

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(a) Introduction.				
<p>(1) Science, as defined by the National Academy of Science, is the "use of evidence to construct testable explanations and predictions of natural phenomena, as well as the knowledge generated through this process." This vast body of changing and increasing knowledge is described by physical, mathematical, and conceptual models. Students should know that some questions are outside the realm of science because they deal with phenomena that are not scientifically testable.</p>				
<p>(2) Scientific hypotheses are tentative and testable statements that must be capable of being supported or not supported by observational evidence. Hypotheses of durable explanatory power that have been tested over a wide variety of conditions become theories. Scientific theories are based on natural and physical phenomena and are capable of being tested by multiple, independent researchers. Students should know that scientific theories, unlike hypotheses, are well-established and highly reliable, but they may still be subject to change as new information and technologies are developed. Students should be able to distinguish between scientific decision-making methods and ethical/social decisions that involve the application of scientific information.</p>				
<p>(3) Grade 7 science is interdisciplinary in nature; however, much of the content focus is on organisms and the environment. National standards in science are organized as a multi-grade blocks such as Grades 5-8 rather than individual grade levels. In order to follow the grade level format used in Texas, the various national standards are found among Grades 6, 7, and 8. Recurring themes are pervasive in sciences, mathematics, and technology. These ideas transcend disciplinary boundaries and include change and constancy, patterns, cycles, systems, models, and scale.</p>				
<p>(4) The strands for Grade 7 include:</p> <p>(A) Scientific investigation and reasoning.</p> <p>(i) To develop a rich knowledge of science and the natural world, students must become familiar with different modes of scientific inquiry, rules of evidence, ways of formulating questions, ways of proposing explanations, and the diverse ways scientists study the natural world and propose explanations based on evidence derived from their work.</p> <p>(ii) Scientific investigations are conducted for different reasons. All investigations require a research question, careful observations, data gathering, and analysis of the data to identify the patterns that will explain the findings. Descriptive investigations are used to explore new phenomena such as conducting surveys of organisms or measuring the abiotic components in a given habitat. Descriptive statistics include frequency, range, mean, median, and mode. A hypothesis is not required in a descriptive investigation. On the other hand, when conditions can be controlled in order to focus on a single variable, experimental research design is used to determine causation. Students should experience both types of investigations and understand that different scientific research questions require different research designs.</p> <p>(iii) Scientific investigations are used to learn about the natural world. Students should understand that certain types of questions can be answered by investigations, and the methods, models, and conclusions built from these investigations change as new observations are made. Models of objects and events are tools for understanding the natural world and can show how systems work. Models have limitations and based on new discoveries are constantly being modified to more closely reflect the natural world.</p>				
<p>(B) Matter and energy. Matter and energy are conserved throughout living systems. Radiant energy from the Sun drives much of the flow of energy throughout living systems due to the process of photosynthesis in organisms described as producers. Most consumers then depend on producers to meet their energy needs. Decomposers play an important role in recycling matter. Organic compounds are composed of carbon and other elements that are recycled due to chemical changes that rearrange the elements for the particular needs of that living system. Large molecules such as carbohydrates are composed of chains of smaller units such as sugars, similar to a train being composed of multiple box cars. Subsequent grade levels will learn about the differences at the molecular and atomic level.</p>				
<p>(C) Force, motion, and energy. Force, motion, and energy are observed in living systems and the environment in several ways. Interactions between muscular and skeletal systems allow the body to apply forces and transform energy both internally and externally. Force and motion can also describe the direction and growth of seedlings, turgor pressure, and geotropism. Catastrophic events of weather systems such as hurricanes, floods, and tornadoes can shape and restructure the environment through the force and motion evident in them. Weathering, erosion, and deposition occur in environments due to the forces of gravity, wind, ice, and water.</p>				

