# CP5 Light and the Electromagnetic Spectrum

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| **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. |

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| 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. |