



HOUSTON MUSEUM
of NATURAL SCIENCE

Texas Essential Knowledge and Skills

BUGS ON WHEELS

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 four Bugs 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.

Little Bodies, Big Jobs

Goals:

- To generate a broad understanding of the vast impact that invertebrates have on the environment.
- To establish the main jobs that many invertebrates carry out daily.
- To explain how the absence of invertebrate species would negatively influence the delicate balance of their native ecosystems.

Participants will be able to:

- Establish common jobs that invertebrates have and the species that correspond with those jobs.
- Understand how all species in their native habitats maintain a balance based on their jobs.

Kindergarten

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 12.B

The student is expected to observe and identify the dependence of animals on air, water, food, space, and shelter.

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.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 12.A

The student is expected to classify living and nonliving things based upon whether they have basic needs and produce young.

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.

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 12.A

The student is expected to describe how the physical characteristics of environments, including the amount of rainfall, support plants and animals within an ecosystem.

Science 12.C

The student is expected to explain and demonstrate how some plants depend on other living things, wind, or water for pollination and to move their seeds around.

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 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.B

The student is expected to 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.

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.

Science 13.B

The student is expected to explore, illustrate, and compare life cycles in organisms such as beetles, crickets, radishes, or lima beans.

4th 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 must 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.B

The student is expected to describe the cycling of matter and flow of energy through food webs, including the roles of the Sun, producers, consumers, and decomposers.

5th 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 12.A

The student is expected to observe and describe how a variety of organisms survive by interacting with biotic and abiotic factors in a healthy ecosystem.

Science 12.B

The student is expected to predict how changes in the ecosystem affect the cycling of matter and flow of energy in a food web.

Science 12.C

The student is expected to describe a healthy ecosystem and how human activities can be beneficial or harmful to an ecosystem.

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.

Science 13.B

The student is expected to explain how instinctual behavioral traits such as turtle hatchlings returning to the sea and learned behavioral traits such as orcas hunting in packs increase chances of survival.

6th Grade**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 12.C

The student is expected to describe the hierarchical organization of organism, population, and community within an ecosystem.

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 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 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.

Science 14.A

The student is expected to describe the taxonomic system that categorizes organisms based on similarities and differences shared among groups.

8th Grade**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 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 12.C

The student is expected to describe how biodiversity contributes to the stability and sustainability of an ecosystem and the health of the organisms within the ecosystem.

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.

The Basics of Bugs

Goals:

- To formulate general knowledge of the major subphylums and classes of the phylum Arthropoda.
- To understand the basic anatomy and behavior of various species of arthropods.
- To investigate the differences and similarities between insects, arachnids, crustaceans, and myriapods.

Participants will be able to:

- Recognize the main components of insects, arachnids, and myriapods.
- Understand why different species of arthropods have evolved to habituate their native environment.
- Apprehend the important role of different arthropod species in their environment.

Kindergarten

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 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.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.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.

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 12.A

The student is expected to describe how the physical characteristics of environments, including the amount of rainfall, support plants and animals within an ecosystem.

Science 12.B

The student is expected to create and describe food chains identifying producers and consumers to demonstrate how animals depend on other living things.

Science 12.C

The student is expected to explain and demonstrate how some plants depend on other living things, wind, or water for pollination and to move their seeds around.

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.

Science 13.C

The student is expected to record and compare how being part of a group helps animals obtain food, defend themselves, and cope with changes.

3rd Grade

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.B

The student is expected to 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.

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.

Science 13.B

The student is expected to explore, illustrate, and compare life cycles in organisms such as beetles, crickets, radishes, or lima beans.

4th 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 12.B

The student is expected to describe the cycling of matter and flow of energy through food webs, including the roles of the Sun, producers, consumers, and decomposers.

Science 13.B

The student is expected to differentiate between inherited and acquired physical traits of organisms.

5th 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 12.A

The student is expected to observe and describe how a variety of organisms survive by interacting with biotic and abiotic factors in a healthy ecosystem.

Science 12.B

The student is expected to predict how changes in the ecosystem affect the cycling of matter and flow of energy in a food web.

Science 12.C

The student is expected to describe a healthy ecosystem and how human activities can be beneficial or harmful to an ecosystem.

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.

Science 13.B

The student is expected to explain how instinctual behavioral traits such as turtle hatchlings returning to the sea and learned behavioral traits such as orcas hunting in packs increase chances of survival.

6th Grade

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 12.C

The student is expected to describe the hierarchical organization of organism, population, and community within an ecosystem.

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 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 12.B

The student is expected to describe how ecosystems are sustained by the continuous flow of energy and the recycling of matter and nutrients within the biosphere.

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.