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<p>(D) Earth and space. Earth and space phenomena can be observed in a variety of settings. Both natural events and human activities can impact Earth systems. There are characteristics of Earth and relationships to objects in our solar system that allow life to exist.</p>				
<p>(E) Organisms and environments.</p> <p>(i) Students will understand the relationship between living organisms and their environment. Different environments support different living organisms that are adapted to that region of Earth. Organisms are living systems that maintain a steady state with that environment and whose balance may be disrupted by internal and external stimuli. External stimuli include human activity or the environment. Successful organisms can reestablish a balance through different processes such as a feedback mechanism. Ecological succession can be seen on a broad or small scale.</p> <p>(ii) Students learn that all organisms obtain energy, get rid of wastes, grow, and reproduce. During both sexual and asexual reproduction, traits are passed onto the next generation. These traits are contained in genetic material that is found on genes within a chromosome from the parent. Changes in traits sometimes occur in a population over many generations. One of the ways a change can occur is through the process of natural selection. Students extend their understanding of structures in living systems from a previous focus on external structures to an understanding of internal structures and functions within living things.</p> <p>(iii) All living organisms are made up of smaller units called cells. All cells use energy, get rid of wastes, and contain genetic material. Students will compare plant and animal cells and understand the internal structures within them that allow them to obtain energy, get rid of wastes, grow, and reproduce in different ways. Cells can organize into tissues, tissues into organs, and organs into organ systems. Students will learn the major functions of human body systems such as the ability of the integumentary system to protect against infection, injury, and ultraviolet (UV) radiation; regulate body temperature; and remove waste.</p>				
(b) Knowledge and skills.				
(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:	(A) demonstrate safe practices during laboratory and field investigations as outlined in the Texas Safety Standards	(i) demonstrate safe practices during laboratory investigations as outlined in the Texas Safety Standards		
(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:	(A) demonstrate safe practices during laboratory and field investigations as outlined in the Texas Safety Standards	(ii) demonstrate safe practices during field investigations as outlined in the Texas Safety Standards		

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(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:	(B) practice appropriate use and conservation of resources, including disposal, reuse, or recycling of materials	(i) practice appropriate use of resources, including disposal, reuse, or recycling of materials		
(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:	(B) practice appropriate use and conservation of resources, including disposal, reuse, or recycling of materials	(ii) practice appropriate conservation of resources, including disposal, reuse, or recycling of materials		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(i) plan comparative investigations by making observations		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(ii) plan comparative investigations by asking well-defined questions		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(iii) plan comparative investigations by using appropriate equipment		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(iv) plan comparative investigations by using appropriate technology		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(v) implement comparative investigations by making observations		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(vi) implement comparative investigations by asking well-defined questions		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(vii) implement comparative investigations by using appropriate equipment		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(viii) implement comparative investigations by using appropriate technology		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(ix) plan descriptive investigations by making observations		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(x) plan descriptive investigations by asking well-defined questions		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(xi) plan descriptive investigations by using appropriate equipment		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(xii) plan descriptive investigations by using appropriate technology		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(xiii) implement descriptive investigations by making observations		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(xiv) implement descriptive investigations by asking well-defined questions		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(xv) implement descriptive investigations by using appropriate equipment		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology	(xvi) implement descriptive investigations by using appropriate technology		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(B) design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	(i) design experimental investigations by making observations		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(B) design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	(ii) design experimental investigations by asking well-defined questions		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(B) design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	(iii) design experimental investigations by formulating testable hypotheses		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(B) design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	(iv) design experimental investigations by using appropriate equipment		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(B) design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	(v) design experimental investigations by using appropriate technology		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(B) design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	(vi) implement experimental investigations by making observations		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(B) design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	(vii) implement experimental investigations by asking well-defined questions		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(B) design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	(viii) implement experimental investigations by formulating testable hypotheses		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(B) design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	(ix) implement experimental investigations by using appropriate equipment		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(B) design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology	(x) implement experimental investigations by using appropriate technology		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(C) collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers	(i) collect data using the International System of Units (SI)		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(C) collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers	(ii) collect data using qualitative means		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(C) collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers	(iii) record data using the International System of Units (SI)		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(C) collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers	(iv) record data using qualitative means		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(D) construct tables and graphs, using repeated trials and means, to organize data and identify patterns	(i) construct tables using repeated trials and means to organize data		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(D) construct tables and graphs, using repeated trials and means, to organize data and identify patterns	(ii) construct tables using repeated trials and means to identify patterns		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(D) construct tables and graphs, using repeated trials and means, to organize data and identify patterns	(iii) construct graphs using repeated trials and means to organize data		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(D) construct tables and graphs, using repeated trials and means, to organize data and identify patterns	(iv) construct graphs using repeated trials and means to identify patterns		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(E) analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends	(i) analyze data to formulate reasonable explanations		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(E) analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends	(ii) analyze data to communicate valid conclusions supported by the data		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:	(E) analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends	(iii) analyze data to predict trends		
(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:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(i) in all fields of science, analyze scientific explanations by using empirical evidence		

