

Subject		Chapter 112. Science		
Course Title		§112.15. Science, Grade 4, Beginning with School Year 2010-2011.		
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(a) Introduction.				
(1) Science, as defined by the National Academy of Sciences, is the "use of evidence to construct testable explanations and predictions of natural phenomena, as well as the knowledge generated through this process."				
(2) Recurring themes are pervasive in sciences, mathematics, and technology. These ideas transcend disciplinary boundaries and include patterns, cycles, systems, models, and change and constancy.				
(3) The study of elementary science includes planning and safely implementing classroom and outdoor investigations using scientific processes, including inquiry methods, analyzing information, making informed decisions, and using tools to collect and record information, while addressing the major concepts and vocabulary, in the context of physical, earth, and life sciences. Districts are encouraged to facilitate classroom and outdoor investigations for at least 50% of instructional time.				
(4) In Grade 4, investigations are used to learn about the natural world. Students should understand that certain types of questions can be answered by investigations and that 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. They have limitations and based on new discoveries are constantly being modified to more closely reflect the natural world. (A) Within the natural environment, students know that earth materials have properties that are constantly changing due to Earth's forces. The students learn that the natural world consists of resources, including renewable and nonrenewable, and their responsibility to conserve our natural resources for future generations. They will also explore Sun, Earth, and Moon relationships. The students will recognize that our major source of energy is the Sun. (B) Within the living environment, students know and understand that living organisms within an ecosystem interact with one another and with their environment. The students will recognize that plants and animals have basic needs, and they are met through a flow of energy known as food webs. Students will explore how all living organisms go through a life cycle and that adaptations enable organisms to survive in their ecosystem.				
(b) Knowledge and skills.				
(1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations, following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:	(A) demonstrate safe practices and the use of safety equipment as described in the Texas Safety Standards during classroom and outdoor investigations	(i) demonstrate safe practices as described in the Texas Safety Standards during classroom investigations		
(1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations, following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:	(A) demonstrate safe practices and the use of safety equipment as described in the Texas Safety Standards during classroom and outdoor investigations	(ii) demonstrate safe practices as described in the Texas Safety Standards during outdoor investigations		

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(1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations, following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:	(A) demonstrate safe practices and the use of safety equipment as described in the Texas Safety Standards during classroom and outdoor investigations	(iv) demonstrate the use of safety equipment as described in the Texas Safety Standards during outdoor investigations		
(1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations, following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:	(B) make informed choices in the use and conservation of natural resources and reusing and recycling of materials such as paper, aluminum, glass, cans, and plastic	(i) make informed choices in the use of natural resources		
(1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations, following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:	(B) make informed choices in the use and conservation of natural resources and reusing and recycling of materials such as paper, aluminum, glass, cans, and plastic	(ii) make informed choices in the conservation of natural resources		
(1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations, following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:	(B) make informed choices in the use and conservation of natural resources and reusing and recycling of materials such as paper, aluminum, glass, cans, and plastic	(iii) make informed choices in the reusing of materials		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(A) plan and implement descriptive investigations, including asking well-defined questions, making inferences, and selecting and using appropriate equipment or technology to answer his/her questions	(i) plan descriptive investigations, including asking well-defined questions		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(A) plan and implement descriptive investigations, including asking well-defined questions, making inferences, and selecting and using appropriate equipment or technology to answer his/her questions	(ii) plan descriptive investigations, including making inferences		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(A) plan and implement descriptive investigations, including asking well-defined questions, making inferences, and selecting and using appropriate equipment or technology to answer his/her questions	(iii) plan descriptive investigations, including selecting appropriate equipment or technology to answer his/her questions		
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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(A) plan and implement descriptive investigations, including asking well-defined questions, making inferences, and selecting and using appropriate equipment or technology to answer his/her questions	(v) implement descriptive investigations, including asking well-defined questions		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(A) plan and implement descriptive investigations, including asking well-defined questions, making inferences, and selecting and using appropriate equipment or technology to answer his/her questions	(vi) implement descriptive investigations, including making inferences		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(B) collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps	(i) collect data by observing		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(B) collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps	(ii) collect data by measuring, using the metric system		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(B) collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps	(iii) record data by using descriptive words		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(B) collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps	(iv) record data by using numerals		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data	(i) construct simple tables using tools to organize data		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data	(v) construct charts using tools to examine data		
