

Correlation to the New York State Learning Standards and Major Understandings

This worktext is customized to the *New York Elementary Science Core Curriculum* and will help you prepare for the *Grade 4 Elementary-Level Science Test*.

After the lesson is completed, place a (✓) to indicate Mastery or a (X) to indicate Review Needed.

Chapter 1: Scientific Inquiry	Review Skill								
	Mastered Skill								
	Lessons	1	2	3	4	5	NA	Chap Review	End Rev
M1.1 Mathematical Analysis Use special mathematical notation and symbolism to communicate in mathematics and to compare and describe quantities, express relationships, and relate mathematics to their immediate environment.									
M1.1a Use plus, minus, greater than, less than, equal to, multiplication, and division signs.	○	○	○	○	★			★	★
M1.1b Select the appropriate operation to solve mathematical problems.	○	○	○	○	★			★	✓
M1.1c Apply mathematical skills to describe the natural world.	○	○	○	○	★			★	✓
M2.1 Mathematical Analysis Use simple logical reasoning to develop conclusions, recognizing that patterns and relationships present in the environment assist them in reaching their conclusions.									
M2.1a Explain verbally, graphically, or in writing the reasoning used to develop mathematical conclusions.	○	○	○	○	★			★	✓
M2.1b Explain verbally, graphically, or in writing patterns and relationships observed in the physical and living environment.	○	○	○	○	★			★	✓
M3.1 Mathematical Analysis Explore and solve problems generated from school, home, and community situations, using concrete objects or manipulative materials when possible.									
M3.1a Use appropriate scientific tools, such as metric rulers, spring scale, pan balance, graph paper, thermometers [Fahrenheit and Celsius], graduated cylinder to solve problems about the natural world.	○	★	✓	✓	✓			★	✓
S1.1 Scientific Inquiry Ask "why" questions in attempts to seek greater understanding concerning objects and events they have observed and heard about.									
S1.1a Observe and discuss objects and events and record observations.	★	✓	✓	✓	✓			★	✓
S1.1b Articulate appropriate questions based on observations.	★	✓	✓	✓	✓			★	✓
S1.2 Scientific Inquiry Question the explanations they hear from others and read about, seeking clarification and comparing them with their own observations and understandings.									
S1.2a Identify similarities and differences between explanations received from others or in print and personal observations or understandings.	★	✓	✓	✓	✓			★	✓
S1.3 Scientific Inquiry Develop relationships among observations to construct descriptions of objects and events and to form their own tentative explanations of what they have observed.									
S1.3a Clearly express a tentative explanation or description which can be tested.	★	✓	✓	✓	✓			✓	✓

Note: Standards in the Living Environment section of the Science Standard 4 are indicated with the letters LE preceding the Major Understandings. Standards from the Physical Setting section are indicated with the letter PS preceding the Major Understandings.

★	Standard Covered	○	Standard to be covered	✓	Standard previously covered
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Chapter 1: Scientific Inquiry (Continued)	Review Skill								
		Mastered Skill							
		Lessons							
		1	2	3	4	5	NA	Chap Review	End Rev
S2.1 Scientific Inquiry Develop written plans for exploring phenomena or for evaluating explanations guided by questions or proposed explanations they have helped formulate.									
S2.1a Indicate materials to be used and steps to follow to conduct the investigation and describe how data will be recorded (journal, dates and times, etc.).		○	★	★	✓	✓		★	✓
S2.2 Scientific Inquiry Share their research plans with others and revise them based on their suggestions.									
S2.2a Explain the steps of a plan to others, actively listening to their suggestions for possible modification of the plan, seeking clarification and understanding of the suggestions and modifying the plan where appropriate.		○	★	✓	✓	✓		★	✓
S2.3 Scientific Inquiry Carry out their plans for exploring phenomena through direct observation and through the simple instruments that permit measurement of quantities, such as length, mass, volume, temperature, and time.									
S2.3a Use appropriate "inquiry and process skills" to collect data.		○	★	★	✓	✓		★	✓
S2.3b Record observations accurately and concisely.		○	★	✓	✓	✓		★	✓
S3.1 Scientific Inquiry Organize observations and measurements of objects and events through classification and preparation of simple charts and tables.									
S3.1a Accurately transfer data from a science journal or notes to appropriate graphic organizer.		○	○	○	★	✓		★	✓
S3.2 Scientific Inquiry Interpret organized observations and measurements, recognizing simple patterns, sequences, and relationships.									
S3.2a State, orally and in writing, any inferences or generalizations indicated by the data collected.		○	○	○	★	✓		★	✓
S3.3 Scientific Inquiry Share their findings with others and actively seek their interpretations and ideas.									
S3.3a Explain their findings to others, and actively listen to suggestions for possible interpretations and ideas.		○	○	○	★	✓		★	✓
S3.4 Scientific Inquiry Adjust their explanations and understandings of objects and events based on their findings and new ideas.									
S3.4a State, orally and in writing, any inferences or generalizations indicated by the data, with appropriate modifications of their original prediction/explanation.		○	○	○	★	✓		★	✓
S3.4b State, orally and in writing, any new questions that arise from their investigation.		○	○	○	★	✓		★	✓

