Course Name: 7th Grade Science
School Year: 2025-2026

Course Purpose and Relevance:

Grade 7 science is interdisciplinary in nature; however, the content focus includes physical science, Earth and space science, and life science. The concepts within each grade level build on prior knowledge, prepare students for the next grade level, and establish a foundation for high school courses. Recurring themes such as patterns, cycles, systems, models, and scale transcend disciplinary boundaries and are integral to understanding the interconnected nature of science, mathematics, and technology.

7th Grade Honors Science is an accelerated course that covers standards from 7th and 8th grade. This curriculum is designed to build on students' existing knowledge, providing an in-depth understanding of the units of study and preparing them for advanced science courses in the future.

Overview of Student Outcomes:

- The student, for at least 40% of instructional time, conducts laboratory and field investigations following safety procedures and environmentally appropriate and ethical practices
- Scientific and Engineering Practices**:** Students conduct investigations to answer questions and explain phenomena using scientific and engineering practices, appropriate tools, and models. Investigations include descriptive, correlative, comparative, or experimental methods.
- Matter and Energy**:** Students investigate the differences between elements and compounds through observations, descriptions of physical properties, and chemical reactions. Students build upon their understanding of solutions by exploring aqueous solutions.
- Force**,** Motion, and Energy**:** Students build upon their understanding of the laws of motions by exploring Newton's First Law of Motion. Temperature is a measure of the average kinetic energy of molecules. Thermal energy is transferred by conduction, convection, or radiation in order to reach thermal equilibrium.
- Earth and Space: Students examine the characteristics and organization of celestial objects and the role of gravity in our solar system. They study Earth's life-supporting features, tectonic changes, and human impacts on the hydrosphere.
- Organisms and Environments: Students learn about the organization of cells into tissues, organs, and organ systems. They explore how traits are inherited and can change through natural and artificial selection. They analyze energy flow in ecosystems, the impact of biodiversity, and the taxonomic classifications of organisms.
- Nature of Science: Students understand that science is the use of evidence to construct testable explanations and predictions of natural phenomena. They learn that science involves physical, mathematical, and conceptual models.
- Scientific Observations, Inferences, Hypotheses, and Theories**:** Students know that observations involve acquiring information through senses, inferences are conclusions based on evidence, hypotheses are testable statements, and scientific theories are well-established explanations.
- Science and Social Ethics: Students distinguish between scientific decision-making practices and ethical and social decisions involving science, adhering to ethical standards in scientific processes.
- Recurring Themes and Concepts: Students analyze systems in terms of structure and function, systems, models, and patterns. They observe and model change and constancy in systems, understanding the limitations of models and making scientifically testable predictions.

Available Support for Student Learning:

Refer to the teacher's Course Syllabus for resources and course specific opportunities.
Student textbook and/or digital version are available through the CCISD Student Portal.

Link to Course TEKS on State website:

7th Grade TEKS Link

Year-at-a-Glance 25-26	Grade Level	7th Grade OL/HONORS Science

<table>
<tr><td></td><td colspan="2">First Semester Instruction</td></tr>
<tr><td rowspan="2">1st Nine Weeks</td><td colspan="2">Unit 1: Scientific and Engineering Practices (7.1-7.5)
BB 1: Lab Safety (7.1C, 7.1D)
BB 2: Exploring Phenomena through Inquiry (7.1-7.5)
TEKS 7.1-7.5 will be embedded throughout each unit supporting the implementation of 3-Dimensional Instruction</td></tr>
<tr><td>OL Unit 2: Matter and Energy (7.6)
BB 1: Physical and Chemical Changes (7.6C)
BB2: Elements, Compounds, and Formulas (7.6A, 7.6B)
BB 3: Properties of Solutions (7.6D & 7.6E)</td><td>H Unit 2: Matter and Energy (7.6)
BB 1: Elements, Compounds, and Formulas (7.6A, 7.6B, 8.6B)
BB 2: Conservation of Mass (8.6E)
BB 3: Properties of Solutions, Acids and Bases (7.6D, 7.6E, 8.6C, 8.6E)</td></tr>
<tr><td rowspan="3">2nd Nine Weeks</td><td>OL Unit 3: Force and Motion (7.7)
BB 1: Newton’s First Law (7.7D)
BB 2: Speed & Velocity (7.7A & 7.7B)
BB3: Distance-Time Graphs (7.7C)</td><td>H Unit 3: Force and Motion (7.7)
BB 1: Speed & Velocity (7.7A & 7.7B)
BB 2: Distance-Time Graphs (7.7C)
BB 3: Newton’s Laws (8.7A & 8.7B)</td></tr>
<tr><td colspan="2">Unit 4: Thermal Energy (7.8)
BB 1: Temperature and Kinetic Energy (7.8C)
BB 2: Thermal Energy Flow (7.8B)
BB3: Thermal Energy and Systems (7.8A)</td></tr>
<tr><td colspan="2">Semester Exam/District Created CBA</td></tr>
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Year-at-a-Glance 25-26	Grade Level	7th Grade OL/HONORS Science

	Second Semester Instruction	
3rd Nine Weeks	**OL Unit 5: The Solar System (7.9)** BB 1: Characteristics Supporting Life on Earth (7.9C) BB 2: Components of the Solar System (7.9A & 7.9B)	**H Unit 5: The Solar System and Universe (7.9 & 8.9)** BB 1: Characteristics Supporting Life on Earth (7.9C) BB 2: Components of the Solar System (7.9A & 7.9B) BB3: Universe (8.9A, 8.9B, & 8.9C)
	OL Unit 6: Earth's Changing Surface (7.10) BB 1: Evidence of Change (7.10A) BB 2: Effects of Plate Tectonics (7.10B)	**H Unit 6: Weather (8.10)** BB 1: Global Weather (8.10A, 8.10C) BB 2: Local Weather (8.10B) BB 3: Natural Influences on Climate (8.11A)
	OL Unit 7: Human Impact on Hydrosphere (7.11) BB 1: Human Impact and Dependence on Water (7.11A & 7.11B)	**H Unit 7: Human Impact on Hydrosphere (7.11)** BB 1: Human Impact and Dependence on Water (7.11A & 7.11B)
	OL Unit 8: Energy Flow in Ecosystems (7.12) BB 1: Energy in Ecosystems (7.12A & 7.12B)	**Honors Unit 8: Organisms and Environment (8.12)** BB 1: Energy in Ecosystems (8.12A) BB 2: Succession (8.12B) BB3: Biodiversity (8.12C)
4th Nine Weeks	**OL Unit 9: Structures in Living Organisms & Heredity and Genetics (7.13)** BB 1: Levels of Organization (7.13B) BB 2: Functions of Body Systems (7.13A) BB 3: Sexual and Asexual Reproduction (7.13C) BB 4: Natural and Artificial Selection (7.13D)	**Honors Unit 9: Structures in Living Organisms & Heredity and Genetics (7.13 & 8.13)** BB 1: Levels of Organization (7.13B) BB 2: Functions of Body Systems (7.13A) BB3: Sexual and Asexual Reproduction (7.13C, 8.13B) BB 4: Natural and Artificial Selection (7.13D, 8.13C)
	Unit 10: Taxonomy (7.14) BB 1: Taxonomy (7.14A & 7.14B)	
	Semester Exam	