Chap1) What is light?

Emitter/Reflector

Properties of light

(path, Speed, medium , Duality)

Waves:

Transverse/longitudinal, Period, Frequency, Wavelength

Electromagnetic Wave

(how to generate it, Electric Fields, Magnetic Fields)

E&M wave Spectrum

(Radio, Micro, Infrared, Visible, Ultraviolet, X-ray, Gamma-ray)

Blackbody Radiation (Plank Distrubution)

Chap2) Geometric Optics

Diffraction

Geometric Optics?

Shadow (Source, Obstacle, Screen), Umbra, Penumbra

Eclipse: what causes it, types of eclipse

Reflection , Refraction, Dispersions

Radar and Sonar

law of reflection

Specular vs. Diffusive Reflection

Refraction, Index of refraction

Total internal reflection and critical angle

Examples of Reflection/Refraction/Dispersions (Sub suns, Sun pillar, Sundogs and Halo, Rainbow)