



HOUSTON MUSEUM
of NATURAL SCIENCE

Texas Essential Knowledge and Skills

EARTH SCIENCE ON WHEELS

SUPPORTED BY WOODSIDE ENERGY

UPDATED OCTOBER 2024

Thank you for choosing the Houston Museum of Natural Science. We are thrilled to have the opportunity to enhance your students' learning experience. To make it easier to select the right program, we have included the Texas Essential Knowledge and Skills (TEKS) for the Earth Science on Wheels programs based on grade level. This resource is designed to assist you in aligning your experience with your curriculum, ensuring that the program is both educational and enjoyable for your students.

We are excited to meet you and your students for an unforgettable journey through the wonders of discovery.

For assistance with high school TEKS, please contact curriculum@hmns.org.

Dinosaur Discovery

Goals:

- To formulate general knowledge of fossilization and prehistoric life.
- To understand the basic knowledge of what we know about Dinosaurs.
- To investigate the ways paleontologists come to conclusions with the evidence provided by the fossil record.

Participants will be able to:

- Recognize the basic concept of fossilization.
- Understand there are many forms of prehistoric life and what the requirements are for being a “Dinosaur.”
- Comprehend the process of looking at fossils to help us theorize what life was like for the dinosaurs (what they ate, how they protected themselves).

Kindergarten

Science 5.B

The student is expected to investigate and predict cause-and-effect relationships in science.

Science 5.F

The student is expected to describe the relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to describe how factors or conditions can cause objects, organisms, and systems to either change or stay the same.

Science 6

The student knows that objects have physical properties that determine how they are described and classified. The student is expected to identify and record observable physical properties of objects, including shape, color, texture, and material, and generate ways to classify objects.

Science 13.B

The student is expected to identify the different structures that animals have that allow them to interact with their environment such as seeing, hearing, moving, and grasping objects.

1st Grade

Science 5.B

The student is expected to investigate and predict cause-and-effect relationships in science.

Science 5.C

The student is expected to describe the properties of objects in terms of relative size (scale) and relative quantity.

Science 5.F

The student is expected to describe the relationship between structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to describe how factors or conditions can cause objects, organisms, and systems to either change or stay the same.

Science 6.A

The student is expected to classify objects by observable physical properties, including, shape, color, and texture, and attributes such as larger and smaller and heavier and lighter.

Science 12.C

The student is expected to identify and illustrate how living organisms depend on each other through food chains.

Science 13.A

The student is expected to identify the external structures of different animals and compare how those structures help different animals live, move, and meet basic needs for survival.

Science 13.C

The student is expected to compare ways that young animals resemble their parents.

2nd Grade**Science 5.B**

The student is expected to investigate and predict cause-and-effect relationships in science.

Science 5.F

The student is expected to describe the relationship between structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to describe how factors or conditions can cause objects, organisms, and systems to either change or stay the same.

Science 13.B

The student is expected to record and compare how the structures and behaviors of animals help them find and take in food, water, and air.

3rd Grade**Science 4.B**

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 10.B

The student is expected to investigate and explain how soils such as sand and clay are formed by weathering of rock and by decomposition of plant and animal remains.

Science 12.C

The student is expected to describe how natural changes to the environment such as floods and droughts cause some organisms to thrive and others to perish or move to new locations.

Science 12.D

The student is expected to identify fossils as evidence of past living organisms and environments, including common Texas fossils.

Science 13.A

The student is expected to explore and explain how external structures and functions of animals such as the neck of a giraffe or webbed feet on a duck enable them to survive in their environment.

4th Grade**Science 1.A**

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 4.B

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 12.C

The student is expected to identify and describe past environments based on fossil evidence, including common Texas fossils.

5th Grade**Science 1.A**

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 4.B

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 13.A

The student is expected to analyze the structures and functions of different species to identify how organisms survive in the same environment.

6th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 3.A

The student is expected to develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to analyze and explain the complementary relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 12.A

The student is expected to investigate how organisms and populations in an ecosystem depend on and may compete for biotic factors such as food and abiotic

factors such as availability of light and water, range of temperatures, or soil composition.

Science 12.B

The student is expected to describe and give examples of predatory, competitive, and symbiotic relationships between organisms, including mutualism, parasitism, and commensalism.

Science 13.C

The student is expected to describe how variations within a population can be an advantage or disadvantage to the survival of a population as environments change.

7th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to analyze and explain the complementary relationship between structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 10.A

The student is expected to describe the evidence that supports that Earth has changed over time, including fossil evidence, plate tectonics, and superposition.

Science 13.D

The student is expected to describe and give examples of how natural and artificial selection change the occurrence of traits in a population over generations.

8th Grade**Science 1.A**

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 3.A

The student is expected to develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to analyze and explain the complementary relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 11.A

The student is expected to use scientific evidence to describe how natural events, including volcanic eruptions, meteor impacts, abrupt changes in ocean currents, and the release and absorption of greenhouse gases influence climate.

