

**Process Standards (Scientific Investigation and Reasoning Skills)**

<b>3.1</b>	<b>Scientific investigation and reasoning.</b> The student conducts classroom and outdoor investigations following school and home safety procedures and environmentally appropriate practices.
<b>3.2</b>	<b>Scientific investigation and reasoning.</b> The student uses scientific inquiry methods during laboratory and outdoor investigations.
<b>3.3</b>	<b>Scientific investigation and reasoning.</b> The student knows that information, critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions.
<b>3.4</b>	<b>Scientific investigation and reasoning.</b> The student knows how to use a variety of tools and methods to conduct science inquiry.
<b>Tools to Know</b>	
3.1(A)	demonstrate safe practices as described in the Texas Safety Standards during classroom and outdoor investigations, including observing a schoolyard habitat
3.1(B)	make informed choices in the use and conservation of natural resources by recycling or reusing materials such as paper, aluminum cans, and plastics
3.2(A)	plan and implement descriptive investigations, including asking and answering questions, making inferences, and selecting and using equipment or technology needed, to solve a specific problem in the natural world
3.2(E)	demonstrate that repeated investigations may increase the reliability of results
3.4(A)	collect, record, and analyze information using tools, including microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, wind vanes, rain gauges, pan balances, graduated cylinders, beakers, spring scales, hot plates, meter sticks, compasses, magnets, collecting nets, notebooks, sound recorders, and Sun, Earth, and Moon system models; timing devices, including clocks and stop watches; and materials to support observation of habitats of organisms such as terrariums and aquariums
3.4(B)	use safety equipment as appropriate, including safety goggles and gloves
<b>Ways to Show</b>	
3.2(B)	collect data by observing and measuring using the metric system and recognize differences between observed and measured data
3.2(C)	construct maps, graphic organizers, simple tables, charts, and bar graphs using tools and current technology to organize, examine, and evaluate measured data
3.2(D)	analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations
3.2(F)	communicate valid conclusions supported by data in writing, by drawing pictures, and through verbal discussion
3.3(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
3.3(B)	draw inferences and evaluate accuracy of product claims found in advertisements and labels such as toys and food
3.3(C)	represent the natural world using models such as volcanoes or Sun, Earth, and Moon system and identify their limitations, including size, properties and materials
3.3(D)	connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists

**Knowledge and Skills Statements**

<b>3.5</b>	<b>Matter and energy.</b> The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used.
<b>3.6</b>	<b>Force, motion, and energy.</b> The student knows that forces cause change and that energy exists in many forms.
<b>3.7</b>	<b>Earth and space.</b> The student knows that Earth consists of natural resources and its surface is constantly changing.
<b>3.8</b>	<b>Earth and space.</b> The student knows there are recognizable patterns in the natural world and among objects in the sky.
<b>3.9</b>	<b>Organisms and environments.</b> The student knows that organisms have characteristics that help them survive and can describe patterns, cycles, systems, and relationships within the environments.
<b>3.10</b>	<b>Organisms and environments.</b> The student knows that organisms undergo similar life processes and have structures that help them survive within their environments.

^ = Student Expectation specifically included in STAAR Assessed Curriculum at Grade 5 (classified as a Readiness or Supporting Standard in Grade 3 based on its characteristics as part of the Grade 3 Science curriculum)

\* = Aligned with STAAR Assessed Curriculum at Grades 5

Source: Texas Education Agency STAAR Resources

Rptg Cat	Readiness Standards	Supporting Standards
1 Matter and Energy	3.5(A)* measure, test, and record physical properties of matter, including temperature, mass, magnetism, and the ability to sink or float	3.5(B) describe and classify samples of matter as solids, liquids, and gases and demonstrate that solids have a definite shape and that liquids and gases take the shape of their container 3.5(C)^ predict, observe and record changes in the state of matter caused by heating or cooling 3.5(D) explore and recognize that a mixture is created when two materials are combined such as gravel and sand and metal and plastic paper clips
2 Force, Motion, and Energy	3.6(A)* explore different forms of energy, including mechanical, light, sound, and heat/thermal in everyday life	3.6(B)^ demonstrate and observe how position and motion can be changed by pushing and pulling objects to show work being done such as swings, balls, pulleys, and wagons 3.6(C)* observe forces such as magnetism and gravity acting on objects
3 Earth and Space	3.7(A)* explore and record how soils are formed by weathering of rock and the decomposition of plant and animal remains 3.8(B)* describe and illustrate the Sun as a star composed of gases that provides light and heat energy for the water cycle 3.8(D)^ identify the planets in Earth's solar system and their position in relation to the sun	3.7(B)^ investigate rapid changes in the Earth's surface such as volcanic eruptions, earthquakes, and landslides 3.7(C) identify and compare different landforms, including mountains, hills, valleys, and plains 3.7(D) explore the characteristics of natural resources that make them useful in products and materials such as clothing and furniture and how resources may be conserved 3.8(A)* observe, measure, record and compare day-to-day weather changes in different locations at the same time that include air temperature, wind direction and precipitation 3.8(C)* construct models that demonstrate the relationship of the Sun, Earth, and Moon, including orbits and positions
4 Organisms and Environments	3.9(A)^ observe and describe the physical characteristics of environments and how they support populations and communities within an ecosystem 3.10(A)* explore how structures and functions of plants and animals allow them to survive in a particular environment	3.9(B)* identify and describe the flow of energy in a food chain and predict how changes in a food chain affect the ecosystem such as removal of frogs from a pond or bees from a field 3.9(C) describe environmental changes such as floods and droughts where some organisms thrive and others perish or move to new locations 3.10(B)* explore that some characteristics of organisms are inherited such as the number of limbs on an animal or flower color and recognize that some behaviors are learned in response to living in a certain environment such as animals using tools to get food 3.10(C)^ investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles such as tomato plants, frogs, and lady bugs

NOTE: The classification of standards on this TEKS Snapshot represents the reviewed and synthesized input of a sample of Texas Science teachers. This TEKS Snapshot DOES NOT represent a publication of the Texas Education Agency. District curriculum materials may reflect other classifications