Edexcel iGCSE Biology 4BI0 Learning Plan

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| **Section E16: Chromosomes, Genes and DNA** | | |
| Specification | Resources | Assessment |
| 3.13 understand that the nucleus of a cell contains chromosomes on which genes are located  3.14 understand that a gene is a section of a molecule of DNA and that a gene codes for a specific protein  3.15 describe a DNA molecule as two strands coiled to form a double helix, the strands being linked by a series of paired bases: adenine (A) with thymine (T), and cytosine (C) with guanine (G)  3.16 understand that genes exist in alternative forms called alleles which give rise to differences in inherited characteristics  3.31 understand that many mutations are harmful but some are neutral and a few are beneficial  3.32 understand that resistance to antibiotics can increase in bacterial populations, and appreciate how such an increase can lead to infections being difficult to control  3.33 understand that the incidence of mutations can be increased by exposure to ionising radiation (for example gamma rays, X-rays and ultraviolet rays) and some chemical mutagens (for example chemicals in tobacco). | Video: Biology Section 3 – Lesson 3 Genetics and Inheritance (part 1) – beginning to 08:20. Biology Section 3 – Lesson 4 – Genetics and Inheritance (part 2) – 12.05 to end.  Powerpoint: Biology Section 3 Lesson 3 – slides 1 to 35. Biology Section 3 Lesson 4 – slides 51 to end.  Textbook: Ch.16 - page 181 to 189  Page 181 – The structure of DNA  Page 182 – The DNA code  Page 183 – DNA replication  Page 184 – The structure of chromosomes  Page 188 – End of Chapter Checklist  Chapter 16 – Chromosomes, Genes and DNA - Student checklist.doc  DVD Revision check list  <http://biology-igcse.weebly.com/key-definitions.html>  <http://biology-igcse.weebly.com/-chromosomes-dna.html>  <http://biology-igcse.weebly.com/mutation-radiation.html> | Textbook  Page 188 to 189 – Questions 1 to 4  Textbook Answers (PDF)  DVD Multiple choice test  Section E16 - exam question - pdf  Section E16 - exam question mark scheme – pdf  Talking paper video – Section E16 – Chromosomes, genes and DNA |

Videos – www.igcsesciencecourses.com

Textbook Ref: Edexcel International GCSE Biology Student Book - Pearson (Bradfield and Potter)

DVD Video Clips – see resource DVD in textbook.