STAAR Alternate 2 Spring 2021
Biology Essence Statements

STAAR Reporting Category 1	STAAR Reporting Category 2	STAAR Reporting Category 3	STAAR Reporting Category 4	STAAR Reporting Category 5
Cell Structure and Function: The student will demonstrate an understanding of biomolecules as building blocks of cells, and that cells are the basic unit of structure and function of living things.	**Mechanisms of Genetics:** The student will demonstrate an understanding of the mechanisms of genetics.	**Biological Evolution and Classification:** The student will demonstrate an understanding of the theory of biological evolution and the hierarchical classification of organisms.	**Biological Processes and Systems:** The student will demonstrate an understanding of metabolic processes, energy conversions, and interactions and functions of systems in organisms.	**Interdependence within Environmental Systems:** The student will demonstrate an understanding of the interdependence and interactions that occur within an environmental system and their significance.
Knowledge and Skills Statement **Biology (4) Science concepts.** The student knows that all cells are basic structures of all living things with specialized parts that perform specific functions and that viruses are different from cells. (Readiness and Supporting Standard) **Essence Statement** Knows that all living things are composed of cells that perform specific functions and that viruses are different from cells. **Knowledge and Skills Statement** **Biology (5) Science concepts.** The student knows how an organism grows and the importance of cell differentiation. (Readiness and Supporting Standard) **Essence Statement** Recognizes the importance of the cell cycle and cell differentiation to the growth of organisms.	**Knowledge and Skills Statement** **Biology (6) Science concepts.** The student knows the mechanisms of genetics such as the role of nucleic acids and the principles of Mendelian and non-Mendelian genetics. (Readiness and Supporting Standard) **Essence Statement** Recognizes that the structure of DNA determines the inherited traits in organisms.	**Knowledge and Skills Statement** **Biology (7) Science concepts.** The student knows evolutionary theory is a scientific explanation for the unity and diversity of life. (Readiness and Supporting Standard) **Essence Statement** Knows evolutionary theory is a scientific explanation for the unity and diversity of life. **Knowledge and Skills Statement** **Biology (8) Science concepts.** The student knows that taxonomy is a branching classification based on the shared characteristics of organisms and can change as new discoveries are made. (Readiness and Supporting Standard) **Essence Statement** Knows that taxonomy is used to classify organisms based on shared characteristics.	**Knowledge and Skills Statement** **Biology (9) Science concepts**. The student knows the significance of various molecules involved in metabolic processes and energy conversions that occur in living organisms. (Readiness and Supporting Standard) **Essence Statement** Recognizes energy conversions in living organisms and the functions of various biomolecules. **Knowledge and Skills Statement** **Biology (10) Science concepts.** The student knows that biological systems are composed of multiple levels. (Readiness and Supporting Standard) **Essence Statement** Knows that biological systems have functions and interact.	**Knowledge and Skills Statement** **Biology (11) Science concepts.** The student knows that biological systems work to achieve and maintain balance. (Readiness and Supporting Standard) **Essence Statement** Knows that biological systems work to achieve and maintain balance. **Knowledge and Skills Statement** **Biology (12) Science concepts.** The student knows that interdependence and interactions occur within an environmental system. (Readiness and Supporting Standard) **Essence Statement** Knows that interdependence and interactions occur within an environmental system.