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Chapter 2: Living Things		Review Skill							
		Mastered Skill							
		Lessons							
		6	7	8	9	10	11	Chap Review	End Rev
LE1.1	Describe the characteristics of and variations between living and nonliving things.								
LE1.1a	Animals need air, water, and food in order to live and thrive.	★	✓	✓	✓	✓	✓	★	✓
LE1.1b	Plants require air, water, nutrients, and light in order to live and thrive.	★	✓	✓	✓	✓	✓	✓	✓
LE1.1c	Nonliving things do not live and thrive.	★	✓	✓	✓	✓	✓	✓	✓
LE1.1d	Nonliving things can be human-created or naturally occurring.	★	✓	✓	✓	✓	✓	★	✓
LE1.2	Describe the life processes common to all living things.								
LE1.2a	Living things grow, take in nutrients, breathe, reproduce, eliminate waste, and die.	★	✓	✓	✓	✓	✓	★	✓
LE2.1	Recognize that traits of living things are both inherited and acquired or learned.								
LE2.1a	Some traits of living things have been inherited.	○	★	✓	✓	✓	✓	★	✓
LE2.1b	Some characteristics result from an individual's interactions with the environment and cannot be inherited by the next generation.	○	★	✓	✓	✓	✓	★	✓
LE2.2	Recognize that for humans and other living things there is a genetic continuity between generations.								
LE2.2a	Plants and animals closely resemble their parents and other individuals in their species.	○	★	✓	✓	✓	✓	★	✓
LE2.2b	Plants and animals can transfer specific traits to their offspring when they reproduce.	○	★	✓	✓	✓	✓	★	✓
LE3.1	Observe and describe properties of materials, using appropriate tools.								
LE3.1a	Each animal has different structures that serve different functions in growth, survival, and reproduction.	○	○	★	✓	✓	✓	★	✓
LE3.1b	Each plant has different structures that serve different functions in growth, survival, and reproduction.	○	○	○	★	✓	✓	★	✓
LE3.1c	In order to survive in their environment, plants and animals must be adapted to that environment.	○	○	○	○	★	✓	★	✓
LE3.2	Observe that differences within a species may give individuals an advantage in surviving and reproducing.								
LE3.2a	Individuals within a species may compete with each other for food, mates, space, water, and shelter in their environment.	○	○	○	○	★	✓	★	✓
LE3.2b	All individuals have variations, and because of these variations individuals of a species may have an advantage in surviving and reproducing.	○	○	○	○	★	✓	★	✓
LE5.1	Describe basic life functions of common living specimens.								
LE5.1a	All living things grow, take in nutrients, breathe, reproduce, and eliminate waste.	★	✓	✓	✓	✓	✓	★	✓
LE5.1b	An organism's external physical features can enable it to carry out life functions in its particular environment.	○	○	★	★	✓	✓	★	✓
LE5.2	Describe some survival behaviors of common living specimens.								