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(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:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(ii) in all fields of science, analyze scientific explanations by using logical reasoning		
(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:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(iii) in all fields of science, analyze scientific explanations by using experimental testing		
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(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:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(xii) in all fields of science, critique scientific explanations by using logical reasoning		
(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:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(xiii) in all fields of science, critique scientific explanations by using experimental testing		

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(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:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(xv) in all fields of science, critique scientific explanations, including examining all sides of scientific evidence of those scientific explanations		
(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:	(B) use models to represent aspects of the natural world such as human body systems and plant and animal cells	(i) use models to represent aspects of the natural world		

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(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:	(C) identify advantages and limitations of models such as size, scale, properties, and materials	(i) identify advantages of models		
(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:	(C) identify advantages and limitations of models such as size, scale, properties, and materials	(ii) identify limitations of models		
(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:	(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	(i) relate the impact of research on scientific thought, including the history of science		
(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:	(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	(ii) relate the impact of research on society, including the history of science		

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(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:	(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	(iv) relate the impact of research on society, including the contributions of scientists as related to the content		
(4) Science 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:	(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 as needed to teach the curriculum	(i) use appropriate tools to collect information, including life science models		

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(4) Science 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:	(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 as needed to teach the curriculum	(ii) use appropriate tools to collect information, including hand lens		
(4) Science 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:	(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 as needed to teach the curriculum	(iii) use appropriate tools to collect information, including stereoscopes		

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(4) Science 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:	(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 as needed to teach the curriculum	(iv) use appropriate tools to collect information, including microscopes		
(4) Science 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:	(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 as needed to teach the curriculum	(v) use appropriate tools to collect information, including beakers		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(vi) use appropriate tools to collect information, including Petri dishes		
(4) Science 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:	(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 as needed to teach the curriculum	(vii) use appropriate tools to collect information, including graduated cylinders		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(viii) use appropriate tools to collect information, including test tubes		
(4) Science 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:	(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 as needed to teach the curriculum	(ix) use appropriate tools to collect information, including meter sticks		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(x) use appropriate tools to collect information, including metric rulers		
(4) Science 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:	(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 as needed to teach the curriculum	(xi) use appropriate tools to collect information, including metric tape measures		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xii) use appropriate tools to collect information, including timing devices		
(4) Science 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:	(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 as needed to teach the curriculum	(xiii) use appropriate tools to collect information, including hot plates		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xiv) use appropriate tools to collect information, including balances		
(4) Science 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:	(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 as needed to teach the curriculum	(xv) use appropriate tools to collect information, including thermometers		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xvi) use appropriate tools to collect information, including calculators		
(4) Science 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:	(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 as needed to teach the curriculum	(xvii) use appropriate tools to collect information, including water test kits		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xviii) use appropriate tools to collect information, including computers		
(4) Science 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:	(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 as needed to teach the curriculum	(xix) use appropriate tools to collect information, including temperature probes		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xx) use appropriate tools to collect information, including pH probes		
(4) Science 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:	(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 as needed to teach the curriculum	(xxi) use appropriate tools to collect information, including collecting nets		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xxii) use appropriate tools to collect information, including insect traps		
(4) Science 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:	(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 as needed to teach the curriculum	(xxiii) use appropriate tools to collect information, including globes		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xxiv) use appropriate tools to collect information, including digital cameras		
(4) Science 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:	(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 as needed to teach the curriculum	(xxv) use appropriate tools to collect information, including other equipment as needed		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xxvi) use appropriate tools to record information, including calculators		
(4) Science 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:	(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 as needed to teach the curriculum	(xxvii) use appropriate tools to record information, including computers		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xxviii) use appropriate tools to record information, including digital cameras		
(4) Science 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:	(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 as needed to teach the curriculum	(xxix) use appropriate tools to record information, including journals/notebooks		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xxx) use appropriate tools to record information including other equipment as needed		
(4) Science 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:	(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 as needed to teach the curriculum	(xxxi) use appropriate tools to analyze information, including life science models		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xxxii) use appropriate tools to analyze information, including hand lens		
(4) Science 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:	(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 as needed to teach the curriculum	(xxxiii) use appropriate tools to analyze information, including stereoscopes		

