

## Lesson 11 - Heat Transfer by Radiation

**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. 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.

When radiation is absorbed by an object, it causes the particles to move faster so they gain kinetic/thermal energy and they become warm.

When radiation is reflected from an object, nothing happens to its particles - they do not gain or lose energy.