

STAAR Review to Go – Biology, Volume 1

| Lesson Title  | Revised 2020 TEKS   | 2010 TEKS<br>(not streamlined<br>TEKS 2017) | Alignment   |
|---|---|---|---|
| <b>*Alignment refers to the content within the student expectation, not to three-dimensional instruction.</b> |   |   |   |
| <b>Cellular Energy</b>  | B.11(A) explain how matter is conserved and energy is transferred during photosynthesis and cellular respiration using models, including the chemical equations for these processes; and  | B.4(B)                                      | Aligned   |
| <b>Biomolecules</b>   | B.5(A) relate the functions of different types of biomolecules, including carbohydrates, lipids, proteins, and nucleic acids, to the structure and function of a cell;  | B.9(A)                                      | Task 1: Partial Alignment (omit columns 3-6)<br>Task 2: Omit all structure based responses in answer key and functions that are at the system level<br>Task 3: Omit |
| <b>Viral Reproduction</b>   | B.5(D) compare the structures of viruses to cells and explain how viruses spread and cause disease.   | B.4(C)                                      | Not Aligned   |
| <b>DNA</b>  | B.7(A) identify components of DNA, explain how the nucleotide sequence specifies some traits of an organism, and examine scientific explanations for the origin of DNA;   | B.6(A)                                      | Aligned   |
| <b>Meiosis</b>  | B.8(A) analyze the significance of chromosome reduction, independent assortment, and crossing over during meiosis in increasing diversity in populations of organisms that reproduce sexually; and  | B.6(G)                                      | Task 1: Omit<br>All other tasks are aligned   |
| <b>Scientific Evidence</b>  | B.9(A) analyze and evaluate how evidence of common ancestry among groups is provided by the fossil record, biogeography, and homologies, including anatomical, molecular, and developmental; and<br>B.9(B) examine scientific explanations for varying rates of change such as gradualism, abrupt appearance, and stasis in the fossil record.<br>B.10(A) analyze and evaluate how natural selection produces change in populations and not in individuals; | B.7(B)                                      | Task 1: Aligned to B.9(A)<br>Task 2: Aligned to B.10(A)<br>Task 3: Aligned to B.9(A)  |
| <b>Natural Selection</b>  | B.10(C) analyze and evaluate how natural selection may lead to speciation; and  | B.7(E)                                      | Aligned   |

|                           |  |         |  |
|---------------------------|--|---------|--|
| Homeostasis               | REMOVED  | B.11(A) | Not Aligned  |
| Plant Systems             | B.12(B) explain how the interactions that occur among systems that perform functions of transport, reproduction, and response in plants are facilitated by their structures. | B.10(B) | Aligned  |
| Flow of Matter and Energy | B.13(B) analyze how ecosystem stability is affected by disruptions to the cycling of matter and flow of energy through trophic levels using models;                          | B.12(C) | Partially Aligned; no tasks address ecosystem stability or the disruptions to the cycling of matter and flow of energy |
| Ecological Succession     | REMOVED; concept reflected in middle school TEKS   | B.11(D) | Not Aligned  |

| STAAR Review to Go – Biology, Volume 2  |   |   |  |
|---|---|---|--|
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| <b>Cell Transport</b>   | B.5(C) investigate homeostasis through the cellular transport of molecules; and   | B.4(B)                                      | Aligned  |
| <b>Cell Cycle</b>   | B.6(A) explain the importance of the cell cycle to the growth of organisms, including an overview of the stages of the cell cycle and deoxyribonucleic acid (DNA) replication models;                                 | B.5(A)                                      | Partially Aligned: <i>Tasks 3 and question 2, task 4 are aligned. Tasks 1, 2 and question 1, task 4 are NOT aligned.</i>   |
| <b>Changes in DNA</b>   | B.7(C) identify and illustrate changes in DNA and evaluate the significance of these changes; and   | B.6(E)                                      | Aligned  |
| <b>Predicting Genetic Outcomes</b>  | B.8(B) predict possible outcomes of various genetic combinations using monohybrid and dihybrid crosses, including non-Mendelian traits of incomplete dominance, codominance, sex-linked traits, and multiple alleles. | B.6(F)                                      | Aligned  |
| <b>Other Evolutionary Mechanisms</b>  | B.10(D) analyze evolutionary mechanisms other than natural selection, including genetic drift, gene flow, mutation, and genetic recombination, and their effect on the gene pool of a population.                     | B.7(F)                                      | Aligned  |
| <b>Classification</b>   | REMOVED, concept reflected in middle school TEKS  | B.8(A)                                      | Not Aligned  |
| <b>Enzymes</b>  | B.11(B) investigate and explain the role of enzymes in facilitating cellular processes  | B.9(C)                                      | Aligned  |
| <b>Body System Interactions</b>   | B.12(A) analyze the interactions that occur among systems that perform the functions of regulation, nutrient absorption, reproduction, and defense from injury or illness in animals; and;                            | B.10(A)                                     | Aligned  |
| <b>Flow of Matter</b>   | B.13(C) explain the significance of the carbon and nitrogen cycles to ecosystem stability and analyze the consequences of disrupting these cycles; and  | B.12(E)                                     | Aligned  |
| <b>Environmental Changes</b>  | B.13(D) explain how environmental change, including change due to human activity, affects biodiversity and analyze how changes in biodiversity impact ecosystem stability.  | B.12(F)                                     | Partially Aligned; <i>Tasks do not address effects on biodiversity by name. However, you can facilitate discussion around how changing populations affect biodiversity and thus ecosystem stability.</i> |