Subject				
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xxxiv) use appropriate tools to analyze information, including microscopes		
(4) Science 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:	(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 as needed to teach the curriculum	(xxxv) use appropriate tools to analyze information, including beakers		

Subject				
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xxxvi) use appropriate tools to analyze information, including Petri dishes		
(4) Science 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:	(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 as needed to teach the curriculum	(xxxvii) use appropriate tools to analyze information, including microscope slides		

Subject				
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xxxviii) use appropriate tools to analyze information, including graduated cylinders		
(4) Science 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:	(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 as needed to teach the curriculum	(xxxix) use appropriate tools to analyze information, including test tubes		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xi) use appropriate tools to analyze information, including meter sticks		
(4) Science 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:	(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 as needed to teach the curriculum	(xli) use appropriate tools to analyze information, including metric rulers		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xlii) use appropriate tools to analyze information, including metric tape measures		
(4) Science 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:	(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 as needed to teach the curriculum	(xliii) use appropriate tools to analyze information, including timing devices		

Subject				
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xiv) use appropriate tools to analyze information, including hot plates		
(4) Science 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:	(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 as needed to teach the curriculum	(xiv) use appropriate tools to analyze information, including balances		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xlvi) use appropriate tools to analyze information, including thermometers		
(4) Science 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:	(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 as needed to teach the curriculum	(xlvii) use appropriate tools to analyze information, including calculators		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(xlvi) use appropriate tools to analyze information, including water test kits		
(4) Science 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:	(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 as needed to teach the curriculum	(xlix) use appropriate tools to analyze information, including computers		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(I) use appropriate tools to analyze information, including temperature probes		
(4) Science 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:	(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 as needed to teach the curriculum	(II) use appropriate tools to analyze information, including pH probes		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(lii) use appropriate tools to analyze information, including collecting nets		
(4) Science 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:	(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 as needed to teach the curriculum	(liii) use appropriate tools to analyze information, including insect traps		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(liv) use appropriate tools to analyze information, including globes		
(4) Science 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:	(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 as needed to teach the curriculum	(lv) use appropriate tools to analyze information, including digital cameras		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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 as needed to teach the curriculum	(lvi) use appropriate tools to analyze information, including journals/notebooks		
(4) Science 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:	(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 as needed to teach the curriculum	(lvii) use appropriate tools to analyze information, including other equipment as needed		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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	(i) use preventative safety equipment, including chemical splash goggles		
(4) Science 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:	(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	(ii) use preventative safety equipment, including aprons		
(4) Science 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:	(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	(iii) use preventative safety equipment, including gloves		
(4) Science 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:	(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	(iv) be prepared to use emergency safety equipment, including an eye/face wash		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(4) Science 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:	(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	(v) be prepared to use emergency safety equipment, including a fire blanket		
(4) Science 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:	(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	(vi) be prepared to use emergency safety equipment, including a fire extinguisher		
(5) Matter and energy. The student knows that interactions occur between matter and energy. The student is expected to:	(A) recognize that radiant energy from the Sun is transformed into chemical energy through the process of photosynthesis			
(5) Matter and energy. The student knows that interactions occur between matter and energy. The student is expected to:	(B) demonstrate and explain the cycling of matter within living systems such as in the decay of biomass in a compost bin	(i) demonstrate the cycling of matter within living systems		
(5) Matter and energy. The student knows that interactions occur between matter and energy. The student is expected to:	(B) demonstrate and explain the cycling of matter within living systems such as in the decay of biomass in a compost bin	(ii) explain the cycling of matter within living systems		
