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 Spectrum  Powerpoint: Physics 20 – The Electromagnetic Spectrum  Textbook: Ch.12 Using Waves  Page 99 – The electromagnetic spectrum  Page 101 – Radio Waves  Page 101 – Microwaves  Page 102 – Infra-red  Page 102 – Visible light  Page 102 – Ultraviolet light  Page 103 – X-rays  Page 103 – Gamma rays  Page 103 – Communicating using waves  Page 104 – Digital and Analogue signals  Page 105 – Advantages of using digital signals  Page 106 – Chapter Checklist  DVD Revision check list | Textbook – Ch.12 Using waves  Page – 106 Question (1) to (3)  Textbook Answers (PDF)  DVD Multiple choice test  Talking paper – Edexcel Physics Section C12 Using Waves - video  Section C12 Exam Question – pdf  Section 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.