


SCIENCE TEKS Side-by-Sides

— FOR TEACHERS —
MIDDLE SCHOOL


6.1 Scientific investigation and reasoning. The student, for at least 40% of instructional time, conducts laboratory and field investigations following safety procedures and environmentally appropriate and ethical practices. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.1(A) 	demonstrate safe practices during laboratory and field investigations as outlined in Texas Education Agency approved safety standards	6.1(A) demonstrate safe practices during laboratory and field investigations as outlined in TEA approved safety standards <i>the Texas Safety Standards</i>	Revised • Clarified safety standards
6.1(B)	practice appropriate use and conservation of resources, including disposal, reuse, or recycling of materials	6.1(B) practice appropriate use and conservation of resources, including disposal, reuse, or recycling of materials	No change in content


6.2 Scientific investigation and reasoning. The student uses scientific **practices** *inquiry methods* during laboratory and field investigations. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.2(A)	plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	6.2(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	No change in content
6.2(B)	design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology	6.2(B) design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology	No change in content
6.2(C)	collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers	6.2(C) collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizer	No change in content
6.2(D)	construct tables and graphs, using repeated trials and means, to organize data and identify patterns	6.2(D) construct tables and graphs, using repeated trials and means, to organize data and identify patterns	No change in content
6.2(E)	analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends	6.2(E) analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends	No change in content




6.3 Scientific investigation and reasoning. The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions and knows the contributions of relevant scientists. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.3(A) 	analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, so as to encourage critical thinking by the student	6.3(A) <i>in all fields of science</i> , analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, <i>including examining all sides of scientific evidence of those scientific explanations</i> , so as to encourage critical thinking by the student	Revised <ul style="list-style-type: none"> Clarified standard
6.3(B)	use models to represent aspects of the natural world such as a model of Earth’s layers	6.3(B) use models to represent aspects of the natural world such as a model of Earth’s layers	No change in content
6.3(C)	identify advantages and limitations of models such as size, scale, properties, and materials	6.3(C) identify advantages and limitations of models such as size, scale, properties, and materials	No change in content
6.3(D)	relate the impact of research on scientific thought and society, including the history of science and contributions of scientists as related to the content	6.3(D) relate the impact of research on scientific thought and society, including the history of science and contributions of scientists as related to the content	No change in content

6.4 Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.4(A) 	use appropriate tools, including journals/notebooks, beakers, petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, balances, microscopes, thermometers, calculators, computers, timing devices, and other necessary equipment to collect, record and analyze information	6.4(A) use appropriate tools <i>to collect, record, and analyze information</i> , including journals/notebooks, beakers, petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, <i>triple beam</i> balances, microscopes, thermometers, calculators, computers, timing devices, and other equipment <i>as needed to teach the curriculum</i>	Revised <ul style="list-style-type: none"> Clarified standard Replaced triple beam balance with balance (options)
6.4(B)	use preventative safety equipment, including chemical splash goggles, aprons, and gloves, and be prepared to use emergency safety equipment, including an eye/face wash, a fire blanket, and a fire extinguisher	6.4(B) use preventative safety equipment, including chemical splash goggles, aprons, and gloves, and be prepared to use emergency safety equipment, including an eye/face wash, a fire blanket, and a fire extinguisher	No change in content



6.5 Matter and energy. The student knows the differences between elements and compounds. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.5(A)* 	know that an element is a pure substance represented by a chemical symbol and that a compound is a pure substance represented by a chemical formula	6.5(A) know that an element is a pure substance represented by a chemical <i>symbols</i>	Revised • Added: compounds and representation with a formula
6.5(B)	recognize that a limited number of the many known elements comprise the largest portion of solid Earth, living matter, oceans, and the atmosphere	6.5(B) recognize that a limited number of the many known elements comprise the largest portion of solid Earth, living matter, oceans, and the atmosphere	No change in content
		<i>6.5(C)* differentiate between elements and compounds on the most basic level</i>	2010 Standard Deleted
6.5(C)* 	identify the formation of a new substance by using the evidence of a possible chemical change such as production of a gas, change in temperature, production of a precipitate, or color change	6.5(D) identify the formation of a new substance by using the evidence of a possible chemical change such as production of a gas, change in temperature, production of a precipitate, or color change	Standard Recoded • Recoded 6.5(D) to 6.5(C)