(5) Matter and energy. The student knows that interactions occur between matter and energy. The student is expected to:	(C) diagram the flow of energy through living systems, including food chains, food webs, and energy pyramids	(i) diagram the flow of energy through living systems, including food chains		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(5) Matter and energy. The student knows that interactions occur between matter and energy. The student is expected to:	(C) diagram the flow of energy through living systems, including food chains, food webs, and energy pyramids	(ii) diagram the flow of energy through living systems, including food webs		
(5) Matter and energy. The student knows that interactions occur between matter and energy. The student is expected to:	(C) diagram the flow of energy through living systems, including food chains, food webs, and energy pyramids	(iii) diagram the flow of energy through living systems, including energy pyramids		
(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:	(A) identify that organic compounds contain carbon and other elements such as hydrogen, oxygen, phosphorus, nitrogen, or sulfur	(i) identify that organic compounds contain carbon		
(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:	(A) identify that organic compounds contain carbon and other elements such as hydrogen, oxygen, phosphorus, nitrogen, or sulfur	(ii) identify that organic compounds contain other elements		
(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:	(B) distinguish between physical and chemical changes in matter in the digestive system			
(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:	(C) recognize how large molecules are broken down into smaller molecules such as carbohydrates can be broken down into sugars	(i) recognize how large molecules are broken down into smaller molecules		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(7) Force, motion, and energy. The student knows that there is a relationship among force, motion, and energy. The student is expected to:	(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	(i) contrast situations where work is done with different amounts of force to situations where no work is done		
(7) Force, motion, and energy. The student knows that there is a relationship among force, motion, and energy. The student is expected to:	(B) illustrate the transformation of energy within an organism such as the transfer from chemical energy to heat and thermal energy in digestion	(i) illustrate the transformation of energy within an organism		
(7) Force, motion, and energy. The student knows that there is a relationship among force, motion, and energy. The student is expected to:	(C) demonstrate and illustrate forces that affect motion in everyday life such as emergence of seedlings, turgor pressure, and geotropism	(i) demonstrate forces that affect motion in everyday life		
(7) Force, motion, and energy. The student knows that there is a relationship among force, motion, and energy. The student is expected to:	(C) demonstrate and illustrate forces that affect motion in everyday life such as emergence of seedlings, turgor pressure, and geotropism	(ii) illustrate forces that affect motion in everyday life		
(8) Earth and space. The student knows that natural events and human activity can impact Earth systems. The student is expected to:	(A) predict and describe how different types of catastrophic events impact ecosystems such as floods, hurricanes, or tornadoes	(i) predict how different types of catastrophic events impact ecosystems		
(8) Earth and space. The student knows that natural events and human activity can impact Earth systems. The student is expected to:	(A) predict and describe how different types of catastrophic events impact ecosystems such as floods, hurricanes, or tornadoes	(ii) describe how different types of catastrophic events impact ecosystems		
(8) Earth and space. The student knows that natural events and human activity can impact Earth systems. The student is expected to:	(B) analyze the effects of weathering, erosion, and deposition on the environment in ecoregions of Texas	(i) analyze the effects of weathering on the environment in ecoregions of Texas		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(8) Earth and space. The student knows that natural events and human activity can impact Earth systems. The student is expected to:	(B) analyze the effects of weathering, erosion, and deposition on the environment in ecoregions of Texas	(ii) analyze the effects of erosion on the environment in ecoregions of Texas		
(8) Earth and space. The student knows that natural events and human activity can impact Earth systems. The student is expected to:	(B) analyze the effects of weathering, erosion, and deposition on the environment in ecoregions of Texas	(iii) analyze the effects of deposition on the environment in ecoregions of Texas		
(8) Earth and space. The student knows that natural events and human activity can impact Earth systems. The student is expected to:	(C) model the effects of human activity on groundwater and surface water in a watershed	(i) model the effects of human activity on groundwater in a watershed		
(8) Earth and space. The student knows that natural events and human activity can impact Earth systems. The student is expected to:	(C) model the effects of human activity on groundwater and surface water in a watershed	(ii) model the effects of human activity on surface water in a watershed		
(9) Earth and space. The student knows components of our solar system. The student is expected to:	(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	(i) analyze the characteristics of objects in our solar system that allow life to exist		
(9) Earth and space. The student knows components of our solar system. The student is expected to:	(B) identify the accommodations, considering the characteristics of our solar system, that enabled manned space exploration			
(10) Organisms and environments. The student knows that there is a relationship between organisms and the environment. The student is expected to:	(A) observe and describe how different environments, including microhabitats in schoolyards and biomes, support different varieties of organisms	(i) observe how different environments, including microhabitats in schoolyards, support different varieties of organisms		