Science 12.A

The student is expected to explain how disruptions such as population changes, natural disasters, and human intervention impact the transfer of energy in food webs in ecosystems.

Science 12.B

The student is expected to describe how primary and secondary ecological succession affect populations and species diversity after ecosystems are disrupted by natural events or human activity.

Science 13.C

The student is expected to describe how variations of traits within a population lead to structural, behavioral, and physiological adaptations that influence the likelihood of survival and reproductive success of a species over generations.

Dynamic Earth

Goals:

- To formulate general knowledge of layers of the earth
- To understand the basic knowledge of the movement of our earth
- To investigate the ways that movement affects our world

Participants will be able to:

- Recognize the concept of layers of the earth
- Understand the aspects of our planet that are moving dynamically
- Comprehend the process of how that constant movement affects our world in dramatic ways

3rd Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 4.A

The student is expected to explain how scientific discoveries and innovative solutions to problems impact science and society.

Science 4.B

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors

employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 10.C

The student is expected to model and describe rapid changes in Earth's surface such as volcanic eruptions, earthquakes, and landslides.

4th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 4.A

The student is expected to explain how scientific discoveries and innovative solutions to problems impact science and society.

Science 4.B

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 10.B

The student is expected to model and describe slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice.

Science 11.C

The student is expected to determine the physical properties of rocks that allow Earth's natural resources to be stored there.

5th Grade**Science 1.A**

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 4.A

The student is expected to explain how scientific discoveries and innovative solutions to problems impact science and society.

Science 4.B

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors

employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 10.C

The student is expected to 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.

6th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 3.A

The student is expected to develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to analyze and explain the complementary relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 7.A

The student is expected to identify and explain how forces act on objects, including gravity, friction, magnetism, applied forces, and normal forces, using real-world applications.

Science 10.B

The student is expected to model and describe the layers of Earth, including the inner core, outer core, mantle, and crust.

7th Grade**Science 1.A**

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 4.A

The student is expected to relate the impact of past and current research on scientific thought and society, including the process of science, cost-benefit analysis, and contributions of diverse scientists as related to the content.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to analyze and explain the complementary relationship between structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 8.A

The student is expected to investigate methods of thermal energy transfer into and out of systems, including conduction, convection, and radiation.

Science 8.B

The student is expected to investigate how thermal energy moves in a predictable pattern from warmer to cooler until all substances within the system reach thermal equilibrium.

Science 10.A

The student is expected to describe the evidence that supports that Earth has changed over time, including fossil evidence, plate tectonics, and superposition.

Science 10.B

The student is expected to describe how plate tectonics causes ocean basin formation, earthquakes, mountain building, and volcanic eruptions, including supervolcanoes and hot spots.

8th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 3.A

The student is expected to develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories.

Science 4.A

The student is expected to relate the impact of past and current research on scientific thought and society, including the process of science, cost-benefit analysis, and contributions of diverse scientists as related to the content.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to analyze and explain the complementary relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 11.A

The student is expected to use scientific evidence to describe how natural events, including volcanic eruptions, meteor impacts, abrupt changes in ocean currents, and the release and absorption of greenhouse gases influence climate.

Science Sort

Goals:

- To formulate basic understanding of fossilization
- To recognize what kind of fossils we find in places of the world that was once an ocean
- To investigate the different types of sea fossils and practice identifying sea fossils

Participants will be able to:

- Recognize the concept of fossilization
- Understand the sedimentary conditions that best preserve fossils
- Discuss why and how paleontologists use tools to excavate and sort fossils

2nd Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 5.B

The student is expected to investigate and predict cause-and-effect relationships in science.

Science 5.F

The student is expected to describe the relationship between structure and function of objects, organisms, and systems.

Science 5.G

describe how factors or conditions can cause objects, organisms, and systems to either change or stay the same.

Science 10.A

The student is expected to investigate and describe how wind and water move soil and rock particles across the Earth's surface such as wind blowing sand into dunes on a beach or a river carrying rocks as it flows.

3rd Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 4.B

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 10.B

The student is expected to investigate and explain how soils such as sand and clay are formed by weathering of rock and by decomposition of plant and animal remains.

Science 12.D

The student is expected to identify fossils as evidence of past living organisms and environments, including common Texas fossils.

4th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 4.B

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.D

The student is expected to examine and model the parts of a system and their interdependence in the function of the system.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 12.C

The student is expected to identify and describe past environments based on fossil evidence, including common Texas fossils.

5th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 4.B

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to explain how factors or conditions impact stability and change in objects, organisms, and systems.

6th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to analyze and explain the complementary relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

7th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to analyze and explain the complementary relationship between structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

Science 10.A

The student is expected to describe the evidence that supports that Earth has changed over time, including fossil evidence, plate tectonics, and superposition.

8th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to analyze and explain the complementary relationship between the structure and function of objects, organisms, and systems.