6.6 Matter and energy. The student knows matter has physical properties that can be used for classification. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.6(A)*	compare metals, nonmetals, and metalloids using physical properties such as luster, conductivity, or malleability	6.6(A) compare metals, nonmetals, and metalloids using physical properties such as luster, conductivity, or malleability	No change in content
6.6(B)*	calculate density to identify an unknown substance	6.6(B) calculate density to identify an unknown substance	No change in content
6.6(C)	test the physical properties of minerals, including hardness, color, luster, and streak	6.6(C) test the physical properties of minerals, including hardness, color, luster, and streak	No change in content

6.7 Matter and energy. The student knows that some of Earth’s energy resources are available on a nearly perpetual basis, while others can be renewed over a relatively short period of time. Some energy resources, once depleted, are essentially nonrenewable. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.7(A) 	research and discuss the advantages and disadvantages of using coal, oil, natural gas, nuclear power, biomass, wind, hydropower, geothermal, and solar resources	6.7(A) research and discuss <i>debate</i> the advantages and disadvantages of using coal, oil, natural gas, nuclear power, biomass, wind, hydropower, geothermal, and solar resources	Revised • Standard clarified
		6.7(B) <i>design a logical plan to manage energy resources in the home, school, or community</i>	2010 Standard Deleted



6.8 Force, motion, and energy. The student knows force and motion are related to potential and kinetic energy. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.8(A)*	compare and contrast potential and kinetic energy	6.8(A) compare and contrast potential and kinetic energy	No change in content
6.8(B)	identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces	6.8(B) identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces	No change in content
6.8(C)*	calculate average speed using distance and time measurements	6.8(C) calculate average speed using distance and time measurements	No change in content
6.8(D)*	measure and graph changes in motion	6.8(D) measure and graph changes in motion	No change in content
6.8(E) 	investigate how inclined planes can be used to change the amount of force to move an object	6.8(E) investigate how inclined planes <i>and pulleys</i> can be used to change the amount of force to move an object	Revised • Removed: pulleys


6.9 Force, motion, and energy. The student knows that the Law of Conservation of Energy states that energy can neither be created nor destroyed, it just changes form. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.9(A)	investigate methods of thermal energy transfer, including conduction, convection, and radiation	6.9(A) investigate methods of thermal energy transfer, including conduction, convection, and radiation	No change in content
6.9(B)	verify through investigations that thermal energy moves in a predictable pattern from warmer to cooler until all the substances attain the same temperature such as an ice cube melting	6.9(B) verify through investigations that thermal energy moves in a predictable pattern from warmer to cooler until all the substances attain the same temperature such as an ice cube melting	No change in content
6.9(C)*	demonstrate energy transformations such as energy in a flashlight battery changes from chemical energy to electrical energy to light energy	6.9(C) demonstrate energy transformations such as energy in a flashlight battery changes from chemical energy to electrical energy to light energy	No change in content


6.10 Earth and space. The student understands the structure of Earth, the rock cycle, and plate tectonics. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.10(A) 	build a model to illustrate the compositional and mechanical layers of Earth, including the inner core, outer core, mantle, crust, asthenosphere, and lithosphere	6.10(A) build a model to illustrate the <i>structural</i> layers of Earth, including the inner core, outer core, mantle, crust, asthenosphere, and lithosphere	Revised • Clarified standard
6.10(B)	classify rocks as metamorphic, igneous, or sedimentary by the processes of their formation	6.10(B) classify rocks as metamorphic, igneous, or sedimentary by the processes of their formation	No change in content
6.10(C)	identify the major tectonic plates, including Eurasian, African, Indo-Australian, Pacific, North American, and South American	6.10(C) identify the major tectonic plates, including Eurasian, African, Indo-Australian, Pacific, North American, and South American	No change in content
6.10(D) 	describe how plate tectonics causes major geological events such as ocean basin formation , earthquakes, volcanic eruptions, and mountain building	6.10(D) describe how plate tectonics causes major geological events such as ocean <i>basins</i> , earthquakes, volcanic eruptions, and mountain building.	Revised • Clarified standard