★ Standard Covered

○ Standard to be covered

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Chapter 2: Living Things (Continued)	Review Skill									
	Mastered Skill									
	Lessons	6	7	8	9	10	11	Chap Review	End Rev	
LE5.2a Plants respond to changes in their environment.		○	○	○	○	○	★	★	✓	
LE5.2b Animals respond to change in their environment.		○	○	○	○	○	★	★	✓	
LE5.2c Senses can provide essential information (regarding anger, food, mates, etc.) to animals about their environment.		○	○	○	○	○	★	★	✓	
LE5.2d Some animals, including humans, move from place to place to meet their needs.		○	○	○	○	○	★	★	✓	
LE5.2e Particular animal characteristics are influenced by changing environmental conditions including: fat storage in winter, coat thickness in winter, camouflage, shedding of fur.		○	○	○	○	○	★	★	✓	
LE5.2f Some animal behaviors are influenced by environmental conditions. These behaviors may include: nest building, hibernating, hunting, migrating, and communicating.		○	○	○	○	○	★	★	✓	
Chapter 3: Growth and Development	Review Skill									
	Mastered Skill									
	Lessons	12	13	14	15	NA	NA	Chap Review	End Rev	
LE4.1 Describe the major stages in the life cycles of selected plants and animals.										
LE4.1a Plants and animals have life cycles. These may include beginning of a life, development into an adult, reproduction as an adult, and eventually death.		★	★	✓	✓			★	✓	
LE4.1b Each kind of plant goes through its own stages of growth and development that may include seed, young plant, and mature plant.		★	✓	✓	✓			★	✓	
LE4.1c The length of time from beginning of development to death of the plant is called its life span.		★	✓	✓	✓			★	✓	
LE4.1d Life cycles of some plants include changes from seed to mature plant.		★	✓	✓	✓			★	✓	
LE4.1e Each generation of animals goes through changes in form from young to adult. This completed sequence of changes in form is called a life cycle. Some insects change from egg to larva to pupa to adult.		○	★	✓	✓			★	✓	
LE4.1f Each kind of animal goes through its own stages of growth and development during its life span.		○	★	✓	✓			★	✓	
LE4.1g The length of time from an animal's birth to its death is called its life span. Life spans of different animals vary.		○	★	✓	✓			★	✓	
LE4.2 Describe evidence of growth, repair, and maintenance, such as nails, hair, and bone, and the healing of cuts and bruises.										
LE4.2a Growth is the process by which plants and animals increase in size.		★	★	★	✓			★	✓	
LE4.2b Food supplies the energy and materials necessary for growth and repair.		★	★	★	✓			✓	✓	
LE5.2 Describe some survival behaviors of common living specimens.										
LE5.2g The health, growth, and development of organisms are affected by environmental conditions such as the availability of food, air, water, space, shelter, heat, and sunlight.		★	★	✓	✓			★	✓	
LE5.3 Describe the factors that help promote good health and growth in humans.										

