

# STAAR Alternate 2 Spring 2021

## 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>  <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)  <b>(6.6) Matter and energy.</b> The student knows matter has physical properties that can be used for classification. (Supporting Standard)  <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>  <b>(8.5) Matter and energy.</b> The student knows that matter is composed of atoms and has chemical and physical properties. (Readiness Standard)  <b>(7.5) Matter and energy.</b> The student knows that interactions occur between matter and energy. (Supporting Standard)  <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>  <b>(6.9) Force, motion, and energy.</b> The student knows that the Law of Conservation of Energy states that energy can neither be created nor destroyed, it just changes form. (Supporting Standard)  <b>Essence Statement</b>            Knows that energy can neither be created nor destroyed but changes form.</p> <p><b>Knowledge and Skills Statement</b>  <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)  <b>Essence Statement</b>            Recognizes that relationships exist between force, motion, and energy.</p>	<p><b>Knowledge and Skills Statement</b>  <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)  <b>Essence Statement</b>            Knows the organization and relationships among components of the solar system.</p> <p><b>Knowledge and Skills Statement</b>  <b>(7.8) Earth and space.</b> The student knows that natural events and human activity can impact Earth systems. (Readiness and Supporting Standard)  <b>Essence Statement</b>            Recognizes the relationship between groundwater and surface water in watersheds.</p> <p><b>Knowledge and Skills Statement</b>  <b>(8.7) Earth and space.</b> The student knows the effects resulting from cyclical movements of the Sun, Earth, and Moon. (Readiness and Supporting Standard)  <b>Essence Statement</b>            Knows that the phases of the moon, the seasons on Earth, and the day and night cycle are the result of cyclical interactions among Earth, the Moon, and the Sun.</p>	<p><b>Knowledge and Skills Statement</b>  <b>(7.10) Organisms and environments.</b> The student knows that there is a relationship between organisms and the environment. (Supporting Standard)  <b>Essence Statement</b>            Knows the importance of biodiversity to the health of an ecosystem.</p> <p><b>Knowledge and Skills Statement</b>  <b>(7.14) Organisms and environments.</b> The student knows that reproduction is a characteristic of living organisms and that the instructions for traits are governed in the genetic material. (Supporting Standard)  <b>Essence Statement</b>            Recognizes that inherited traits are determined by genetic material.</p> <p><b>Knowledge and Skills Statements</b>  <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)  <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)  <b>Essence Statement</b>            Recognizes the interdependence of</p>

		<p><b>Knowledge and Skills Statement</b>  <b>(8.9) Earth and space.</b> The student knows that natural events can impact Earth systems. (Readiness and Supporting Standard)  <b>Essence Statement</b>  Recognizes that natural events affect Earth's systems.</p> <p><b>Knowledge and Skills Statement</b>  <b>(8.10) Earth and space.</b> The student knows that climatic interactions exist among Earth, ocean, and weather systems. (Supporting Standard)  <b>Essence Statement</b>  Knows that interactions exist among Earth, ocean, and weather systems.</p>	organisms with each other and with their environment.
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