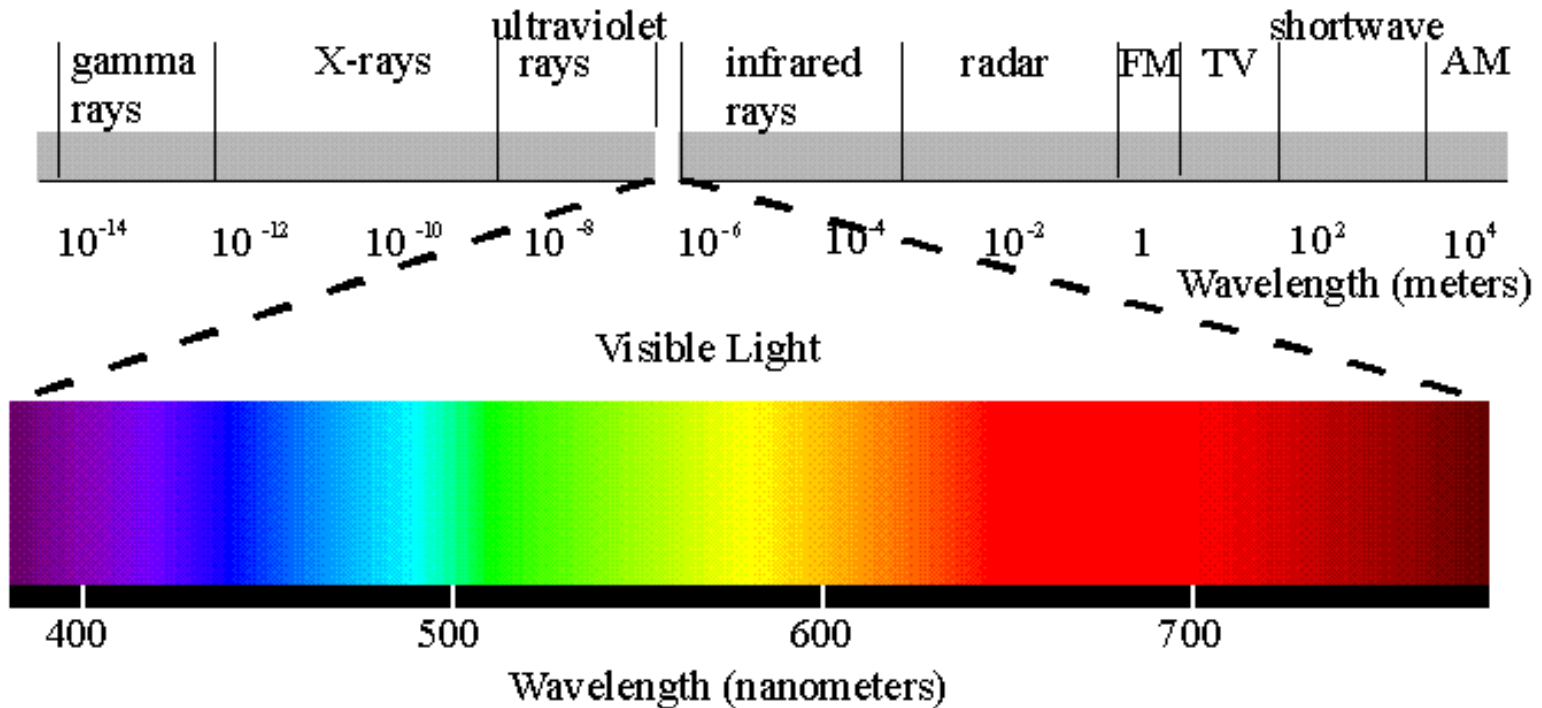
### **3. Radiation – the transfer of energy in the form of electromagnetic waves**

**Radiation can transfer energy through many different materials including empty space (a vacuum)**





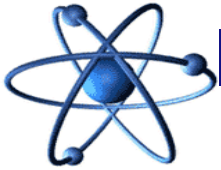
# There are many different kinds of radiation:



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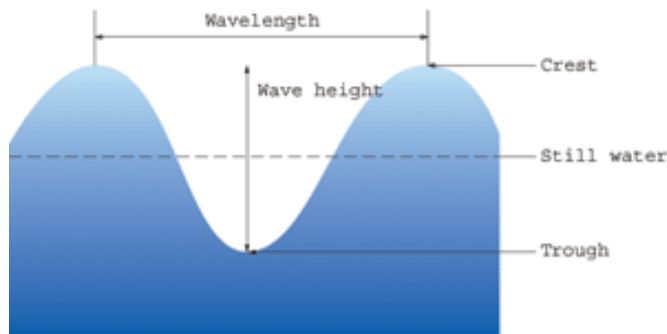
[Visual Stimulus](#)

# Electromagnetic Spectrum

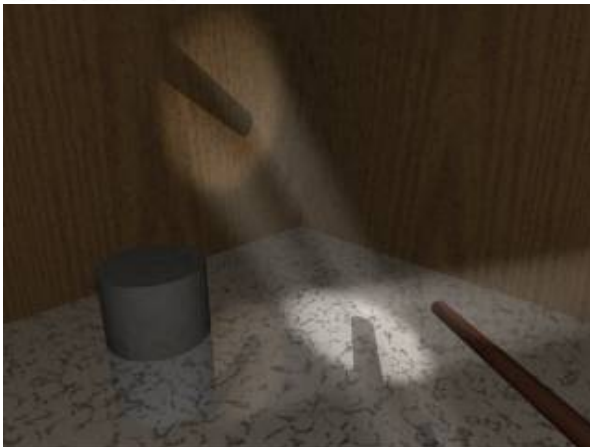


**All of these different kinds of radiation share three characteristics:**

- 1. They all behave like waves**
- 2. They can all be either reflected or absorbed by objects**
- 3. They can all travel through a vacuum at very high speeds (the speed of light 300,000 km/sec)**



Wave climate





**When radiation is absorbed by an object, it causes the particles to move faster so they gain kinetic/thermal energy and they become warm.  
(Like in a microwave or when you sun bathe)**





**When radiation is reflected from an object, nothing happens to its particles they do not gain or lose energy. (like a mirror)**