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Chapter 3: Growth and Development (Continued)		Review Skill							
		Mastered Skill							
		Lessons							
		12	13	14	15	NA	NA	Chap Review	End Rev
LE5.3a	Humans need a variety of healthy foods, exercise, and rest in order to grow and maintain good health.	○	○	○	★			★	✓
LE5.3b	Good health habits include hand washing and personal cleanliness; avoiding harmful substances (including alcohol, tobacco, illicit drugs); eating a balanced diet; engaging in regular exercise.	○	○	○	★			★	✓
Chapter 4: Ecology		Review Skill							
		Mastered Skill							
		Lessons							
		16	17	18	NA	NA	NA	Chap Review	End Rev
LE6.1	Describe how plants and animals, including humans, depend upon each other and the nonliving environment.								
LE6.1a	Green plants are producers because they provide the basic food supply for themselves and animals.	★	✓	✓				★	✓
LE6.1b	All animals depend on plants. Some animals (predators) eat other animals (prey).	★	✓	✓				★	✓
LE6.1c	Animals that eat plants for food may in turn become food for other animals. This sequence is called a food chain.	★	✓	✓				★	✓
LE6.1d	Decomposers are living things that play a vital role in recycling nutrients.	★	✓	✓				★	✓
LE6.1e	An organism's pattern of behavior is related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and other resources, and the physical characteristics of the environment.	○	★	✓				★	✓
LE6.1f	When the environment changes, some plants and animals survive and reproduce, and others die or move to new locations.	○	★	✓				★	✓
LE6.2	Describe the relationship of the Sun as an energy source for living and nonliving cycles.								
LE6.2a	Plants manufacture food by utilizing air, water, and energy from the Sun.	★	✓	✓				★	✓
LE6.2b	The Sun's energy is transferred on Earth from plants to animals through the food chain.	★	✓	✓				★	✓
LE6.2c	Heat energy from the Sun powers the water cycle.	○	★	✓				★	✓
LE7.1	Identify ways in which humans have changed their environment and the effects of those changes.								
LE7.1a	Humans depend on their natural and constructed environments.	○	○	★				★	✓
LE7.1b	Over time humans have changed their environment by cultivating crops and raising animals, creating shelter, using energy, manufacturing goods, developing means of transportation, changing populations, and carrying out other activities.	○	○	★				★	✓
LE7.1c	Humans, as individuals or communities, change environments in ways that can be either helpful or harmful for themselves and other organisms.	○	○	★				★	✓

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Chapter 5: Earth	Review Skill								
	Mastered Skill								
	Lessons	19	20	21	22	23	NA	Chap Review	End Rev
PS1.1 Describe patterns of daily, monthly, and seasonal changes in the atmosphere.									
PS1.1a Natural cycles and patterns include: <ul style="list-style-type: none"> • Earth spinning around once every 24 hours (rotation), resulting in day and night; • Earth moving in a path around the Sun (revolution), resulting in one Earth year; • the length of daylight and darkness varying with the seasons; • weather changing from day to day and through the seasons; • the appearance of the Moon changing as it moves in a path around Earth to complete a single cycle. 	○	○	○	○	★		★	✓	
PS1.1b Humans organize time into units based on natural motions of Earth: second, minute, hour, week, month.	○	○	○	○	★		★	✓	
PS1.1c The Sun and other stars appear to move in a recognizable pattern both daily and seasonally.	○	○	○	○	★		★	✓	
PS2.1 Describe the relationship among air, water, and land on Earth.									
PS2.1a Weather is the condition of the outside air at a particular moment.	★	✓	✓	✓	✓		★	✓	
PS2.1b Weather can be described and measured by: <ul style="list-style-type: none"> • temperature • wind speed and direction • form and amount of precipitation • general sky conditions (cloudy, sunny, partly cloudy) 	★	✓	✓	✓	✓		★	✓	
PS2.1c Water is recycled by natural processes on Earth. <ul style="list-style-type: none"> • evaporation: changing of water (liquid) into water vapor (gas) • condensation: changing of water vapor (gas) into water (liquid) • precipitation: rain, sleet, snow, hail • runoff: water flowing on Earth's surface • groundwater: water that moves downward into the ground 	○	★	✓	✓	✓		★	✓	
PS2.1d Erosion and deposition result from the interaction among air, water, and land. <ul style="list-style-type: none"> • interaction between air and water breaks down earth materials • pieces of earth material may be moved by air, water, wind, and gravity • pieces of earth material will settle or deposit on land or in the water in different places • soil is composed of broken-down pieces of living and nonliving earth material 	○	○	★	✓	✓		★	✓	
PS2.1e Extreme natural events (floods, fires, earthquakes, volcanic eruptions, hurricanes, tornadoes, and other severe storms) may have positive or negative impacts on living things.	○	○	○	★	✓		★	✓	