6.11 Earth and space. The student understands the organization of our solar system and the relationships among the various bodies that comprise it. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.11(A) 	describe the physical properties, locations, and movements of the Sun, planets, moons, meteors, asteroids, and comets	6.11(A) describe the physical properties, locations, and movements of the Sun, planets, <i>Galilean</i> moons, meteors, asteroids, and comets	Revised • Removed: Galilean moons (no longer in the TEKS)
6.11(B)*	understand that gravity is the force that governs the motion of our solar system	6.11(B) understand that gravity is the force that governs the motion of our solar system	No change in content
6.11(C)	describe the history and future of space exploration, including the types of equipment and transportation needed for space travel	6.11(C) describe the history and future of space exploration, including the types of equipment and transportation needed for space travel	No change in content

6.12 Organisms and Environments. The student knows all organisms are classified into Domains and Kingdoms. Organisms within these taxonomic groups share similar characteristics that allow them to interact with the living and nonliving parts of their ecosystem. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
6.12(A)	understand that all organisms are composed of one or more cells	6.12(A) understand that all organisms are composed of one or more cells	No change in content
6.12(B) 	recognize that the presence of a nucleus is a key factor used to determine whether a cell is prokaryotic or eukaryotic	6.12(B) recognize that the presence of a nucleus <i>determines</i> whether a cell is prokaryotic or eukaryotic	Revised • Clarified standard
6.12(C)	recognize that the broadest taxonomic classification of living organisms is divided into currently recognized Domains	6.12(C) recognize that the broadest taxonomic classification of living organisms is divided into currently recognized Domains	No change in content
6.12(D)*	identify the basic characteristics of organisms, including prokaryotic or eukaryotic, unicellular or multicellular, autotrophic or heterotrophic, and mode of reproduction, that further classify them in the currently recognized Kingdoms	6.12(D) identify the basic characteristics of organisms, including prokaryotic or eukaryotic, unicellular or multicellular, autotrophic or heterotrophic, and mode of reproduction, that further classify them in the currently recognized Kingdoms	No change in content
6.12(E)	describe biotic and abiotic parts of an ecosystem in which organisms interact	6.12(E) describe biotic and abiotic parts of an ecosystem in which organisms interact	No change in content
6.12(F)	diagram the levels of organization within an ecosystem, including organism, population, community, and ecosystem	6.12(F) diagram the levels of organization within an ecosystem, including organism, population, community, and ecosystem	No change in content


7.1 Scientific investigation and reasoning. The student, for at least 40% of instructional time, conducts laboratory and field investigations following safety procedures and environmentally appropriate and ethical practices. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.1(A) 	demonstrate safe practices during laboratory and field investigations as outlined in Texas Education Agency approved safety standards	7.1(A) demonstrate safe practices during laboratory and field investigations as outlined in TEA approved safety standards <i>the Texas Safety Standards</i>	Revised • Clarified safety standards
7.1(B)	practice appropriate use and conservation of resources, including disposal, reuse, or recycling of materials	7.1(B) practice appropriate use and conservation of resources, including disposal, reuse, or recycling of materials	No change in content

7.2 Scientific investigation and reasoning. The student uses scientific **practices** *inquiry methods* during laboratory and field investigations. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.2(A)	plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	7.2(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	No change in content
7.2(B)	design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology	7.2(B) design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology	No change in content
7.2(C)	collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers	7.2(C) collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers	No change in content
7.2(D)	construct tables and graphs, using repeated trials and means, to organize data and identify patterns	7.2(D) construct tables and graphs, using repeated trials and means, to organize data and identify patterns	No change in content
7.2(E)	analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends	7.2(E) analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends	No change in content

7.3 Scientific investigation and reasoning. The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions and knows the contributions of relevant scientists. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.3(A) 	analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, so as to encourage critical thinking by the student	7.3(A) <i>in all fields of science</i> , analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, <i>including examining all sides of scientific evidence of those scientific explanations</i> , so as to encourage critical thinking by the student	Revised <ul style="list-style-type: none"> Removed: in all fields of science, including examining all sides of scientific evidence of those scientific explanations
7.3(B)	use models to represent aspects of the natural world such as human body systems and plant and animal cells	7.3(B) use models to represent aspects of the natural world such as human body systems and plant and animal cells	No change in content
7.3(C)	identify advantages and limitations of models such as size, scale, properties, and materials	7.3(C) identify advantages and limitations of models such as size, scale, properties, and materials	No change in content
7.3(D)	relate the impact of research on scientific thought and society, including the history of science and contributions of scientists as related to the content	7.3(D) relate the impact of research on scientific thought and society, including the history of science and contributions of scientists as related to the content	No change in content



revised standard




recoded standard





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gray indicates part of standard deleted *indicates SE has been tested on STAAR
bold indicates revisions to standard