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TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(10) Organisms and environments. The student knows that there is a relationship between organisms and the environment. The student is expected to:	(A) observe and describe how different environments, including microhabitats in schoolyards and biomes, support different varieties of organisms	(ii) observe how different environments, including biomes, support different varieties of organisms		
(10) Organisms and environments. The student knows that there is a relationship between organisms and the environment. The student is expected to:	(A) observe and describe how different environments, including microhabitats in schoolyards and biomes, support different varieties of organisms	(iii) describe how different environments, including microhabitats in schoolyards, support different varieties of organisms		
(10) Organisms and environments. The student knows that there is a relationship between organisms and the environment. The student is expected to:	(A) observe and describe how different environments, including microhabitats in schoolyards and biomes, support different varieties of organisms	(iv) describe how different environments, including biomes, support different varieties of organisms		
(10) Organisms and environments. The student knows that there is a relationship between organisms and the environment. The student is expected to:	(B) describe how biodiversity contributes to the sustainability of an ecosystem	(i) describe how biodiversity contributes to the sustainability of an ecosystem		
(10) Organisms and environments. The student knows that there is a relationship between organisms and the environment. The student is expected to:	(C) observe, record, and describe the role of ecological succession such as in a microhabitat of a garden with weeds	(i) observe the role of ecological succession		
(10) Organisms and environments. The student knows that there is a relationship between organisms and the environment. The student is expected to:	(C) observe, record, and describe the role of ecological succession such as in a microhabitat of a garden with weeds	(ii) record the role of ecological succession		

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TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(10) Organisms and environments. The student knows that there is a relationship between organisms and the environment. The student is expected to:	(C) observe, record, and describe the role of ecological succession such as in a microhabitat of a garden with weeds	(iii) describe the role of ecological succession		
(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:	(A) examine organisms or their structures such as insects or leaves and use dichotomous keys for identification	(i) examine organisms or their structures		
(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:	(A) examine organisms or their structures such as insects or leaves and use dichotomous keys for identification	(ii) use dichotomous keys for identification		
(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:	(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	(i) explain variation within a population or species by comparing external features, behaviors, or physiology of organisms that enhance their survival		

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TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(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:	(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	(i) identify some changes in genetic traits that have occurred over several generations through natural selection		
(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:	(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	(ii) identify some changes in genetic traits that have occurred over several generations through selective breeding		
(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:	(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	(i) investigate how internal structures of organisms have adaptations that allow specific functions		
(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:	(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	(ii) explain how internal structures of organisms have adaptations that allow specific functions		

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TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(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:	(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	(i) identify the main functions of the systems of the human organism, including the circulatory [system]		
(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:	(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	(ii) identify the main functions of the systems of the human organism, including the respiratory [system]		
(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:	(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	(iii) identify the main functions of the systems of the human organism, including the skeletal [system]		
(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:	(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	(iv) identify the main functions of the systems of the human organism, including the muscular [system]		