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Chapter 6: Matter	Review Skill								
	Mastered Skill								
	Lessons	24	25	26	NA	NA	NA	Chap Review	End Rev
PS3.1 Observe and describe properties of materials, using appropriate tools.									
PS3.1a Matter takes up space and has mass. Two objects cannot occupy the same place at the same time.	★	✓	✓					★	✓
PS3.1b Matter has properties (color, hardness, odor, sound, taste, etc.) that can be observed through the senses.	★	✓	✓					★	✓
PS3.1c Objects have properties that can be observed, described, and/or measured: length, width, volume, size, shape, mass or weight, temperature, texture, flexibility, reflectiveness of light.	★	✓	✓					★	✓
PS3.1d Measurements can be made with standard metric units and nonstandard units.	★	✓	✓					★	✓
PS3.1e The material(s) an object is made up of determine some specific properties of the object (sink/float, conductivity, magnetism). Properties can be observed or measured with tools such as hand lenses, metric rulers, thermometers, balances, magnets, circuit testers, and graduated cylinders.	★	★	✓					★	✓
PS3.1f Objects and/or materials can be sorted or classified according to their properties.	○	★	✓					★	✓
PS3.1g Some properties of an object are dependent on the conditions of the present surroundings in which the object exists. For example: • temperature—hot or cold • lighting—shadows, color • moisture—wet or dry	○	★	✓					★	✓
PS3.2 Describe chemical and physical changes, including changes in states of matter.									
PS3.2a Matter exists in three states: solid, liquid, gas. • Solids have a definite shape and volume. • Liquids do not have a definite shape but have a definite volume. • Gases do not hold their shape or volume.	○	○	★					★	✓
PS3.2b Temperature can affect the state of matter of a substance.	○	○	★					★	✓
PS3.2c Changes in the properties or materials of objects can be observed and described.	○	○	★					★	✓
PS4.1 Describe a variety of forms of energy (e.g., heat, chemical, light) and the changes that occur in objects when they interact with those forms of energy.									
PS4.1f Heat can be released in many ways, for example, by burning, rubbing (friction), or combining one substance with another.	○	○	★					★	✓
Chapter 7: Energy	Review Skill								
Mastered Skill									
Lessons	27	28	29	NA	NA	NA	Chap Review	End Rev	
PS4.1 Describe a variety of forms of energy (e.g., heat, chemical, light) and the changes that occur in objects when they interact with those forms of energy.									
PS4.1a Energy exists in various forms: heat, electric, sound, chemical, mechanical, light.	★	✓	✓					★	✓
PS4.1b Energy can be transferred from one place to another.	○	★	✓					★	✓
PS4.1c Some materials transfer energy better than others (heat and electricity).	○	★	★					★	✓

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Chapter 7: Energy (continued)	Review Skill								
	Mastered Skill								
	Lessons	27	28	29	NA	NA	NA	Chap Review	End Rev
PS 4.1d Energy and matter interact: water is evaporated by the Sun's heat; a bulb is lighted by means of electrical current; a musical instrument is played to produce sound; dark colors may absorb light, light colors may reflect light.		○	○	★				★	✓
PS 4.1e Electricity travels in a closed circuit.		★	★	✓				★	✓
PS 4.1f Heat can be released in many ways; for example, by burning, rubbing (friction), or combining one substance with another.		★	✓	✓				★	✓
PS 4.1g Interactions with forms of energy can be either helpful or harmful.		★	✓	✓				★	✓
PS 4.2 Observe the way one form of energy is transferred into another form of energy present in common situations (e.g., mechanical to heat energy, mechanical to electrical energy, chemical to heat energy).									
PS 4.2a Everyday events involve one form of energy being changed to another. ● Animals convert food to heat and motion. ● The Sun's energy warms the air and water.		○	★	✓				★	✓
PS 4.2b Humans utilize interactions between matter and energy. ● chemical to electrical, light, and heat: battery and bulb ● electrical to sound (e.g., doorbell buzzer) ● mechanical to sound (e.g., musical instruments, clapping) ● light to electrical (e.g., solar-powered calculator)		○	○	★				★	✓
Chapter 8: Force and Motion	Review Skill								
Mastered Skill									
Lessons		30	31	32	NA	NA	NA	Chap Review	End Rev
PS5.1 Describe the effects of common forces (pushes and pulls) of objects, such as those caused by gravity, magnetism, and mechanical forces.									
PS5.1a The position of an object can be described by locating it relative to another object or the background (e.g., on top of, next to, over, under, etc.).		★	✓	✓				★	✓
PS5.1b The position or direction of motion of an object can be changed by pushing or pulling.		★	✓	✓				★	✓
PS5.1c The force of gravity pulls objects toward the center of Earth.		○	○	★				★	✓
PS5.1d The amount of change in the motion of an object is affected by friction.		★	✓	✓				★	✓
PS5.1e Magnetism is a force that may attract or repel certain materials.		○	○	★				★	✓
PS5.1f Mechanical energy may cause change in motion through the application of force and through the use of simple machines such as pulleys, levers, and inclined planes.		★	★	✓				★	✓
PS5.2 Describe how forces can operate across distances.									
PS5.2a The forces of gravity and magnetism can affect objects through gases, liquids, and solids.		○	○	★				★	✓
PS5.2b The force of magnetism on objects decreases as distance increases.		○	○	★				★	✓