7.4 Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.4(A) 	use appropriate tools including life science models, hand lenses, stereoscopes, microscopes, beakers, Petri dishes, microscope slides, graduated cylinders, test tubes, meter sticks, metric rulers, metric tape measures, timing devices, hot plates, balances, thermometers, calculators, water test kits, computers, temperature and pH probes, collecting nets, insect traps, globes, digital cameras, journals/notebooks and other necessary equipment to collect, record and analyze information	7.4(A) use appropriate tools to collect, record, and analyze information, including life science models, hand lens, stereoscopes, microscopes, beakers, Petri dishes, microscope slides, graduated cylinders, test tubes, meter sticks, metric rulers, metric tape measures, timing devices, hot plates, balances, thermometers, calculators, water test kits, computers, temperature and pH probes, collecting nets, insect traps, globes, digital cameras, journals/notebooks and other equipment <i>as needed to teach the curriculum</i>	Revised • Clarified standard
7.4(B)	use preventative safety equipment, including chemical splash goggles, aprons, and gloves, and be prepared to use emergency safety equipment, including an eye/face wash, a fire blanket, and a fire extinguisher	7.4(B) use preventative safety equipment, including chemical splash goggles, aprons, and gloves, and be prepared to use emergency safety equipment, including an eye/face wash, a fire blanket, and a fire extinguisher	No change in content

7.5 Matter and energy. The student knows that interactions occur between matter and energy. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.5(A)	recognize that radiant energy from the Sun is transformed into chemical energy through the process of photosynthesis	7.5(A) recognize that radiant energy from the Sun is transformed into chemical energy through the process of photosynthesis	No change in content
		7.5(B) <i>demonstrate and explain the cycling of matter within living systems such as in the decay of biomass in a compost bin</i>	2010 Standard Deleted • Content addressed in Biology
7.5(B)* 	diagram the flow of energy through living systems, including food chains, food webs, and energy pyramids	7.5(C) diagram the flow of energy through living systems, including food chains, food webs, and energy pyramids	Standard Recoded • 7.5(C) recoded to 7.5(B)



revised standard







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gray indicates part of standard deleted *indicates SE has been tested on STAAR
bold indicates revisions to standard


7.6 Matter and energy. The student knows that matter has physical and chemical properties and can undergo physical and chemical changes. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
		<i>7.6(A) identify that organic compounds contain carbon and other elements such as hydrogen, oxygen, phosphorus, nitrogen, or sulfur</i>	<p>2010 Standard Deleted</p> <ul style="list-style-type: none"> Content will be addressed in Biology <p>Impact</p> <ul style="list-style-type: none"> 7.6(A) has been tested on STAAR in the past
<p>7.6(A)</p>  	distinguish between physical and chemical changes in matter	7.6(B) distinguish between physical and chemical changes in matter <i>in the digestive system</i>	<p>Standard Recoded</p> <p>Impact</p> <ul style="list-style-type: none"> 7.6(B) has been tested on STAAR in the past
		<i>7.6(C) recognize how large molecules are broken down into smaller molecules such as carbohydrates can be broken down into sugars.</i>	<p>2010 Standard Deleted</p> <p>Impact</p> <ul style="list-style-type: none"> Content will be addressed in Biology

7.7 Force, motion, and energy. The student knows that there is a relationship among force, motion, and energy. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
		7.7(A) contrast situations where work is done with different amounts of force to situations where no work is done such as moving a box with a ramp and without a ramp, or standing still	2010 Standard Deleted Impact <ul style="list-style-type: none"> Content will be addressed in Physics 7.7(A) has been tested on STAAR in the past
7.7(A)* 	illustrate the transformation of energy within an organism such as the transfer from chemical energy and thermal energy	7.7(B) illustrate the transformation of energy within an organism such as the transfer from chemical energy to heat and thermal energy in digestion	No change in content Standard Recoded <ul style="list-style-type: none"> Moved 7.7(B) to 7.7(A)
7.7(B)* 	demonstrate and illustrate forces that affect motion in organisms such as emergence of seedlings, turgor pressure, geotropism, and circulation of blood	7.7(C) demonstrate and illustrate forces that affect motion in organisms <i>everyday life</i> such as emergence of seedlings, turgor pressure, and geotropism	Revised <ul style="list-style-type: none"> Clarified standard Standard Recoded <ul style="list-style-type: none"> Moved 7.7(C) to 7.7(B)


