**SNC 1D Biology Unit Test Study Guide**

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| **Day** | **Topic** | **Focus Areas** | **Suggested Textbook Questions** |
| 1 | 2.5 – Food Webs & Ecological Pyramids | * What is an ecological niche? * Types of Consumers * Understand how food chains, food webs, and ecological pyramids work and review the examples from the PowerPoint * What does the position of the tropic level indicate, and how does it effect the energy pathways? | 2.5 – pg.47 #1-8 |
| 2 | 2.6 – Cycling of Matter in Ecosystems | * Review the worksheets from class on:   + Water Cycle   + Nitrogen Cycle   + Carbon Cycle | 2.6 – pg.51 #1-10 |
| 3 | 2.2 – Introducing Ecosystems (Self-Study)  2.4 – Energy Flow in Ecosystems (Self-Study) | * *Read and make study notes on these 2 sections, and complete the section questions* * You should be able to differentiate between biotic and abiotic factors * What is a sustainable ecosystem? * Understand the process of photosynthesis and cellular respiration. How are these 2 processes related? | 2.2 – pg.35 #1-5  2.4 – pg.41 #1-7, 9-12 |
| 4 | 2.1 – Life on Planet Earth  2.7 – Biotic & Abiotic Influences on Ecosystems | * Review the board notes from class on section 2.1 * Define lithosphere, atmosphere, hydrosphere, and biosphere * Give examples of abiotic and biotic limiting factors * What are the 5 key types of species interactions and how do they work? (competition, predation, mutualism, parasitism, commensalism) * What is meant by carrying capacity? | 2.1 – pg.31 #1-5  2.7 – pg.55 #1-7 |
| 5 | 3.3 – The importance of Diversity  3.4 – Habitat Loss & Fragmentation  3.5 – The Introduction of Non-Native Species (Self-Study) | * What is meant by the term species richness? * What are the classifications and meaning of species at risk? (extinct, extirpated, endangered, threatened, special concern) * What are the factors that improve the sustainability of habitat fragments? (size, number, proximity, connectedness, integrity) * What human activities are having impacts on wetlands and aquatic ecosystems * Read and make study notes on this section, and complete the section questions * What is an invasive species? * What are the 4 types of impacts and consequences of invasive species? (ecological, economic, tourism, health) * What are the 3 methods of controlling introduced species and give an example (chemical control, mechanical control, biological control) | 3.3 – pg.86 #1-7  3.4 – pg.90 #1-7  3.5 – pg.94 #1-7 |
| 6 | 2.8 – Terrestrial Ecosystems  2.9 – Aquatic Ecosystems  3.1 – Services from Natural Ecosystems | * What is a biome? What are common types of biomes? * What are Canada’s five terrestrial biomes (mountain forest, tundra, boreal forest, grassland, temperate deciduous forest) and list one abiotic and biotic feature of each * Compare and contrast terrestrial and aquatic biomes (similarities and differences) * Describe 3 human activities that threaten terrestrial and aquatic habitats * Define oligotrophic and eutrophic * What are benefits/services from Natural ecosystems (cultural, products, environmental, economic, other) | 2.8 – pg.59#1-6  2.9 – pg.62 #1-7  3.1 – pg.79 #1-5 |
| 7 | 4.4 – Pests & Poisons  4.5 – Issues with Pesticides | * What are pesticides and what are the 3 different types? * What are the problems of pesticides in terms of bioaccumulation and bioamplification? * Provide 2 benefits and risks of pesticides * What is an alternative method to pesticides and how does it work? (organic farming) | 4.4 – pg.134 #1-7  4.5 – pg.140 #1-8 |
| 8 | 3.6 – Pollution  3.7 – Consumption & Resource Management | * What are the effects of acid rain, and how can we reduce it? * What are types of pollution and their effects (heavy metals, pesticides, fertilizers, ocean acidification, oil spills, plastics at sea) * What is sustainability and how can we manage it. | 3.6 – pg.101 #1-6  3.7 – pg.105 #1-6 |
| 9 | 4.7 – The Urban Ecosystem  4.1 – Engineered Ecosystems & Modern Agriculture | * Compare urban and natural ecosystems in terms of their various features * As humans, how can we reduce our ecological footprint (our impact on the environment) * Describe how you use engineered ecosystems * How are monocultures and agroecosystems related | 4.7 – pg.145 #1-7  4.1 – pg.122 #1-11 |