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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data	(vii) construct bar graphs using tools to organize data		
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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data	(xi) construct maps using tools to examine data		
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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data	(xiv) construct simple tables using current technology to examine data		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data	(xv) construct simple tables using current technology to evaluate data		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data	(xvi) construct charts using current technology to organize data		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data	(xvii) construct charts using current technology to examine data		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data	(xix) construct bar graphs using current technology to organize data		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data	(xx) construct bar graphs using current technology to examine data		
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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(D) analyze data and interpret patterns to construct reasonable explanations from data that can be observed and measured	(i) analyze data to construct reasonable explanations from data that can be observed		

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(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(D) analyze data and interpret patterns to construct reasonable explanations from data that can be observed and measured	(iv) interpret patterns to construct reasonable explanations from data that can be measured		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(E) perform repeated investigations to increase the reliability of results			
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(F) communicate valid, oral, and written results supported by data	(i) communicate valid oral results supported by data		
(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:	(F) communicate valid, oral, and written results supported by data	(ii) communicate valid written results supported by data		
(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. 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 and scientific problem solving to make informed decisions. The student is expected to:	(B) draw inferences and evaluate accuracy of services and product claims found in advertisements and labels such as for toys, food, and sunscreen	(i) draw inferences [about] services claims found in advertisements		
(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:	(B) draw inferences and evaluate accuracy of services and product claims found in advertisements and labels such as for toys, food, and sunscreen	(ii) draw inferences [about] product claims found in advertisements		

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(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:	(B) draw inferences and evaluate accuracy of services and product claims found in advertisements and labels such as for toys, food, and sunscreen	(iv) draw inferences [about] product claims found in labels		
(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:	(B) draw inferences and evaluate accuracy of services and product claims found in advertisements and labels such as for toys, food, and sunscreen	(v) evaluate accuracy of services claims found in advertisements		
(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:	(B) draw inferences and evaluate accuracy of services and product claims found in advertisements and labels such as for toys, food, and sunscreen	(vi) evaluate accuracy of product claims found in advertisements		
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(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:	(B) draw inferences and evaluate accuracy of services and product claims found in advertisements and labels such as for toys, food, and sunscreen	(viii) evaluate accuracy of product claims found in labels		
(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:	(C) represent the natural world using models such as rivers, stream tables, or fossils and identify their limitations, including accuracy and size	(i) represent the natural world using models		
(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:	(C) represent the natural world using models such as rivers, stream tables, or fossils and identify their limitations, including accuracy and size	(ii) identify [models'] limitations, including accuracy		

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(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:	(D) connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists	(i) connect grade-level appropriate science concepts with the history of science		
(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:	(D) connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists	(ii) connect grade-level appropriate science concepts with science careers		
(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:	(D) connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists	(iii) connect grade-level appropriate science concepts with the contributions of scientists		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(i) collect information using tools, including calculators		

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(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(iii) collect information using tools, including cameras		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(iv) collect information using tools, including computers		

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(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(v) collect information using tools, including hand lenses		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(vi) collect information using tools, including metric rulers		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(vii) collect information using tools, including Celsius thermometers		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(viii) collect information using tools, including mirrors		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(ix) collect information using tools, including spring scales		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(x) collect information using tools, including pan balances		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xi) collect information using tools, including triple beam balances		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xii) collect information using tools, including graduated cylinders		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xiii) collect information using tools, including beakers		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xiv) collect information using tools, including hot plates		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xv) collect information using tools, including meter sticks		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xvi) collect information using tools, including compasses		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xvii) collect information using tools, including magnets		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xviii) collect information using tools, including collecting nets		