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 Ecosystems  Powerpoint: Biology Section 4 Lesson 1; Biology Section 4 Lesson 2; Biology Section 4 Lesson 3  Textbook pages:  187 – Ecosystems  188 – The components of ecosystems  192 – Interactions in ecosystems  197 – The flow of energy through ecosystems  197 – Cycling nutrients through ecosystems | Page 201 – 203 Qs. 1 to 10  Textbook Answers (PDF)  Chapter 14 - exam question - pdf  Chapter 14 - exam question mark scheme – pdf  Chapter 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)