7.8 Earth and space. The student knows that natural events and human activity can impact Earth systems. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.8(A) 	predict and describe how catastrophic events such as floods, hurricanes, or tornadoes impact ecosystems	7.8(A) predict and describe how <i>different types of</i> catastrophic events such as floods, hurricanes, or tornadoes	Revised <ul style="list-style-type: none"> Clarified standard
7.8(B)	analyze the effects of weathering, erosion, and deposition on the environment in ecoregions of Texas	7.8(B) analyze the effects of weathering, erosion, and deposition on the environment in ecoregions of Texas	No change in content
7.8(C)*	model the effects of human activity on groundwater and surface water in a watershed	7.8(C) model the effects of human activity on groundwater and surface water in a watershed	No change in content

7.9 Earth and space. The student knows components of our solar system. The student is expected to:			
TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.9(A)	analyze the characteristics of objects in our solar system that allow life to exist such as the proximity of the Sun, presence of water, and composition of the atmosphere	7.9(A) analyze the characteristics of objects in our solar system that allow life to exist such as the proximity of the Sun, presence of water, and composition of the atmosphere	No change in content
7.9(B)	identify the accommodations, considering the characteristics of our solar system that enabled manned space exploration	7.9(B) identify the accommodations, considering the characteristics of our solar system that enabled manned space exploration	No change in content

7.10 Organisms and Environments. The student knows that there is a relationship between organisms and the environment. The student is expected to:			
TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.10(A)	observe and describe how different environments, including microhabitats in schoolyards and biomes, support different varieties of organisms	7.10(A) observe and describe how different environments, including microhabitats in schoolyards and biomes, support different varieties of organisms	No change in content
7.10(B)*	describe how biodiversity contributes to the sustainability of an ecosystem	7.10(B) describe how biodiversity contributes to the sustainability of an ecosystem	No change in content
7.10(C)*	observe, record, and describe the role of ecological succession such as in a microhabitat of a garden with weeds	7.10(C) observe, record, and describe the role of ecological succession such as in a microhabitat of a garden with weeds	No change in content

7.11 Organisms and Environments. The student knows that populations and species demonstrate variation and inherit many of their unique traits through gradual processes over many generations. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.11(A)*	examine organisms or their structures such as insects or leaves and use dichotomous keys for identification	7.11(A) examine organisms or their structures such as insects or leaves and use dichotomous keys for identification	No change in content
7.11(B)	explain variation within a population or species by comparing external features, behaviors, or physiology of organisms that enhance their survival such as migration, hibernation, or storage of food in a bulb	7.11(B) explain variation within a population or species by comparing external features, behaviors, or physiology of organisms that enhance their survival such as migration, hibernation, or storage of food in a bulb	No change in content
7.11(C)* 	identify some changes in genetic traits that have occurred over several generations through natural selection and selective breeding such as the Galapagos Medium Ground Finch (<i>Geospiza fortis</i>) or domestic animals and hybrid plants	7.11(C) identify some changes in genetic traits that have occurred over several generations through natural selection and selective breeding such as the Galapagos Medium Ground Finch (<i>Geospiza fortis</i>) or domestic animal	Revised • Added: hybrid plants



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gray indicates part of standard deleted *indicates SE has been tested on STAAR


bold indicates revisions to standard

7.12 Organisms and Environments. The student knows that living systems at all levels of organization demonstrate the complementary nature of structure and function. The student is expected to:			
TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.12(A)	investigate and explain how internal structures of organisms have adaptations that allow specific functions such as gills in fish, hollow bones in birds, or xylem in plants	7.12(A) investigate and explain how internal structures of organisms have adaptations that allow specific functions such as gills in fish, hollow bones in birds, or xylem in plants	No change in content
7.12(B)*	identify the main functions of the systems of the human organism, including the circulatory, respiratory, skeletal, muscular, digestive, excretory, reproductive, integumentary, nervous, and endocrine systems	7.12(B) identify the main functions of the systems of the human organism, including the circulatory, respiratory, skeletal, muscular, digestive, excretory, reproductive, integumentary, nervous, and endocrine systems	No change in content
7.12(C)	recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	7.12(C) recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	No change in content
7.12(D)*	differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	7.12(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	No change in content
7.12(E) 	compare the functions of cell organelles to the functions of an organ system	7.12(E) compare the functions of <i>a</i> cell organelles to the functions of an organ system <i>organisms such as waste removal</i>	Revised • Clarified standard
7.12(F)* 	recognize the components of cell theory	7.12(F) recognize <i>that according to</i> cell theory <i>all organisms are composed of cells and cells carry on similar functions such as extracting energy from food to sustain life</i>	Revised • Clarified standard