Science 5.G

The student is expected to analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

Renewable is Doable

Goals

- To formulate basic understanding of kinetic and potential energy
- To recognize the difference between renewable and nonrenewable energy
- To investigate the different types of renewable energy including pros and cons

Participants will be able to:

- Recognize the concept of energy
- Understand there are many forms of renewable energies with unique advantages and disadvantages
- Ponder the ways they can use more renewable energy or reduce the amount they use nonrenewable energy

2nd Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify basic advantages and limitations of models such as their size, properties, and materials.

Science 4.A

The student is expected to explain how science or an innovation can help others.

Science 5.B

The student is expected to investigate and predict cause-and-effect relationships in science.

Science 5.E

identify forms of energy and properties of matter.

Science 5.F

The student is expected to describe the relationship between structure and function of objects, organisms, and systems.

Science 9.A

The student is expected to describe the Sun as a star that provides light and heat and explain that the Moon reflects the Sun's light.

Science 11.A

The student is expected to distinguish between natural and manmade resources.

3rd Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 4.A

The student is expected to explain how scientific discoveries and innovative solutions to problems impact science and society.

Science 4.B

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 8.A

The student is expected to identify everyday examples of energy, including light, sound, thermal, and mechanical.

Science 11.A

The student is expected to explore and explain how humans use natural resources such as in construction, in agriculture, in transportation, and to make products.

Science 11.B

The student is expected to explain why the conservation of natural resources is important.

Science 11.C

The student is expected to identify ways to conserve natural resources through reducing, reusing, or recycling.

4th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 4.A

The student is expected to explain how scientific discoveries and innovative solutions to problems impact science and society.

Science 4.B

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.D

The student is expected to examine and model the parts of a system and their interdependence in the function of the system.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 8.B

The student is expected to identify conductors and insulators of thermal and electrical energy.

Science 8.C

The student is expected to demonstrate and describe how electrical energy travels in a closed path that can produce light and thermal energy.

Science 11.A

The student is expected to 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.

Science 11.B

The student is expected to explain the critical role of energy resources to modern life and how conservation, disposal, and recycling of natural resources impact the environment.

5th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 2.D

The student is expected to evaluate experimental and engineering designs.

Science 4.A

The student is expected to explain how scientific discoveries and innovative solutions to problems impact science and society.

Science 4.B

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to explain the relationship between the structure and function of objects, organisms, and systems.

Science 8.A

The student is expected to investigate and describe the transformation of energy in systems such as energy in a flashlight battery that changes from chemical energy to electrical energy to light energy.

Science 8.B

The student is expected to 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.

6th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 2.D

The student is expected to evaluate experimental and engineering designs..

Science 4.A

The student is expected to relate the impact of past and current research on scientific thought and society, including the process of science, cost-benefit analysis, and contributions of diverse scientists as related to the content.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to analyze and explain the complementary relationship between the structure and function of objects, organisms, and systems.

Science 8.A

The student is expected to compare and contrast gravitational, elastic, and chemical potential energies with kinetic energy.

Science 8.B

The student is expected to describe how energy is conserved through transfers and transformations in systems such as electrical circuits, food webs, amusement park rides, or photosynthesis.

Science 11.A

The student is expected to research and describe why resource management is important in reducing global energy poverty, malnutrition, and air and water pollution.

Science 11.B

The student is expected to explain how conservation, increased efficiency, and technology can help manage air, water, soil, and energy resources.

7th Grade**Science 1.A**

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 2.D

The student is expected to evaluate experimental and engineering designs.

Science 4.A

The student is expected to relate the impact of past and current research on scientific thought and society, including the process of science, cost-benefit analysis, and contributions of diverse scientists as related to the content.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.F

The student is expected to analyze and explain the complementary relationship between structure and function of objects, organisms, and systems.

Science 8.A

The student is expected to investigate methods of thermal energy transfer into and out of systems, including conduction, convection, and radiation.

Science 8.B

The student is expected to investigate how thermal energy moves in a predictable pattern from warmer to cooler until all substances within the system reach thermal equilibrium.

8th Grade

Science 1.A

The student is expected to ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

Science 2.A

The student is expected to identify advantages and limitations of models such as their size, scale, properties, and materials.

Science 2.D

The student is expected to evaluate experimental and engineering designs.

Science 4.A

The student is expected to relate the impact of past and current research on scientific thought and society, including the process of science, cost-benefit analysis, and contributions of diverse scientists as related to the content.

Science 4.C

The student is expected to research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Science 5.B

The student is expected to identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Science 5.C

The student is expected to analyze how differences in scale, proportion, or quantity affect a system's structure or performance.

Science 5.F

The student is expected to analyze and explain the complementary relationship between the structure and function of objects, organisms, and systems.

Science 11.A

The student is expected to use scientific evidence to describe how natural events, including volcanic eruptions, meteor impacts, abrupt changes in ocean currents, and the release and absorption of greenhouse gases influence climate.

Science 11.B

The student is expected to use scientific evidence to describe how human activities, including the release of greenhouse gases, deforestation, and urbanization, can influence climate.