LLT1: Describe the properties of transverse and longitudinal waves, apply the wave equation and describe wave interference.

Be able to define, explain or identify the following:

- Mechanical waves
- Medium
- Transverse waves
- Longitudinal waves
- Amplitude
- Crest
- Trough
- Equilibrium (rest) position

- Frequency
- Period
- Wavelength
- Wave Speed
- Constructive interference
- Destructive interference
- Standing Waves

LLT2: Describe the properties and applications of the electromagnetic spectrum.

Be able to define, explain or identify the following:

- Electromagnetic wave
- Radio, micro, infrared, visible, ultraviolet, x-ray and gamma ray radiation
- Speed of light
- Wavelength, frequency, period and energies of EM radiation
- Inverse Square Law
- Blackbody radiation
- Natural and human created sources of EM radiation
- Safety when working with EM radiation

LLT3: Explain, qualitatively and quantitatively, the phenomenon of refraction and its applications. Apply the wave equation in various media and use Snell's Law to solve problems and predict the path of light.

Be able to define, explain or identify the following:

- Incident, reflected and refracted rays and angles
- Index of refraction
- Critical angle
- Total internal reflection

- Lateral displacement
- Angle of deviation
- Lunar Eclipse

LLT4: Explain, qualitatively and quantitatively, the phenomenon of diffraction and its applications.

Be able to define, explain or identify the following:

- Wave interference
- Wavefront
- Path difference
- Grating
- Slit width
- Central maximum