CP5 Light and the Electromagnetic Spectrum

CP5a Electromagnetic waves
Recall examples of electromagnetic waves.
Describe the common features of electromagnetic waves.
Describe the transfer of energy by electromagnetic waves.
Describe the range of electromagnetic waves that our eyes can detect.
H Describe an effect caused by the different velocities of electromagnetic waves in different substances.
CP5b The electromagnetic spectrum
Recall the groups of waves in the electromagnetic spectrum in order.
Recall the colours of the visible spectrum in order.
Describe how the waves in the electromagnetic spectrum are grouped.
H Describe some differences in the ways that different parts of the electromagnetic spectrum are absorbed and transmitted.
H Describe some differences in the ways that different parts of the electromagnetic spectrum are refracted and reflected.
CP5c Using the long wavelengths
H Describe how long wavelength electromagnetic waves are affected by different substances.
H Explain the effects caused by long wavelength electromagnetic waves travelling at different velocities in different substances.
Describe some uses of radio waves.
Describe some uses of microwaves.
Describe some uses of infrared.
Describe some uses of visible light.
H Describe how radio waves are produced and detected by electrical circuits.
CP5d Using the short wavelengths
H Describe how short wavelength electromagnetic waves are affected by different substances.
H Explain the effects caused by short wavelength electromagnetic waves travelling at different velocities in different substances.
Describe some uses of ultraviolet radiation.
Describe some uses of X-rays.
Describe some uses of gamma rays.
CP5e EM radiation dangers
Describe how the potential danger of electromagnetic radiation depends on its frequency.
Describe the harmful effects of microwave and infrared radiation.

Describe the harmful effects of ultraviolet radiation, X-rays and gamma rays.
Recall the nature of radiation produced by changes in atoms and their nuclei.
Recall that absorption of radiation can cause changes in atoms and their nuclei.