Edexcel iGCSE Physics 4PH0 Learning Plan

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| **Section C12: Using Waves** |
| Specification | Resources | Assessment |
| 3.10 understand that light is part of a continuous electromagnetic spectrum which includes radio, microwave, infrared, visible, ultraviolet, x-ray and gamma ray radiations and that all these waves travel at the same speed in free space 3.11 identify the order of the electromagnetic spectrum in terms of decreasing wavelength and increasing frequency, including the colours of the visible spectrum 3.12 explain some of the uses of electromagnetic radiations, including:  radio waves: broadcasting and communications  microwaves: cooking and satellite transmissions  infrared: heaters and night vision equipment  visible light: optical fibres and photography  ultraviolet: fluorescent lamps  x-rays: observing the internal structure of objects and materials and medical applications  gamma rays: sterilising food and medical equipment 3.13 understand the detrimental effects of excessive exposure of the human body to electromagnetic waves, including:  microwaves: internal heating of body tissue  infrared: skin burns  ultraviolet: damage to surface cells and blindness  gamma rays: cancer, mutation and describe simple protective measures against the risks. | Video: Physics Section 3 – Lesson 4 – The Electromagnetic SpectrumPowerpoint: Physics 20 – The Electromagnetic SpectrumTextbook: Ch.12 Using WavesPage 99 – The electromagnetic spectrumPage 101 – Radio WavesPage 101 – MicrowavesPage 102 – Infra-redPage 102 – Visible lightPage 102 – Ultraviolet lightPage 103 – X-raysPage 103 – Gamma raysPage 103 – Communicating using wavesPage 104 – Digital and Analogue signalsPage 105 – Advantages of using digital signalsPage 106 – Chapter ChecklistDVD Revision check list | Textbook – Ch.12 Using wavesPage – 106 Question (1) to (3)Textbook Answers (PDF)DVD Multiple choice testTalking paper – Edexcel Physics Section C12 Using Waves - videoSection C12 Exam Question – pdfSection C12 Exam Question Mark Scheme - pdf |

Videos – www.igcsesciencecourses.com

Textbook Ref: Edexcel International GCSE Physics Student Book - Pearson

DVD Video Clips – see resource DVD in textbook.