7.13 Organisms and Environments. The student knows that a living organism must be able to maintain balance in stable internal conditions in response to external and internal stimuli. The student is expected to

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.13(A)	investigate how organisms respond to external stimuli found in the environment such as phototropism and fight or flight	7.13(A) investigate how organisms respond to external stimuli found in the environment such as phototropism and fight or flight	No change in content
7.13(B)	describe and relate responses in organisms that may result from internal stimuli such as wilting in plants and fever or vomiting in animals that allow them to maintain balance	7.13(B) describe and relate responses in organisms that may result from internal stimuli such as wilting in plants and fever or vomiting in animals that allow them to maintain balance	No change in content

7.14 Organisms and Environments. The student knows that reproduction is a characteristic of living organisms and that the instructions for traits are governed in the genetic material. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
7.14(A)	define heredity as the passage of genetic instructions from one generation to the next generation	7.14(A) define heredity as the passage of genetic instructions from one generation to the next generation	No change in content
7.14(B)* 	compare the results of uniform or diverse offspring from asexual or sexual reproduction	7.14(B) compare the results of uniform or diverse offspring from sexual reproduction <i>or asexual reproduction</i>	Revised • Clarified standard
7.14(C)*	recognize that inherited traits of individuals are governed in the genetic material found in the genes within chromosomes in the nucleus	7.14(C) recognize that inherited traits of individuals are governed in the genetic material found in the genes within chromosomes in the nucleus	No change in content



revised standard




recoded standard



deleted standard

gray indicates part of standard deleted *indicates SE has been tested on STAAR
bold indicates revisions to standard

8.1 Scientific investigation and reasoning. The student, for at least 40% of instructional time, conducts laboratory and field investigations following safety procedures and environmentally appropriate and ethical practices. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
8.1(A)* 	demonstrate safe practices during laboratory and field investigations as outlined in Texas Education Agency approved safety standards	8.1(A) demonstrate safe practices during laboratory and field investigations as outlined in TEA approved safety standards <i>the Texas Safety Standards</i>	Revised • Clarified safety standards
8.1(B)*	practice appropriate use and conservation of resources, including disposal, reuse, or recycling of materials	8.1(B) practice appropriate use and conservation of resources, including disposal, reuse, or recycling of materials	No change in content



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8.2 Scientific investigation and reasoning. The student uses scientific **practices** *inquiry methods* during laboratory and field investigations. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
8.2(A)*	plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	8.2(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	No change in content
8.2(B)* 	design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	8.2(B) design and implement <i>comparative and</i> experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	Revised • Removed: comparative investigations
8.2(C)*	collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers	8.2(C) collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers	No change in content
8.2(D)*	construct tables and graphs, using repeated trials and means, to organize data and identify patterns	8.2(D) construct tables and graphs, using repeated trials and means, to organize data and identify patterns	No change in content
8.2(E)*	analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends	8.2(E) analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends	No change in content



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8.3 Scientific investigation and reasoning. The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions and knows the contributions of relevant scientists. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
8.3(A)* 	analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, so as to encourage critical thinking by the student	8.3(A) <i>in all fields of science</i> , analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, <i>including examining all sides of scientific evidence of those scientific explanations</i> , so as to encourage critical thinking by the student	Revised <ul style="list-style-type: none"> Removed: in all fields of science, including examining all sides of scientific evidence of those scientific explanations
8.3(B)*	use models to represent aspects of the natural world such as an atom, a molecule, space, or a geologic feature	8.3(B) use models to represent aspects of the natural world such as an atom, a molecule, space, or a geologic feature	No change in content
8.3(C)*	identify advantages and limitations of models such as size, scale, properties, and materials	8.3(C) identify advantages and limitations of models such as size, scale, properties, and materials	No change in content
8.3(D)*	relate the impact of research on scientific thought and society, including the history of science and contributions of scientists as related to the content	8.3(D) relate the impact of research on scientific thought and society, including the history of science and contributions of scientists as related to the content	No change in content



