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| IB DP Biology 2 | | **Standards-Based Education Priority Standards** |
| **12th Grade** | | |
| *Human Physiology* | | |
| 6.5 | Neurons transmit the message, synapses modulate the message. | |
| 6.6/D.5 | Hormones are used when signals need to be widely distributed. | |
| 11.2 | The roles of the musculoskeletal system are movement, support and protection. | |
| 3.3/10.1 | Meiosis leads to independent assortment of chromosomes and unique composition of alleles in daughter cells, allowing for new genetic combinations in embryos. | |
| 11.3/D.3 | Organ systems regulate the body’s water and solute concentrations. | |
| 11.4 | Sexual reproduction involves the development and fusion of haploid gametes. | |
| *Plant Biology* | | |
| 2.9/8.3 | Photosynthesis uses the energy in sunlight to produce the chemical energy needed for life. | |
| 9.1/9.2 | Structure and function are correlated in the xylem and phloem of plants. | |
| 1.6 | Cell division is essential but must be controlled. | |
| 9.3 | Plants adapt their growth to environmental conditions. | |
| 9.4 | Reproduction in flowering plants is influenced by the biotic and abiotic environment. | |
| *Evolution* | | |
| 1.1 | The evolution of multicellular organisms allowed cell specialization and cell replacement. | |
| 1.5 | There is an unbroken chain of life from the first cells on Earth to all cells in organisms alive today. | |
| 5.1 | There is overwhelming evidence for the evolution of life on Earth. | |
| 5.2/10.3 | The diversity of life has evolved and continues to evolve by natural selection. | |
| 5.3 | Species are named and classified using an internationally agreed system. | |
| 5.4 | The ancestry of groups of species can be deduced by comparing their base or amino acid sequences. | |
| *Genetics* | | |
| 3.1/3.2 | Every living organism inherits a blueprint for life from its parents. | |
| 3.4/10.2 | The inheritance of genes follows patterns in which genes may be linked or unlinked. | |
| 3.5 | Biologists have developed techniques for artificial manipulation of DNA, cells and organisms. | |
| 2.6/7.1 | The structure of DNA allows for efficient storage of genetic information. | |
| 2.7/7.2/7.3 | Genetic information in DNA can be accurately copied and can be translated to make the proteins needed by the cell. | |
| *Literacy in Science* | | |
| 11-12. RST.1 | Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. | |
| 11-12. RST.3 | Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. | |
| 11-12. RST.7 | Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. | |
| 11-12. WHST.1 | Write arguments focused on discipline-specific content. | |
| 11-12. WHST.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. | |