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TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(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:	(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	(v) identify the main functions of the systems of the human organism, including the digestive [system]		
(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:	(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	(vi) identify the main functions of the systems of the human organism, including the excretory [system]		
(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:	(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	(vii) identify the main functions of the systems of the human organism, including the reproductive [system]		
(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:	(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	(viii) identify the main functions of the systems of the human organism, including the integumentary [system]		

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TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(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:	(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	(ix) identify the main functions of the systems of the human organism, including the nervous [system]		
(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:	(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	(x) identify the main functions of the systems of the human organism, including the endocrine [system]		
(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:	(C) recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	(i) recognize levels of organization in plants, including cells		
(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:	(C) recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	(ii) recognize levels of organization in plants, including tissues		
(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:	(C) recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	(iii) recognize levels of organization in plants, including organs		

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TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(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:	(C) recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	(iv) recognize levels of organization in plants, including organ systems		
(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:	(C) recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	(v) recognize levels of organization in plants, including organisms		
(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:	(C) recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	(vi) recognize levels of organization in animals, including cells		
(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:	(C) recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	(vii) recognize levels of organization in animals, including tissues		
(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:	(C) recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	(viii) recognize levels of organization in animals, including organs		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(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:	(C) recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	(ix) recognize levels of organization in animals, including organ systems		
(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:	(C) recognize levels of organization in plants and animals, including cells, tissues, organs, organ systems, and organisms	(x) recognize levels of organization in animals, including organisms		
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(i) differentiate between structure and function in plant cell organelles, including cell membrane		
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(ii) differentiate between structure and function in plant cell organelles, including cell wall		
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(iii) differentiate between structure and function in plant cell organelles, including nucleus		

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TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(iv) differentiate between structure and function in plant cell organelles, including cytoplasm		
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(v) differentiate between structure and function in plant cell organelles, including mitochondrion		
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(vi) differentiate between structure and function in plant cell organelles, including chloroplast		
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(vii) differentiate between structure and function in plant cell organelles, including vacuole		
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(viii) differentiate between structure and function in animal cell organelles, including cell membrane		

Subject		§112.19.Science, Grade 7, Beginning with School Year 2010-2011.		
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(ix) differentiate between structure and function in animal cell organelles, including nucleus		
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(x) differentiate between structure and function in animal cell organelles, including cytoplasm		
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(xi) differentiate between structure and function in animal cell organelles, including mitochondrion		
(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:	(D) differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole	(xii) differentiate between structure and function in animal cell organelles, including vacuole		
(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:	(E) compare the functions of a cell to the functions of organisms such as waste removal	(i) compare the functions of a cell to the functions of organisms		

Subject				
Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(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:	(F) recognize that according to cell theory all organisms are composed of cells and cells carry on similar functions such as extracting energy from food to sustain life	(i) recognize that according to cell theory, all organisms are composed of cells		
(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:	(F) recognize that according to cell theory all organisms are composed of cells and cells carry on similar functions such as extracting energy from food to sustain life	(ii) recognize that according to cell theory, all cells carry on similar functions		
(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:	(A) investigate how organisms respond to external stimuli found in the environment such as phototropism and fight or flight	(i) investigate how organisms respond to external stimuli found in the environment		
(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:	(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	(i) describe responses in organisms that may result from internal stimuli that allow [plants and animals] to maintain balance		

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Course Title				
TEKS (Knowledge and	Student Expectation	Breakout	Element	Subelement
(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:	(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	(ii) relate responses in organisms that may result from internal stimuli that allow [plants and animals] to maintain balance		
(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:	(A) define heredity as the passage of genetic instructions from one generation to the next generation			
(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:	(B) compare the results of uniform or diverse offspring from sexual reproduction or asexual reproduction			
(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:	(C) recognize that inherited traits of individuals are governed in the genetic material found in the genes within chromosomes in the nucleus			