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8.4 Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
8.4(A)* 	use appropriate tools, including lab journals/notebooks, beakers, meter sticks, graduated cylinders, anemometers, psychrometers, hot plates, test tubes, spring scales, balances, microscopes, thermometers, calculators, computers, spectrosopes, timing devices, and other necessary equipment to collect, record, and analyze information	8.4(A) use appropriate tools to collect, record, and analyze information, including lab journals/notebooks, beakers, meter sticks, graduated cylinders, anemometers, psychrometers, hot plates, test tubes, spring scales, balances, microscopes, thermometers, calculators, computers, spectrosopes, timing devices, and other equipment as needed to teach the curriculum	Revised • Clarified standard
8.4(B)*	use preventative safety equipment, including chemical splash goggles, aprons, and gloves, and be prepared to use emergency safety equipment, including an eye/face wash, a fire blanket, and a fire extinguisher	8.4(B) use preventative safety equipment, including chemical splash goggles, aprons, and gloves, and be prepared to use emergency safety equipment, including an eye/face wash, a fire blanket, and a fire extinguisher	No change in content



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8.5 Matter and energy. The student knows that matter is composed of atoms and has chemical and physical properties. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
8.5(A)*	describe the structure of atoms, including the masses, electrical charges, and locations, of protons and neutrons in the nucleus and electrons in the electron cloud	8.5(A) describe the structure of atoms, including the masses, electrical charges, and locations, of protons and neutrons in the nucleus and electrons in the electron cloud	No change in content
8.5(B)*	identify that protons determine an element's identity and valence electrons determine its chemical properties, including reactivity	8.5(B) identify that protons determine an element's identity and valence electrons determine its chemical properties, including reactivity	Impact • instructional impact with the removal of 6.5(C) elements and compounds.
8.5(C)*	interpret the arrangement of the Periodic Table, including groups and periods, to explain how properties are used to classify elements	8.5(C) interpret the arrangement of the Periodic Table, including groups and periods, to explain how properties are used to classify elements	Impact • instructional impact with the removal of 6.5(C) elements and compounds.
8.5(D)*	recognize that chemical formulas are used to identify substances and determine the number of atoms of each element in chemical formulas containing subscripts	8.5(D) recognize that chemical formulas are used to identify substances and determine the number of atoms of each element in chemical formulas containing subscripts	No change in content
8.5(E)* 	investigate how evidence of chemical reactions indicates that new substances with different properties are formed and how that relates to the law of conservation of mass	8.5(E) investigate how evidence of chemical reactions indicate that new substances with different properties are formed	Revised • Clarified standard
		8.5(F)* recognize whether a chemical equation containing coefficients is balanced or not and how that relates to the law of conservation of mass	2010 Standard Deleted

8.6 Force, motion, and energy. The student knows that there is a relationship between force, motion, and energy. The student is expected to:			
TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
8.6(A)*	demonstrate and calculate how unbalanced forces change the speed or direction of an object's motion	8.6(A) demonstrate and calculate how unbalanced forces change the speed or direction of an object's motion	No change in content
8.6(B)*	differentiate between speed, velocity, and acceleration	8.6(B) differentiate between speed, velocity, and acceleration	No change in content
8.6(C)* 	investigate and describe applications of Newton's three laws of motion such as in vehicle restraints, sports activities, amusement park rides, Earth's tectonic activities, and rocket launches	8.6(C) investigate and describe applications of Newton's <i>law of inertia, law of force and acceleration, and law of action-reaction</i> such as in vehicle restraints, sports activities, amusement park rides, Earth's tectonic activities, and rocket launches	Revised • Clarified standard


8.7 Earth and space. The student knows the effects resulting from cyclical movements of the Sun, Earth, and Moon. The student is expected to:			
TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
8.7(A)*	model and illustrate how the tilted Earth rotates on its axis, causing day and night, and revolves around the Sun causing changes in seasons	8.7(A) model and illustrate how the tilted Earth rotates on its axis, causing day and night, and revolves around the Sun causing changes in seasons	No change in content
8.7(B)*	demonstrate and predict the sequence of events in the lunar cycle	8.7(B) demonstrate and predict the sequence of events in the lunar cycle	No change in content
8.7(C)*	relate the positions of the Moon and Sun to their effect on ocean tides	8.7(C) relate the position of the Moon and Sun to their effect on ocean tides	No change in content

