

2nd Grade Science TEKS

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Knowledge and skills.

(1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures. – Science Investigation Skills

The student is expected to:

- (A) identify, describe, and demonstrate safe practices as outlined in Texas Education Agency approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately; and
- (B) identify and demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reuse or recycling of paper, plastic, and metal.

(2) Scientific investigation and reasoning. The student develops abilities necessary to do scientific inquiry in classroom and outdoor investigations. – Science Reasoning Skills

The student is expected to:

- (A) ask questions about organisms, objects, and events during observations and investigations;
- (B) plan and conduct descriptive investigations;
- (C) collect data from observations using scientific tools;
- (D) record and organize data using pictures, numbers, and words;
- (E) communicate observations and justify explanations using student-generated data from simple descriptive investigations; and
- (F) compare results of investigations with what students and scientists know about the world.

(3) Scientific investigation and reasoning. The student knows that information and critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions. – Science Reasoning Skills

The student is expected to:

- (A) identify and explain a problem and propose a task and solution for the problem;
- (B) make predictions based on observable patterns; and
- (C) identify what a scientist is and explore what different scientists do

(4) Scientific investigation and reasoning. The student uses age-appropriate tools and models to investigate the natural world. – Science Investigation Skills

The student is expected to:

- (A) collect, record, and compare information using tools, including computers, hand lenses, rulers, plastic beakers, magnets, collecting nets, notebooks, and safety goggles or chemical splash goggles, as appropriate; timing devices; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquariums; and
- (B) measure and compare organisms and objects.

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(5) Matter and energy. The student knows that matter has physical properties and those properties determine how it is described, classified, changed, and used.

The student is expected to:

(A) classify matter by physical properties, including relative temperature, texture, flexibility, and whether material is a solid or liquid;

-STAAR Readiness Standard for 5th Grade (5.5A Classifying Matter)

(B) compare changes in materials caused by heating and cooling;

-STAAR Supporting Standard for 5th Grade (3.5C Adding/Removing Heat to Matter)

(C) demonstrate that things can be done to materials such as cutting, folding, sanding, and melting to change their physical properties;

-STAAR Readiness Standard for 5th Grade (5.5A Classifying Matter)

(D) combine materials that when put together can do things that they cannot do by themselves such as building a tower or a bridge and justify the selection of those materials based on their physical properties.

-STAAR Readiness Standard for 5th Grade (5.5A Classifying Matter)

(6) Force, motion, and energy. The student knows that forces cause change and energy exists in many forms.

The student is expected to:

(A) investigate the effects on objects by increasing or decreasing amounts of light, heat, and sound energy such as how the color of an object appears different in dimmer light or how heat melts butter;

-STAAR Readiness Standard for 5th Grade (5.6A Forms of Energy and their Use)

(B) observe and identify how magnets are used in everyday life; and

-STAAR Supporting Standard for 5th Grade (5.6D Force and Motion)

(C) trace and compare patterns of movement of objects such as sliding, rolling, and spinning over time.

-STAAR Supporting Standard for 5th Grade (3.6B Force and Work)

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(7) Earth and space. The student knows that the natural world includes earth materials.

The student is expected to:

(A) observe, describe, and compare rocks by size, texture, and color;

-STAAR Supporting Standard for 5th Grade (4.7A Properties of Soil)

(B) identify and compare the properties of natural sources of freshwater and saltwater; and

-STAAR Supporting Standard for 5th Grade (5.8B Interaction between Sun and Water) and (4.8B Water Cycle above and on Earth Surface)

(C) distinguish between natural and manmade resources

-STAAR Supporting Standard for 5th Grade (4.7C Renewable and Nonrenewable Resources)

(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among objects in the sky.

The student is expected to:

(A) measure, record, and graph weather information, including temperature, wind conditions, precipitation, and cloud coverage, in order to identify patterns in the data;

-STAAR Supporting Standard for 5th Grade (5.8A Weather vs Climate)

(B) identify the importance of weather and seasonal information to make choices in clothing, activities, and transportation; and

-STAAR Supporting Standard for 5th Grade (4.8C Sequences and Patterns on Earth)

(C) observe, describe, and record patterns of objects in the sky, including the appearance of the Moon.

-STAAR Supporting Standard for 5th Grade (4.8C Sequences and Patterns on Earth) and Readiness Standard (5.8C The apparent movement of the sun across the Sky)

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(9) Organisms and environments. The student knows that living organisms have basic needs that must be met for them to survive within their environment.

The student is expected to:

(A) identify the basic needs of plants and animals;

-STAAR Readiness Standard for 5th Grade (5.9A How Organisms interact with environment to Live and Survive)

(B) identify factors in the environment, including temperature and precipitation, that affect growth and behavior such as migration, hibernation, and dormancy of living things; and

-STAAR Readiness Standard for 5th Grade (5.9A How Organisms interact with environment to Live and Survive)

(C) compare the ways living organisms depend on each other and on their environments such as through food chains.

-STAAR Readiness Standard for 5th Grade (5.9B Flow of Energy in Organisms) and Supporting Standard (5.9C Effect on Organisms by Competitors, Invasive Species, or Humans)

(10) Organisms and environments. The student knows that organisms resemble their parents and have structures and processes that help them survive within their environments.

The student is expected to:

(A) observe, record, and compare how the physical characteristics and behaviors of animals help them meet their basic needs;

-STAAR Readiness Standard for 5th Grade (5.10A Structures and Functions of Species to Live and Survive)

(B) observe, record, and compare how the physical characteristics of plants help them meet their basic needs such as stems carry water throughout the plant; and

-STAAR Readiness Standard for 5th Grade (5.10A Structures and Functions of Species to Live and Survive)

(C) investigate and record some of the unique stages that insects such as grasshoppers and butterflies undergo during their life cycle.

-STAAR Supporting Standard for 5th Grade (3.10B Life Cycles of Organisms)