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Correlation of the Performance Tasks to the New York State Learning Standards and Major Understandings

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Performance Task	Review Skill							
	Mastered Skill							
	Chapter							
	1	2	3	4	5	6	7	8
T1.1 Engineering Design Describe objects, imaginary or real, that can be modeled or made differently and suggest ways in which the objects can be changes, fixed or improved.								
T1.1a Identify a simple/common object which might be improved and state the purpose of the improvement.	○	○	○	○	○	○	★	✓
T1.1b Identify features of an object that help or hinder the performance of the object.	★	✓	✓	★	✓	✓	★	✓
T1.1c Suggest ways the object can be made differently, fixed, or improved within given constraints.	○	○	○	★	✓	✓	★	✓
T1.2 Engineering Design Investigate prior solutions and ideas from books, magazines, family, friends, neighbors, and community leaders.								
T1.2a Identify appropriate questions to ask about the design of an object.	★	★	✓	✓	✓	✓	✓	✓
T1.2b Identify the appropriate resources to use to find out about the design of an object.	○	★	✓	✓	✓	✓	✓	✓
T1.2c Describe prior designs of the object.	○	○	○	★	✓	✓	✓	✓
T1.3 Engineering Design Generate ideas for possible solutions, individually and through group activity; apply age-appropriate mathematics and science skills; evaluate the ideas and determine the best solution; and explain reasons for the choices.								
T1.3a List possible solutions, applying age-appropriate math and science skills.	○	★	✓	✓	✓	✓	✓	✓
T1.3b Develop and apply criteria to evaluate possible solutions.	○	★	✓	✓	✓	★	✓	✓
T1.3c Select a solution consistent with given constraints and explain why it was chosen.	○	★	✓	✓	✓	★	★	✓
T1.4 Engineering Design Plan and build, under supervision, a model of a solution, using familiar materials, processes, and hand tools.								
T1.4a Create a grade-appropriate graphic or plan listing all materials needed, showing sizes of parts, indicating how things will fit together, and detailing steps for assembly.	○	○	○	○	○	○	○	★
T1.4b Build a model of the object, modifying the plan as necessary.	○	○	○	○	○	○	○	★
T1.5 Engineering Design Discuss how best to test the solution; perform the test under teacher supervision; record and portray results through numerical and graphic means; discuss orally why things worked or didn't work; and summarize results in writing, suggesting ways to make a solution better.								
T1.5a Determine a way to test the finished solution or model.	○	○	★	✓	✓	✓	✓	★
T1.5b Perform the test and record the results, numerically and /or graphically	○	○	★	✓	✓	✓	★	★
T1.5c Analyze results and suggest how to improve the solution or model, using oral, graphic, or written formats.	○	○	★	✓	✓	✓	★	★
6.1 Interconnectedness: Common Themes Through systems thinking, people can recognize the commonalities that exist among all systems and how parts of a system interrelate and combine to perform specific functions. ● Observe and describe interactions among components of simple systems. ● Identify common things that can be considered to be systems (e.g., a plant, a transportation system, human beings).	○	○	○	★	✓	✓	✓	★

★ Standard Covered	○ Standard to be covered	✓ Standard previously covered
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Correlation of the Performance Tasks to the New York State Learning Standards and Major Understandings

This worktext is customized to the *Elementary Science Core Curriculum* and will help you prepare for the *Grade 4 Elementary-Level Science Test*.