Science 14.A

The student is expected to describe the taxonomic system that categorizes organisms based on similarities and differences shared among groups.

8th Grade**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 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 12.C

The student is expected to describe how biodiversity contributes to the stability and sustainability of an ecosystem and the health of the organisms within the ecosystem.

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.

The Magic of Metamorphosis

Goals:

- To establish a basic understanding of different arthropod lifecycles.
- To present the process by which butterflies and moths metamorphose.

Participants will be able to:

- To differentiate between a complete and incomplete lifecycle.
- To understand the process of metamorphosis.
- To recognize the important role that moths and butterflies play for their native ecosystems.

Kindergarten**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 12.B

The student is expected to observe and identify the dependence of animals on air, water, food, space, and shelter.

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.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 11.A

The student is expected to identify and describe how plants, animals, and humans use rocks, soil, and water.

Science 12.A

The student is expected to classify living and nonliving things based upon whether they have basic needs and produce young.

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.

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 12.A

The student is expected to describe how the physical characteristics of environments, including the amount of rainfall, support plants and animals within an ecosystem.

Science 12.B

The student is expected to create and describe food chains identifying producers and consumers to demonstrate how animals depend on other living things.

Science 12.C

The student is expected to explain and demonstrate how some plants depend on other living things, wind, or water for pollination and to move their seeds around.

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 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.B

The student is expected to 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.

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.

Science 13.B

The student is expected to explore, illustrate, and compare life cycles in organisms such as beetles, crickets, radishes, or lima beans.

4th 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 12.B

The student is expected to describe the cycling of matter and flow of energy through food webs, including the roles of the Sun, producers, consumers, and decomposers.

Science 13.B

The student is expected to differentiate between inherited and acquired physical traits of organisms.

5th 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 12.A

The student is expected to observe and describe how a variety of organisms survive by interacting with biotic and abiotic factors in a healthy ecosystem.

Science 12.B

The student is expected to predict how changes in the ecosystem affect the cycling of matter and flow of energy in a food web.

Science 12.C

The student is expected to describe a healthy ecosystem and how human activities can be beneficial or harmful to an ecosystem.

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.

Science 13.B

The student is expected to explain how instinctual behavioral traits such as turtle hatchlings returning to the sea and learned behavioral traits such as orcas hunting in packs increase chances of survival.

6th Grade

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.C

The student is expected to describe the hierarchical organization of organism, population, and community within an ecosystem.

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 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 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 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 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 12.C

The student is expected to describe how biodiversity contributes to the stability and sustainability of an ecosystem and the health of the organisms within the ecosystem.

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.

Adaptation Exploration - TEKS

Goals:

- To define adaptation and connect which species rely heavily on their adaptations.
- To introduce a variety of species of arthropods that display excellent examples of camouflage, mimicry, threat response, strength, speed, agility, unique behavior/communication, and more.
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Participants will be able to:

- Define adaptation and understand how different species of arthropods rely on their unique adaptations.
- Recognize how different species evolve over time to survive in their environment.
- Differentiate between behavioral, structural, and physiological adaptation.

Kindergarten

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 12.B

The student is expected to observe and identify the dependence of animals on air, water, food, space, and shelter.

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.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 11.A

The student is expected to identify and describe how plants, animals, and humans use rocks, soil, and water.

Science 12.A

The student is expected to classify living and nonliving things based upon whether they have basic needs and produce young.

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.

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 12.A

The student is expected to describe how the physical characteristics of environments, including the amount of rainfall, support plants and animals within an ecosystem.

Science 12.B

The student is expected to create and describe food chains identifying producers and consumers to demonstrate how animals depend on other living things.

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.

Science 13.C

The student is expected to record and compare how being part of a group helps animals obtain food, defend themselves, and cope with changes.

3rd Grade

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.B

The student is expected to 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.

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 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.B

The student is expected to differentiate between inherited and acquired physical traits of organisms.

5th 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 12.A

The student is expected to observe and describe how a variety of organisms survive by interacting with biotic and abiotic factors in a healthy ecosystem.

Science 12.B

The student is expected to predict how changes in the ecosystem affect the cycling of matter and flow of energy in a food web.

Science 12.C

The student is expected to describe a healthy ecosystem and how human activities can be beneficial or harmful to an ecosystem.

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.

Science 13.B

The student is expected to explain how instinctual behavioral traits such as turtle hatchlings returning to the sea and learned behavioral traits such as orcas hunting in packs increase chances of survival.

6th Grade**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 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 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 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.

Science 14.A

The student is expected to describe the taxonomic system that categorizes organisms based on similarities and differences shared among groups.

8th Grade**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.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 12.C

The student is expected to describe how biodiversity contributes to the stability and sustainability of an ecosystem and the health of the organisms within the ecosystem.

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.