Edexcel International GCSE Biology 4BI1 Learning Plan

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|  **Unit: 4. Ecology and the Environment** | **Chapter: 14. Ecosystems** | **Hours: 8** |
| Content coverage | Learning outcomes | Resources | Assessment |
| **Section 4: Ecology and the environment****a)** The organism in the environment | **4.1** understand the terms population, community, habitat and ecosystem**4.2** practical: investigate the population size of an organism in two different areas using quadrats**4.5** understand how abiotic and biotic factors affect the population size and distribution of Organisms.**4.3B understand the term biodiversity****4.4B practical: investigate the distribution of organisms in their habitats and****measure biodiversity using quadrats****4.6** understand the names given to different trophic levels, including producers, primary,secondary and tertiary consumers and decomposers**4.7** understand the concepts of food chains, food webs, pyramids of number, pyramids of biomass and pyramids of energy transfer.**4.8** understand the transfer of substances and energy along a food chain**4.9** understand why only about 10% of energy is transferred from one trophic level to the next.**4.10** describe the stages in the carbon cycle, including respiration, photosynthesis,decomposition and combustion**4.11B describe the stages in the nitrogen cycle, including the roles of nitrogen fixing bacteria, decomposers, nitrifying bacteria.** | Video: Biology Section 4 Lesson 1 – Ecology and the Environment (Part 1); Biology Section 4 Lesson 2 – Ecology and the Environment (Part 2); Biology Section 4 Lesson 3 – Recycling in Natural EcosystemsPowerpoint: Biology Section 4 Lesson 1; Biology Section 4 Lesson 2; Biology Section 4 Lesson 3Textbook pages:187 – Ecosystems188 – The components of ecosystems192 – Interactions in ecosystems197 – The flow of energy through ecosystems197 – Cycling nutrients through ecosystems | Page 201 – 203 Qs. 1 to 10Textbook Answers (PDF)Chapter 14 - exam question - pdfChapter 14 - exam question mark scheme – pdfChapter 14 - Talking paper video  |

Videos – [www.igcsesciencecourses.com](http://www.igcsesciencecourses.com)

Textbook Ref: Edexcel International GCSE (9-1) Biology Student Book - Pearson (Bradfield and Potter)