



Make sure you can write definitions for these key terms.
ray diagrams, incident ray, refracted ray, normal, total internal reflection (TIR), critical angle, interface, white light, visible spectrum, diffuse reflection, specular reflection, luminous, converging lens, diverging lens, electromagnetic spectrum, frequency, wavelength,

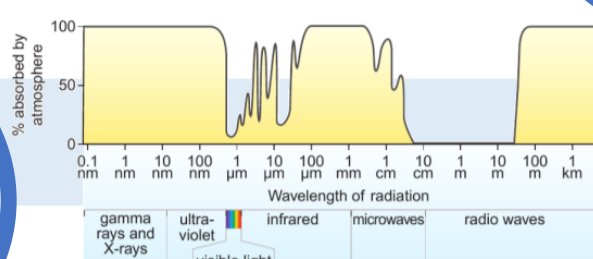
Revision
Retrieval, keyword definitions and equation practice.



Final assessment
★
Review of learning

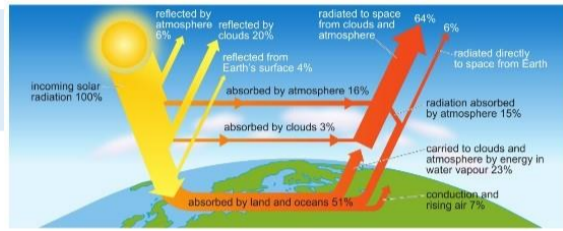
Apply:
SP6 Gamma radiation
SP7 Red shift / Doppler effect
SP10a AC/DC (Oscilloscopes)
16+ Wavelength, amplitude, period and phase difference
Wave equation
Diffraction and polarisation
Amplitude and intensity
The transverse nature of EM waves
Refractive index and Snell's law
Coherence and path difference
Phase and phase difference

EM radiation dangers
How is the danger associated with Electromagnetic wave linked to its frequency?



Using short wavelengths
What are some uses of Ultraviolet, X-rays and gamma rays?

Investigating radiation
CORE PRACTICAL – Investigate how the nature of a surface affects the amount of thermal energy radiated or absorbed

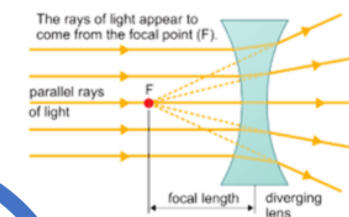
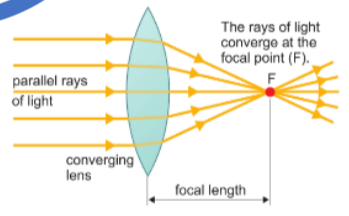
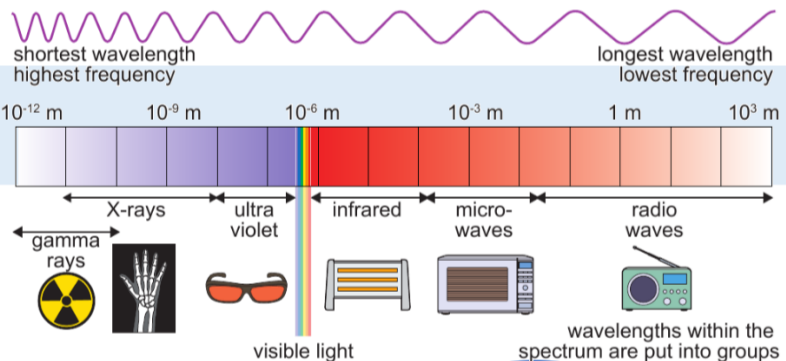


Radiation and temperature
How does the radiation emitted by a body depend on its temperature?

oscillating electricity in a metal rod produce radio waves

Using the long wavelengths
How do different substances affect radio waves, microwaves and infrared?

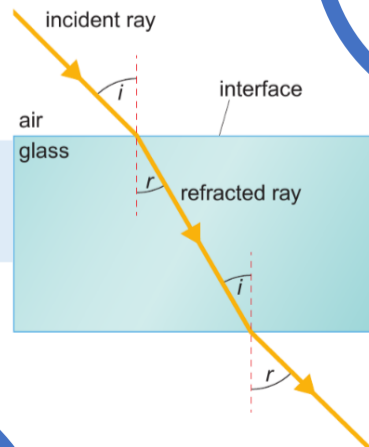
The electromagnetic spectrum
What are some of the differences in behaviour of waves in different parts of the EM spectrum?



Electromagnetic waves
What do all electromagnetic waves have in common?

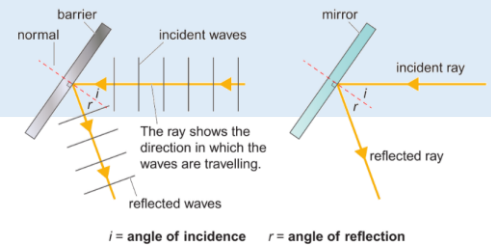
Lenses
How do different shaped lenses refract light?

Colour
How do filters affect coloured light?



LESSON 1

Investigating refraction
CORE PRACTICAL – Investigate refraction in rectangular glass blocks in terms of the interaction of EM waves with matter



Ray diagrams
How to use ray diagrams to show reflection and refraction

Retrieve:
KS2 reflection and shadows
P1.3 Light
P1.4.1 How we see objects
P1.4.4 The moon
P2.2.5 Thermal radiation
P2.3.1 Calculating Speed
SP1 Speed = distance / time