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xix) collect information using tools, including timing devices including clocks		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xx) collect information using tools, including timing devices including stopwatches		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxi) collect information using tools, including materials to support observation of habitats of organisms		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxii) record information using tools, including calculators		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxiii) record information using tools, including cameras		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxiv) record information using tools, including computers		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxv) record information using tools, including notebooks		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxvi) record information using tools, including timing devices, including stopwatches		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxvii) analyze information using tools, including calculators		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxviii) analyze information using tools, including microscopes		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxix) analyze information using tools, including cameras		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxx) analyze information using tools, including computers		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxxi) analyze information using tools, including hand lenses		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxxii) analyze information using tools, including metric rulers		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxxiii) analyze information using tools, including Celsius thermometers		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxxiv) analyze information using tools, including mirrors		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxxv) analyze information using tools, including spring scales		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxxvi) analyze information using tools, including pan balances		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxxvii) analyze information using tools, including triple beam balances		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxxviii) analyze information using tools, including graduated cylinders		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xxxix) analyze information using tools, including beakers		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xl) analyze information using tools, including hot plates		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xli) analyze information using tools, including meter sticks		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xlii) analyze information using tools, including compasses		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xliii) analyze information using tools, including magnets		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xlv) analyze information using tools, including collecting nets		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xlv) analyze information using tools, including notebooks		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xlv) analyze information using tools, including timing devices including clocks		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xlvii) analyze information using tools, including timing devices including stopwatches		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums	(xlviii) analyze information using tools, including materials to support observation of habitats of organisms		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(B) use safety equipment as appropriate, including safety goggles and gloves	(i) use safety equipment as appropriate, including safety goggles		
(4) Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry. The student is expected to:	(B) use safety equipment as appropriate, including safety goggles and gloves	(ii) use safety equipment as appropriate, including gloves		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(i) measure physical properties of matter, including size		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(ii) measure physical properties of matter, including mass		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(iii) measure physical properties of matter, including volume		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(iv) measure physical properties of matter, including temperature		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(v) measure physical properties of matter, including magnetism		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(vi) measure physical properties of matter, including the ability to sink or float		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(vii) compare physical properties of matter, including size		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(viii) compare physical properties of matter, including mass		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(ix) compare physical properties of matter, including volume		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(x) compare physical properties of matter, including states (solid, liquid, gas)		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(xi) compare physical properties of matter, including temperature		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(xii) compare physical properties of matter, including magnetism		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(xiii) compare physical properties of matter, including the ability to sink or float		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(xiv) contrast physical properties of matter, including size		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(xv) contrast physical properties of matter, including mass		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(xvi) contrast physical properties of matter, including volume		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(xvii) contrast physical properties of matter, including states (solid, liquid, gas)		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(xviii) contrast physical properties of matter, including temperature		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(xix) contrast physical properties of matter, including magnetism		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(A) measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float	(xx) contrast physical properties of matter, including the ability to sink or float		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(B) predict the changes caused by heating and cooling such as ice becoming liquid water and condensation forming on the outside of a glass of ice water	(i) predict the changes caused by heating		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(B) predict the changes caused by heating and cooling such as ice becoming liquid water and condensation forming on the outside of a glass of ice water	(ii) predict the changes caused by cooling		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(C) compare and contrast a variety of mixtures and solutions such as rocks in sand, sand in water, or sugar in water	(i) compare a variety of mixtures		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(C) compare and contrast a variety of mixtures and solutions such as rocks in sand, sand in water, or sugar in water	(ii) compare a variety of solutions		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(C) compare and contrast a variety of mixtures and solutions such as rocks in sand, sand in water, or sugar in water	(iii) contrast a variety of mixtures		
