

# STAAR Alternate 2 Spring 2022

## Grade 8 Science Essence Statements

STAAR Reporting Category 1	STAAR Reporting Category 2	STAAR Reporting Category 3	STAAR Reporting Category 4
<p><b>Matter and Energy:</b> The student will demonstrate an understanding of the properties of matter and energy and their interactions.</p>	<p><b>Force, Motion, and Energy:</b> The student will demonstrate an understanding of force, motion, and energy and their relationships.</p>	<p><b>Earth and Space:</b> The student will demonstrate an understanding of components, cycles, patterns, and natural events of Earth and space systems.</p>	<p><b>Organisms and Environments:</b> The student will demonstrate an understanding of the structures and functions of living organisms and their interdependence on each other and on their environment.</p>
<p><b>Knowledge and Skills Statements</b></p> <p><b>(7.6) Matter and energy.</b> The student knows that matter has physical and chemical properties and can undergo physical and chemical changes. (Supporting Standard)</p> <p><b>(6.6) Matter and energy.</b> The student knows matter has physical properties that can be used for classification. (Supporting Standard)</p> <p><b>Essence Statement</b> Recognizes the physical and chemical properties and changes of matter and how physical properties are used for classification.</p> <p><b>Knowledge and Skills Statements</b></p> <p><b>(8.5) Matter and energy.</b> The student knows that matter is composed of atoms and has chemical and physical properties. (Readiness Standard)</p> <p><b>(7.5) Matter and energy.</b> The student knows that interactions occur between matter and energy. (Supporting Standard)</p> <p><b>Essence Statement</b> Recognizes that matter is composed of atoms, has distinct properties, and interacts with energy.</p>	<p><b>Knowledge and Skills Statement</b></p> <p><b>(6.8) Force, motion, and energy.</b> The student knows force and motion are related to potential and kinetic energy. (Supporting Standard)</p> <p><b>Essence Statement</b> Recognizes that force and motion are related to potential and kinetic energy.</p> <p><b>Knowledge and Skills Statement</b></p> <p><b>(8.6) Force, motion, and energy.</b> The student knows that there is a relationship between force, motion, and energy. (Readiness and Supporting Standard)</p> <p><b>Essence Statement</b> Recognizes that relationships exist between force, motion, and energy.</p>	<p><b>Knowledge and Skills Statement</b></p> <p><b>(6.11) Earth and space.</b> The student understands the organization of our solar system and the relationships among the various bodies that comprise it. (Supporting Standard)</p> <p><b>Essence Statement</b> Knows the organization and relationships among components of the solar system.</p> <p><b>Knowledge and Skills Statement</b></p> <p><b>(7.8) Earth and space.</b> The student knows that natural events and human activity can impact Earth systems. (Readiness and Supporting Standard)</p> <p><b>Essence Statement</b> Recognizes the relationship between groundwater and surface water in watersheds.</p> <p><b>Knowledge and Skills Statement</b></p> <p><b>(8.9) Earth and space.</b> The student knows that natural events can impact Earth systems. (Readiness and Supporting Standard)</p> <p><b>Essence Statement</b> Recognizes that natural events affect Earth's systems.</p>	<p><b>Knowledge and Skills Statement</b></p> <p><b>(7.10) Organisms and environments.</b> The student knows that there is a relationship between organisms and the environment. (Supporting Standard)</p> <p><b>Essence Statement</b> Knows the importance of biodiversity to the health of an ecosystem.</p> <p><b>Knowledge and Skills Statement</b></p> <p><b>(7.12) Organisms and environments.</b> The student knows that living systems at all levels of organization demonstrate the complementary nature of structure and function. (Supporting Standard)</p> <p><b>Essence Statement</b> Recognizes the classification of organisms.</p> <p><b>Knowledge and Skills Statements</b></p> <p><b>(8.11) Organisms and environments.</b> The student knows that interdependence occurs among living systems and the environment and that human activities can affect these systems. (Readiness and Supporting Standard)</p> <p><b>(7.11) Organisms and environments.</b> The student knows that populations and species demonstrate variation and inherit many of their unique traits through gradual processes over many generations. (Supporting Standard)</p> <p><b>Essence Statement</b> Recognizes the interdependence of</p>

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