**Graphical user interface

Description automatically generated with medium confidenceElectromagnetic Radiation** (Phys)

RAG your understanding.

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|  | **Start of Topic** | **End of Topic** | **Revised** |
| **Electromagnetic Waves** |  |  |  |
| P.6.2.1.a - I can state that electromagnetic waves are transverse waves that travel at the same velocity through a vacuum and transfer energy from a source to an absorber, and that they are grouped in terms of their wavelength and their frequency. |  |  |  |
| P.6.2.1.b - I can list the groups of electromagnetic waves in order of wavelength: radio, microwave, infrared, visible light (red to violet), ultraviolet, X-rays and gamma rays, illustrating the transfer of energy, with examples. |  |  |  |
| P.6.2.1.c - I can explain that because our eyes only detect a limited range of electromagnetic waves, they can only detect visible light. |  |  |  |
| P***.6.2.2.a (HT) - I can explain how different wavelengths of electromagnetic radiation are reflected, refracted, absorbed or transmitted differently by different substances and types of surface.*** |  |  |  |
| P.6.2.2.b I can illustrate the refraction of a wave at the boundary between two different media by constructing ray diagrams. |  |  |  |
| ***P.6.2.2.c (HT) - I can describe that refraction is due to the difference in velocity of waves in different substances, and illustrate this using wave front diagrams.*** |  |  |  |
| ***P.6.2.3.a (HT) - I can explain that radio waves can be produced by oscillations in electrical circuits, or absorbed by electrical circuits, inducing an alternating current with the same frequency.*** |  |  |  |
| P.6.2.3.b - I can explain that changes in atoms and the nuclei of atoms can result in electromagnetic waves being generated or absorbed over a wide frequency range. |  |  |  |
| P.6.2.3.c - I can state examples of the dangers of each group of electromagnetic radiation, and discuss the effects of radiation as depending on the type of radiation and the size of the dose, measured in Sieverts. |  |  |  |
| P.6.2.4.a - I can state examples of the uses of each group of electromagnetic radiation, explaining why each type of electromagnetic wave is suitable for its applications. |  |  |  |

**NB – Further light is completed as a separate topic and blackbody radiation is taught with heat radiation.**