(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:	(C) compare and contrast a variety of mixtures and solutions such as rocks in sand, sand in water, or sugar in water	(iv) contrast a variety of solutions		
(6) Force, motion, and energy. The student knows that energy exists in many forms and can be observed in cycles, patterns, and systems. The student is expected to:	(A) differentiate among forms of energy, including mechanical, sound, electrical, light, and heat/thermal			
(6) Force, motion, and energy. The student knows that energy exists in many forms and can be observed in cycles, patterns, and systems. The student is expected to:	(B) differentiate between conductors and insulators			
(6) Force, motion, and energy. The student knows that energy exists in many forms and can be observed in cycles, patterns, and systems. The student is expected to:	(C) demonstrate that electricity travels in a closed path, creating an electrical circuit, and explore an electromagnetic field	(i) demonstrate that electricity travels in a closed path, creating an electrical circuit		
(6) Force, motion, and energy. The student knows that energy exists in many forms and can be observed in cycles, patterns, and systems. The student is expected to:	(C) demonstrate that electricity travels in a closed path, creating an electrical circuit, and explore an electromagnetic field	(ii) explore an electromagnetic field		
(6) Force, motion, and energy. The student knows that energy exists in many forms and can be observed in cycles, patterns, and systems. The student is expected to:	(D) design an experiment to test the effect of force on an object such as a push or a pull, gravity, friction, or magnetism	(i) design an experiment to test the effect of force on an object		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(A) examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants	(i) examine properties of soils, including color		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(A) examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants	(ii) examine properties of soils, including texture		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(A) examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants	(iii) examine properties of soils, including capacity to retain water		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(A) examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants	(iv) examine properties of soils, including ability to support the growth of plants		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(B) observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice	(i) observe slow changes to Earth's surface caused by weathering		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(B) observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice	(ii) observe slow changes to Earth's surface caused by erosion		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(B) observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice	(iii) observe slow changes to Earth's surface caused by deposition from water		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(B) observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice	(iv) observe slow changes to Earth's surface caused by deposition from wind		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(B) observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice	(v) observe slow changes to Earth's surface caused by deposition from ice		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(B) observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice	(vi) identify slow changes to Earth's surface caused by weathering		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(B) observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice	(vii) identify slow changes to Earth's surface caused by erosion		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(B) observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice	(viii) identify slow changes to Earth's surface caused by deposition from water		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(B) observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice	(ix) identify slow changes to Earth's surface caused by deposition from wind		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(B) observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice	(x) identify slow changes to Earth's surface caused by deposition from ice		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(i) identify Earth's renewable resources, including air		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(ii) identify Earth's renewable resources, including plants		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(iii) identify Earth's renewable resources, including water		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(iv) identify Earth's renewable resources, including animals		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(v) identify Earth's nonrenewable resources, including coal		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(vi) identify Earth's nonrenewable resources, including oil		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(vii) identify Earth's nonrenewable resources, including natural gas		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(viii) classify Earth's renewable resources, including air		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(ix) classify Earth's renewable resources, including plants		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(x) classify Earth's renewable resources, including water		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(xi) classify Earth's renewable resources, including animals		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(xii) classify Earth's nonrenewable resources, including coal		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(xiii) classify Earth's nonrenewable resources, including oil		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(xiv) classify Earth's nonrenewable resources, including natural gas		
