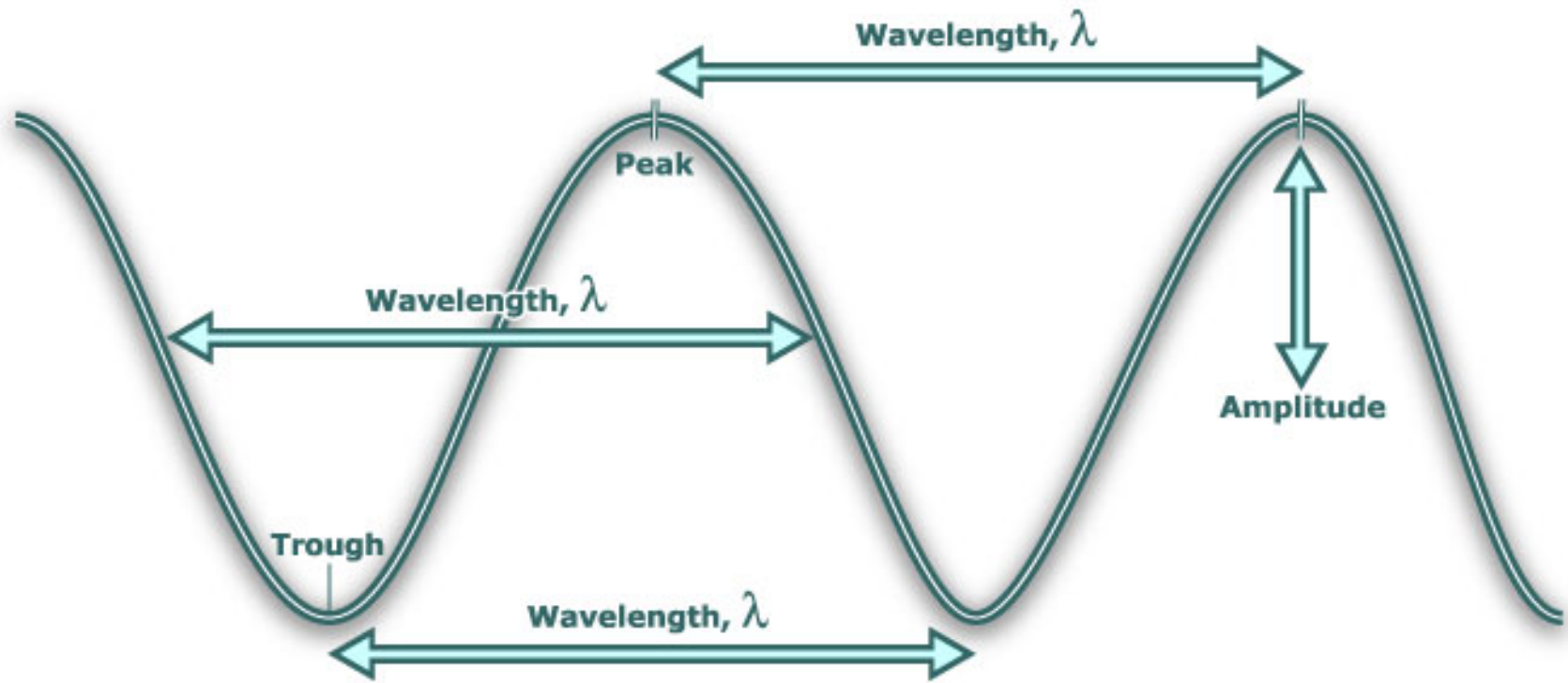


http://www.catie.org.uk/facesofscience/images/waves_wavelength.jpg



Waves in the electromagnetic spectrum

Waves in the electromagnetic spectrum vary in wavelength from very long radio waves to very short gamma-rays.

http://www.catie.org.uk/facesofscience/invisible_waves/screen3.htm

Radio waves vary in length from very long waves (up to a kilometer) to shorter waves the size of buildings and people.

Microwaves are around the size of an insect.

Infrared waves are about the length of a pinhead.

Visible waves are the size of bacteria.

Ultraviolet waves are about the length of molecules.

X-rays are about the length of atoms.

Gamma-rays are the smallest waves, smaller than the size of the nucleus of an atom.

http://www.catie.org.uk/facesofscience/invisible_waves/screen4.htm

How deeply different wavelengths penetrate the body

Visible light does not penetrate the skin.

Ultraviolet radiation is part of the sun's rays and it penetrates into the skin.

X-rays penetrate through the soft tissue of the body until they reach the bone.

Gamma rays penetrate right through the body and can only be reduced by 15 cm of solid, heavy lead