Elementary Science Assessment

Administered in Grade 5

Eligible Texas Essential Knowledge and Skills

Texas Education Agency
Effective as of the 2025-2026 school year

STAAR Elementary Science Assessment

Matter and Energy

Grade 5

5.6 The student knows that matter has measurable physical properties that determine how matter is identified, classified, changed, and used. The student is expected to:

(A) compare and contrast matter based on measurable, testable, or observable physical properties, including mass, magnetism, relative density (sinking and floating using water as a reference point), physical state (solid, liquid, gas), volume, solubility in water, and the ability to conduct or insulate thermal energy and electric energy ***Readiness Standard***

(B) demonstrate and explain that some mixtures maintain physical properties of their substances such as iron filings and sand or sand and water ***Supporting Standard***

(C) compare the properties of substances before and after they are combined into a solution and demonstrate that matter is conserved in solutions ***Supporting Standard***

Grade 3

3.6 The student knows that matter has measurable physical properties that determine how matter is identified, classified, changed, and used. The student is expected to:

(C) predict, observe, and record changes in the state of matter caused by heating or cooling in a variety of substances such as ice becoming liquid water, condensation forming on the outside of a glass, or liquid water being heated to the point of becoming water vapor (gas) ***Supporting Standard***

Force, Motion, and Energy

Grade 5

5.7 The student knows the nature of forces and the patterns of their interactions. The student is expected to:

(A) investigate and explain how equal and unequal forces acting on an object cause patterns of motion and transfer of energy ***Supporting Standard***

(B) design a simple experimental investigation that tests the effect of force on an object in a system such as a car on a ramp or balloon rocket on a string ***Supporting Standard***

5.8 The student knows that energy is everywhere and can be observed in cycles, patterns, and systems. The student is expected to:

(B) demonstrate that electrical energy in complete circuits can be transformed into motion, light, sound, or thermal energy and identify the requirements for a functioning electrical circuit ***Readiness Standard***

(C) demonstrate and explain how light travels in a straight line and can be reflected, refracted, or absorbed ***Readiness Standard***

Grade 4

4.8 The student knows that energy is everywhere and can be observed in cycles, patterns, and systems. The student is expected to:

(A) investigate and identify the transfer of energy by objects in motion, waves in water, and sound ***Supporting Standard***

Grade 3

3.7 The student knows the nature of forces and the patterns of their interactions. The student is expected to:

(A) demonstrate and describe forces acting on an object in contact or at a distance, including magnetism, gravity, and pushes and pulls ***Supporting Standard***

(B) plan and conduct a descriptive investigation to demonstrate and explain how position and motion can be changed by pushing and pulling objects such as swings, balls, and wagons ***Supporting Standard***

Earth and Space

Grade 5

5.9 The student recognizes patterns among the Sun, Earth, and Moon system and their effects. The student is expected to:

(A) demonstrate that Earth rotates on its axis once approximately every 24 hours and explain how that causes the day/night cycle and the appearance of the Sun moving across the sky, resulting in changes in shadow positions and shapes ***Readiness Standard***

5.10 The student knows that there are recognizable patterns and processes on Earth. The student is expected to:

(A) explain how the Sun and the ocean interact in the water cycle and affect weather ***Supporting Standard***

(B) model and describe the processes that led to the formation of sedimentary rocks and fossil fuels ***Readiness Standard***

(C) model and identify how changes to Earth's surface by wind, water, or ice result in the formation of landforms, including deltas, canyons, and sand dunes ***Readiness Standard***

Grade 4

4.9 The student recognizes patterns among the Sun, Earth, and Moon system and their effects. The student is expected to:

(A) collect and analyze data to identify sequences and predict patterns of change in seasons such as changes in temperature and length of daylight ***Supporting Standard***

(B) collect and analyze data to identify sequences and predict patterns of change in the observable appearance of the Moon from Earth ***Supporting Standard***

4.10 The student knows that there are processes on Earth that create patterns of change. The student is expected to:

(A) 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 ***Supporting Standard***

(B) model and describe slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice ***Supporting Standard***

(C) differentiate between weather and climate ***Supporting Standard***

4.11 The student understands how natural resources are important and can be managed. The student is expected to:

(A) identify and explain advantages and disadvantages of using Earth's renewable and nonrenewable natural resources such as wind, water, sunlight, plants, animals, coal, oil, and natural gas ***Supporting Standard***

Grade 3

3.9 The student knows there are recognizable objects and patterns in Earth's solar system. The student is expected to:

(B) identify the order of the planets in Earth's solar system in relation to the Sun ***Supporting Standard***

3.10 The student knows that there are recognizable processes that change Earth over time. The student is expected to:

(C) model and describe rapid changes in Earth's surface such as volcanic eruptions, earthquakes, and landslides ***Supporting Standard***

Organisms and Environments

Grade 5

5.12 The student describes patterns, cycles, systems, and relationships within environments. The student is expected to:

(A) observe and describe how a variety of organisms survive by interacting with biotic and abiotic factors in a healthy ecosystem ***Readiness Standard***

5.13 The student knows that organisms undergo similar life processes and have structures and behaviors that help them survive within their environments. The student is expected to:

(A) analyze the structures and functions of different species to identify how organisms survive in the same environment ***Readiness Standard***

Grade 4

4.12 The student describes patterns, cycles, systems, and relationships within environments. The student is expected to:

(B) describe the cycling of matter and flow of energy through food webs, including the roles of the Sun, producers, consumers, and decomposers ***Supporting Standard***

Grade 3

3.12 The student describes patterns, cycles, systems, and relationships within environments. The student is expected to:

(B) identify and describe the flow of energy in a food chain and predict how changes in a food chain such as removal of frogs from a pond or bees from a field affect the ecosystem ***Supporting Standard***

(D) identify fossils as evidence of past living organisms and environments, including common Texas fossils ***Supporting Standard***