After the Performance Task is completed, place a (✓) to indicate Mastery or a (X) to indicate Review Needed.

Performance Task (Continued)	Review Skill							
	Mastered Skill							
	Chapter							
	1	2	3	4	5	6	7	8
<p>6.2 Interconnectedness: Common Themes Models are simplified representations of objects, structures, or systems, used in analysis, explanation, or design.</p> <ul style="list-style-type: none"> Analyze, construct, and operate models in order to discover attributes of the real thing. Discover that a model of something is different from the real thing but can be used to study the real thing. Use different types of models, such as graphs, sketches, diagrams, and maps, to represent various aspects of the real world. 	○	○	○	★	✓	✓	✓	✓
<p>6.3 Interconnectedness: Common Themes The grouping of magnitudes of size, time, frequency, and pressures or other units of measurement into a series of relative order provided a useful way to deal with the immense range and the changes in scale that affect behavior and design or systems</p> <ul style="list-style-type: none"> Observe that things in nature and things that people make have very different sizes, weights, and ages. Recognize that almost anything has limits on how big or small it can be. 	○	○	○	○	★	✓	✓	✓
<p>6.4 Interconnectedness: Common Themes Equilibrium is a state of stability due either to a lack of changes (static equilibrium) or a balance between opposing forces (dynamic equilibrium).</p> <ul style="list-style-type: none"> Observe that things change in some ways and stay the same in some ways. Recognize that things can change in different ways such as size, weight, color, and movement. Some changes can be detected by taking measurements. 	○	○	○	★	✓	✓	✓	✓
<p>6.5 Interconnectedness: Common Themes Identifying patterns of change is necessary for making predictions about future behavior and conditions.</p> <ul style="list-style-type: none"> Use simple instruments to measure such quantities as distance, size, weight and look for patterns in the data. Analyze data by making tables and graphs and looking for patterns of change. 	○	○	★	✓	✓	✓	✓	✓
<p>6.6 Interconnectedness: Common Themes In order to arrive at the best solution that meets criteria within given constraints, it is often necessary to make trade-offs.</p> <ul style="list-style-type: none"> Choose the best alternative of a set of solution under given constraints. Explain the criteria used in selecting a solution orally and in writing. 	○	★	✓	✓	✓	✓	✓	✓
<p>7.1 Interdisciplinary Problem Solving The knowledge and skills of mathematics, science, and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/technology/society, consumer decision making, design, and inquiry into phenomena.</p> <ul style="list-style-type: none"> Analyze science/technology/society problems and issues that affect their home, school, or community, and carry out a remedial course of action. Make informed consumer decisions by applying knowledge about the attributes of particular products and making cost/benefit trade-offs to arrive at an optimal choice. Design solutions to problems involving a familiar and real context, investigate related science concepts to determine the solution, and use mathematics to model, quantify, measure, and compute. Observe phenomena and evaluate them scientifically and mathematically, by conducting a fair test of the effect of variables and using mathematical knowledge and technological tools to collect, analyze, and present data and conclusions. 	○	○	★	✓	✓	✓	✓	★
<p>7.2 Interdisciplinary Problem Solving Solving interdisciplinary problems involves a variety of skills and strategies, including effective work habits; gathering and processing information; generating and analyzing ideas; realizing ideas; making connections among common themes of mathematics, science, and technology; and presenting results.</p> <ul style="list-style-type: none"> work effectively gather and process information generate and analyze ideas observe common themes realize ideas present results 	★	★	★	★	★	★	★	★

★ Standard Covered

○ Standard to be covered

✓ Standard previously covered