(7) Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:	(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation	(xv) identify the importance of conservation		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(A) measure and record changes in weather and make predictions using weather maps, weather symbols, and a map key	(i) measure changes in weather		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(A) measure and record changes in weather and make predictions using weather maps, weather symbols, and a map key	(ii) record changes in weather		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(A) measure and record changes in weather and make predictions using weather maps, weather symbols, and a map key	(iii) make predictions using weather maps,		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(A) measure and record changes in weather and make predictions using weather maps, weather symbols, and a map key	(iv) make predictions using weather symbols		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(A) measure and record changes in weather and make predictions using weather maps, weather symbols, and a map key	(v) make predictions using a map key		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(B) describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process	(i) describe the continuous movement of water above the surface of Earth through the water cycle		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(B) describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process	(ii) describe the continuous movement of water on the surface of Earth through the water cycle		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(B) describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process	(iii) illustrate the continuous movement of water above the surface of Earth through the water cycle		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(B) describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process	(iv) illustrate the continuous movement of water on the surface of Earth through the water cycle		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(B) describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process	(v) explain the role of the Sun as a major source of energy in this process		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(i) collect data to identify sequences of change in shadows over time		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(ii) collect data to identify sequences of change in tides over time		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(iii) collect data to identify sequences of change in seasons over time.		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(iv) collect data to identify sequences of change in the observable appearance of the Moon over time		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(v) collect data to predict patterns of change in shadows over time		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(vi) collect data to predict patterns of change in tides over time		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(vii) collect data to predict patterns of change in seasons over time.		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(viii) collect data to predict patterns of change in the observable appearance of the Moon over time		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(ix) analyze data to identify sequences of change in shadows over time		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(x) analyze data to identify sequences of change in tides over time		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(xi) analyze data to identify sequences of change in seasons over time.		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(xii) analyze data to identify sequences of change in the observable appearance of the Moon over time		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(xiii) analyze data to predict patterns of change in shadows over time		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(xiv) analyze data to predict patterns of change in tides over time		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(xv) analyze data to predict patterns of change in seasons over time.		
(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:	(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time	(xvi) analyze data to predict patterns of change in the observable appearance of the Moon over time		
(9) Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment. The student is expected to:	(A) investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food	(i) investigate that most producers need sunlight to make their own food, while consumers are dependent on other organisms for food		
(9) Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment. The student is expected to:	(A) investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food	(ii) investigate that most producers need water to make their own food, while consumers are dependent on other organisms for food		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(9) Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment. The student is expected to:	(A) investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food	(iii) investigate that most producers need carbon dioxide to make their own food, while consumers are dependent on other organisms for food		
(9) Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment. The student is expected to:	(B) describe the flow of energy through food webs, beginning with the Sun, and predict how changes in the ecosystem affect the food web such as a fire in a forest	(i) describe the flow of energy through food webs, beginning with the Sun		
(9) Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment. The student is expected to:	(B) describe the flow of energy through food webs, beginning with the Sun, and predict how changes in the ecosystem affect the food web such as a fire in a forest	(ii) predict how changes in the ecosystem affect the food web		
(10) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environment. The student is expected to:	(A) explore how adaptations enable organisms to survive in their environment such as comparing birds' beaks and leaves on plants	(i) explore how adaptations enable organisms to survive in their environment		
(10) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environment. The student is expected to:	(B) demonstrate that some likenesses between parents and offspring are inherited, passed from generation to generation such as eye color in humans or shapes of leaves in plants. Other likenesses are learned such as table manners or reading a book and seals balancing balls on their noses	(i) demonstrate that some likenesses between parents and offspring are inherited, passed from generation to generation		
(10) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environment. The student is expected to:	(B) demonstrate that some likenesses between parents and offspring are inherited, passed from generation to generation such as eye color in humans or shapes of leaves in plants. Other likenesses are learned such as table manners or reading a book and seals balancing balls on their noses	(ii) [demonstrate that] other likenesses are learned		

Subject	Chapter 112. Science			
Course Title	§112.15. Science, Grade 4, Beginning with School Year 2010-2011.			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(10) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environment. The student is expected to:	(C) explore, illustrate, and compare life cycles in living organisms such as butterflies, beetles, radishes, or lima beans	(i) explore life cycles in living organisms		
(10) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environment. The student is expected to:	(C) explore, illustrate, and compare life cycles in living organisms such as butterflies, beetles, radishes, or lima beans	(ii) illustrate life cycles in living organisms		
(10) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environment. The student is expected to:	(C) explore, illustrate, and compare life cycles in living organisms such as butterflies, beetles, radishes, or lima beans	(iii) compare life cycles in living organisms		