

STAAR Alternate 2 Spring 2025 Biology Essence Statements

Includes only the overlapping curriculum that is eligible for assessment in the 2024-2025 school year.

STAAR Reporting Category 1	STAAR Reporting Category 2	STAAR Reporting Category 3	STAAR Reporting Category 4	STAAR Reporting Category 5
<p>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.</p>	<p>Mechanisms of Genetics: The student will demonstrate an understanding of the mechanisms of genetics.</p>	<p>Biological Evolution and Classification: The student will demonstrate an understanding of the theory of biological evolution and the hierarchical classification of organisms.</p>	<p>Biological Processes and Systems: The student will demonstrate an understanding of metabolic processes, energy conversions, and interactions and functions of systems in organisms.</p>	<p>Interdependence within Environmental Systems: The student will demonstrate an understanding of the interdependence and interactions that occur within an environmental system and their significance.</p>
<p>Knowledge and Skills Statement</p> <p>Biology (5) Science concepts. The student knows that biological structures at multiple levels of organization perform specific functions and processes that affect life. (Readiness and Supporting Standard)</p> <p>Essence Statement Knows that all living things are composed of cells that perform specific functions and that viruses are different from cells.</p> <p>Knowledge and Skills Statement</p> <p>Biology (6) Science concepts. The student knows how an organism grows and the importance of cell differentiation. (Readiness and Supporting Standard)</p> <p>Essence Statement Recognizes the importance of the cell cycle and cell differentiation to the growth of organisms.</p>	<p>Knowledge and Skills Statement</p> <p>Biology (7) Science concepts. The student knows the role of nucleic acids in gene expression. (Readiness and Supporting Standard)</p> <p>Essence Statement Recognizes the structure of DNA.</p> <p>Knowledge and Skills Statement</p> <p>Biology (8) Science concepts. The student knows the role of nucleic acids and the principles of inheritance and variation of traits in Mendelian and non-Mendelian genetics. (Readiness and Supporting Standard)</p> <p>Essence Statement Knows that the structure of DNA determines inherited traits in organisms.</p>	<p>Knowledge and Skills Statement</p> <p>Biology (9) Science concepts. The student knows evolutionary theory is a scientific explanation for the unity and diversity of life that has multiple lines of evidence. (Readiness and Supporting Standard)</p> <p>Essence Statement Knows evolutionary theory is a scientific explanation for the unity and diversity of life.</p> <p>Knowledge and Skills Statement</p> <p>Biology (10) Science concepts. The student knows evolutionary theory is a scientific explanation for the unity and diversity of life that has multiple mechanisms. (Readiness and Supporting Standard)</p> <p>Essence Statement Knows that the unity and diversity caused by evolution can occur by multiple mechanisms.</p>	<p>Knowledge and Skills Statement</p> <p>Biology (12) Science concepts. The student knows that multicellular organisms are composed of multiple systems that interact to perform complex functions. (Readiness and Supporting Standard)</p> <p>Essence Statement Knows that biological systems have functions and interact.</p> <p><small>*Biology (12) Science concepts in the STAAR Alternate 2 Curriculum Framework, effective 2025-2026, are listed in Strand 1.</small></p>	<p>Knowledge and Skills Statement</p> <p>Biology (13) Science concepts. The student knows that interactions at various levels of organization occur within an ecosystem to maintain stability. (Readiness and Supporting Standard)</p> <p>Essence Statement Recognizes the balance and interdependence within biological systems and their interactions within the environment.</p> <p><small>**Biology (13) Science concepts in the STAAR Alternate 2 Curriculum Framework, effective 2025-2026, are listed in Strand 4.</small></p>