8.8 Earth and space. The student knows characteristics of the universe. The student is expected to:			
TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
8.8(A)*	describe components of the universe, including stars, nebulae, and galaxies, and use models such as the Hertzsprung-Russell diagram for classification	8.8(A) describe components of the universe, including stars, nebulae, and galaxies, and use models such as the Hertzsprung-Russell diagram for classification	No change in content
8.8(B)* 	recognize that the Sun is a medium-sized star located in a spiral arm of the Milky Way galaxy and that the Sun is many thousands of times closer to Earth than any other star	8.8(B) recognize that the Sun is a medium-sized star <i>near the edge of a disc-shaped galaxy of stars</i> and that the Sun is many thousands of times closer to Earth than any other star	Revised • Clarified standard
8.8(C)* 	Identify how different wavelengths of the electromagnetic spectrum such as visible light and radio waves are used to gain information about components in the universe	8.8(C) <i>explore</i> how different wavelengths of the electromagnetic spectrum such as light and radio waves are used to gain information about <i>distances and properties of</i> components in the universe	Revised • Clarified standard
		<i>8.8(D) model and describe how light years are used to measure distances and sizes in the universe</i>	2010 Standard Deleted • Content addressed in Astronomy
8.8(D) 	research how scientific data are used as evidence to develop scientific theories to describe the origin of the universe	8.8(E) research how scientific data are used as evidence to develop scientific theories to describe the origin of the universe	No change in content Standard Recoded • Recoded 8.8(E) to 8.8(D)






8.9 Earth and space. The student knows that natural events can impact Earth systems. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
8.9(A)*	describe the historical development of evidence that supports plate tectonic theory	8.9(A) describe the historical development of evidence that supports plate tectonic theory	No change in content
8.9(B)*	relate plate tectonics to the formation of crustal features	8.9(B) relate plate tectonics to the formation of crustal features	No change in content
8.9(C)*	interpret topographic maps and satellite views to identify land and erosional features and predict how these features may be reshaped by weathering	8.9(C) interpret topographic maps and satellite views to identify land and erosional features and predict how these features may be reshaped by weathering	No change in content

8.10 Earth and space. The student knows that climatic interactions exist among Earth, ocean, and weather systems. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
8.10(A)* 	recognize that the Sun provides the energy that drives convection within the atmosphere and oceans, producing winds	8.10(A) recognize that the Sun provides the energy that drives convection within the atmosphere and oceans, producing winds <i>and ocean currents</i>	Revised • Clarified standard
8.10(B)*	identify how global patterns of atmospheric movement influence local weather using weather maps that show high and low pressures and fronts	8.10(B) identify how global patterns of atmospheric movement influence local weather using weather maps that show high and low pressures and fronts	No change in content
8.10(C)*	identify the role of the oceans in the formation of weather systems such as hurricanes	8.10(C) identify the role of the oceans in the formation of weather systems such as hurricanes	No change in content

8.11 Organisms and environments. The student knows that interdependence occurs among living systems and the environment and that human activities can affect these systems. The student is expected to:

TEKS	2018 Streamlined TEKS	2010 TEKS	Instructional Impact/Notes
		<i>8.11(A) describe producer/consumer, predator/prey, and parasite/host relationships as they occur in food webs within marine, freshwater, and terrestrial ecosystems</i>	2010 Standard Deleted Impact • 8.11(A) was tested on STAAR
8.11(A)*  	investigate how organisms and populations in an ecosystem depend on and may compete for biotic factors such as food and abiotic factors such as quantity of light, water, range of temperatures, or soil composition	8.11(B) investigate how organisms and populations in an ecosystem depend on and may compete for biotic and abiotic factors such as quantity of light, water, range of temperatures, or soil composition	Revised • Clarified standard Standard Recoded • Recoded 8.11(B) to 8.11(A)
8.11(B)* 	explore how short- and long-term environmental changes affect organisms and traits in subsequent populations	8.11(C) explore how short- and long-term environmental changes affect organisms and traits in subsequent populations	Standard Recoded • Recoded 8.11(C) to 8.11(B) No change in content
8.11(C)* 	recognize human dependence on ocean systems and explain how human activities such as runoff, artificial reefs, or use of resources have modified these systems	8.11(D) recognize human dependence on ocean systems and explain how human activities such as runoff, artificial reefs, or use of resources have modified these systems	Standard Recoded • Recoded 8.11(D) to 8.11(C) No change in content