

Gateways to Science STAAR Edition for Grade 6

Unit Outline

Unit 1: Introduction

Approximate Teaching Time: 1 Week

Lesson	Learning Goal	TEKS	
		Content	Process
1.1	Gateways to Science		6.4A
1.2	Safety		6.1A 6.4B

Unit 2: Matter and Energy

Approximate Teaching Time: 12 Weeks

Lesson	Learning Goal	TEKS	
		Content	Process
2.1	Defining Matter		6.1A 6.2A 6.4A
2.2	Physical Properties of Matter	6.6A	6.1A
2.3	Defining Density	6.6B	6.1A–B 6.4A
2.4	Density of Regular-Shaped Objects	6.6B	6.1A 6.2A 6.2C–E 6.4A
2.5	Density of Liquids	6.6B	6.1A 6.2C–E 6.3A 6.4A–B
2.6	Density of Irregular-Shaped Objects	6.6B	6.1A 6.2C 6.4A
2.7	Elements and Their Symbols	6.5C	6.1A 6.3A 6.4A
2.8	Metals, Nonmetals, and Metalloids	6.6A	6.1A 6.2C, E 6.3A 6.4A
2.9	Elements and Compounds	6.5C	6.2C 6.3B
2.10	Evidence of a Chemical Change	6.5D	6.1A 6.3A 6.4A–B

*Process skills are embedded in all lessons but only indicated upon first introduction.

Gateways to Science STAAR Edition for Grade 6 Unit Outline

Unit 3: Force, Motion, and Energy

Approximate Teaching Time: 11 Weeks

Lesson	Learning Goal	TEKS	
		Content	Process
3.1	Earth's Energy Resources	Research advantages and disadvantages of using various energy resources.	6.7A 6.2C
3.2	Energy Debate	Debate advantages and disadvantages of using various energy resources.	6.7A–B 6.3D
3.3	Potential and Kinetic Energy	Compare and contrast potential and kinetic energy.	6.8A 6.1A 6.2A–B 6.2D–E 6.4A
3.4	Forms of Energy	Identify forms of energy.	6.9C 6.1A 6.4B
3.5	Energy Transformations	Describe how energy changes form during energy transformations.	6.9C 6.2C 6.3A
3.6	Thermal Energy	Investigate how heat moves from place to place.	6.9A–B 6.2D–E 6.4A–B
3.7	Speed	Calculate and graph speed.	6.8C–D 6.2D–E 6.4A
3.8	Unbalanced Forces	Demonstrate how unbalanced forces cause changes in position and direction.	6.8B 6.2B–C, E
3.9	Pulleys and Inclined Planes	Investigate how the amount of force needed changes when using an inclined plane or a pulley.	6.8E 6.1A 6.2B–C 6.4B

Unit 4: Earth and Space

Approximate Teaching Time: 7 Weeks

Lesson	Learning Goal	TEKS	
		Content	Process
4.1	Gravity	Identify gravity as the force that controls the motion of the solar system.	6.11B 6.3B–D 6.4A–B
4.2	Planet Locations and Properties	Create a model of the solar system to describe the location of the planets.	6.11A 6.3B–C 6.4A
4.3	Planet Properties and Motion	Describe the physical properties and movements of the planets.	6.11A 6.2D–E 6.3A–B
4.4	Space Exploration	Research and describe historical contributions to space exploration.	6.11C 6.2C–D 6.3D
4.5	Earth's Layers	Build a model of Earth illustrating its structural layers.	6.10A 6.2C 6.5B 6.2E 6.3B–C
4.6	Tectonic Plates	Identify the major tectonic plates and determine the density of the crust.	6.10C–D 6.3A–C 6.4A–B

*Process skills are embedded in all lessons but only indicated upon first introduction.

Gateways to Science STAAR Edition for Grade 6 Unit Outline

Unit 4: Earth and Space *continued*

Approximate Teaching Time: 7 Weeks

Lesson	Learning Goal	TEKS		
		Content	Process	
4.7	Plate Tectonics and Geologic Events	Describe how the tectonic plates move, causing earthquakes, volcanic eruptions, and the formation of new ocean floor and mountains.	6.10D	6.3D 6.4A–B
4.8	Rock Cycle	Classify rocks based on how they were formed in the rock cycle.	6.10B	6.3A–C 6.4A–B
4.9	Minerals	Test the physical properties of minerals used to identify minerals.	6.6C	6.2E

Unit 5: Organisms and Their Environment

Approximate Teaching Time: 5 Weeks

Lesson	Learning Goal	TEKS		
		Content	Process	
5.1	Biotic and Abiotic Factors	Describe biotic and abiotic parts of an ecosystem in which organisms interact.	6.12E	6.4A
5.2	Levels of Organization within an Ecosystem	Diagram the levels of organization within an ecosystem, including organism, population, community, and ecosystem.	6.12F	6.2C 6.4A
5.3	The Microscope	Identify parts of a compound microscope and properly use the microscope.	6.12A	6.1A 6.3D 6.4A
5.4	Cells	Observe organisms using a microscope and determine characteristics of cells.	6.12A–B	6.1A 6.3D 6.4A
5.5	Kingdoms	Classify organisms into six Kingdoms according to basic characteristics.	6.12D	6.2E
5.6	Domains	Explain why scientists use Domains and Kingdoms to organize and classify organisms.	6.12C	6.2E

*Process skills are embedded in all lessons but only indicated upon first introduction.