

Science

Standard

SC.1: Students will be able to develop a system of questioning and problem solving.

Benchmark

SC.1.0.1 Grade K: Employ simple equipment and tools to gather data and extend the senses.

Benchmark

SC.1.1.1 Grade 1: Ask a question about objects, organisms, and events in the environment.

Benchmark

SC.1.2.1 Grade 2: Ask a question about objects, organisms, and events in the environment.

Benchmark

SC.1.2.2 Grade 2: Plan and conduct a simple investigation.

Benchmark

SC.1.5.1 Grade 5: Communicate, critique, and analyze investigations and explanations.

Benchmark

SC.1.6-8.1 Grade 6-8: Have abilities necessary to do scientific inquiry.

Benchmark

SC.1.6-8.2 Grade 6-8: Develop understanding about scientific inquiry.

Benchmark

SC.1.9-12.1 Grade 9-12: Identify questions, design, and conduct scientific investigations to answer them.

Benchmark

SC.1.9-12.2 Grade 9-12: Use technology, mathematics, and newly acquired evidence to revise or make scientific explanations.

Standard

SC.2: Students will investigate, understand and apply physical science concepts.

Benchmark

SC.2.1.1 Grade 1: Observe that materials can exist in many different states, and some materials can be changed from one state to another by heating and cooling.

Benchmark

SC.2.1.2 Grade 1: Observe that pushing and pulling can change the position and motion of objects.

Benchmark

SC.2.1.3 Grade 1: Observe that light travels in a straight line until it strikes an object.

Benchmark

SC.2.1.4 Grade 1: Observe the heat can be produced in many ways and can move from one object to another by conduction.

Benchmark

SC.2.2.1 Grade 2: Observe and measure that materials can exist in many different states, and some materials can be changed from one state to another by heating or cooling.

Benchmark

SC.2.2.2 Grade 2: Observe the objects can be described and classified by their properties and by the properties of the materials from which they are made.

Benchmark

SC.2.2.3 Grade 2: Observe and measure that magnets attract and repel each other and certain kinds of other materials.

Benchmark

SC.2.3.1 Grade 3: Observe that light travels in a straight line until it strikes an object, then it is reflected, refracted or is absorbed by the object.

Benchmark

SC.2.3.2 Grade 3: Observe and measure that pushing and pulling can change the position and motion of objects.

Benchmark

SC.2.3.3 Grade 3: Observe and measure that heat can be produced in many ways and can move from one object to another by conduction.

Benchmark

SC.2.4.1 Grade 4: Observe, measure, and describe that heat can be produced in many ways and can move from one object to another by conduction.

Benchmark

SC.2.5.1 Grade 5: Observe that materials can exist in many different states, and some materials can be changed from one state to another by heating and cooling.

Benchmark

SC.2.5.2 Grade 5: Observe and describe that objects can be described and classified by their properties and by the properties of the materials of which they are made.

Benchmark

SC.2.5.3 Grade 5: Observe that objects have many observable properties that can be measured using tools.

Benchmark

SC.2.5.4 Grade 5: Observe, measure, and describe that an object's motion can be described by tracing and measuring its position over time.

Benchmark

SC.2.5.5 Grade 5: Observe, measure and describe the magnets attract and repel each other and certain kinds of other materials.

Benchmark

SC.2.6-8.1 Grade 6-8: Observe, measure, and describe the properties of objects and materials.

Benchmark

SC.2.6-8.2 Grade 6-8: Observe, measure, and describe the position and motion of objects.

Benchmark

SC.2.6-8.3 Grade 6-8: Observe, measure, and describe the transfer of energy.

Benchmark

SC.2.9-12.1 Grade 9-12: Describe, explain, and compare the properties of matter.

Benchmark

SC.2.9-12.2 Grade 9-12: Explain, compare, and investigate forces and their relationship to motion.

Benchmark

SC.2.9-12.3 Grade 9-12: Investigate and explain the interactions of energy and matter, relating to laws of conservation.

Standard

SC.3: Students will investigate, understand and apply life science concepts.

Benchmark

SC.3.0.1 Grade K: Observe that plants and animals have varying life cycles that include being born, developing into adults, reproducing, and eventually dying.

Benchmark

SC.3.0.2 Grade K: Observe plants and animals closely resemble their parents.

Benchmark

SC.3.1.1 Grade 1: Observe that organisms have basic needs and can survive in environments in which their basic needs are met and the world has many different environments and each distinct environment supports the life of different types of organisms.

Benchmark

SC.3.1.2 Grade 1: Observe that each plant and animal has different structures that serve different purposes.

Benchmark

SC.3.1.3 Grade 1: Observe that plants and animals closely resemble their parents.

Benchmark

SC.3.2.1 Grade 2: Observe that organisms have basic needs and can survive in environments in which their basic needs are met and the world has many different environments and each distinct environment supports the life of different types of organisms.

Benchmark

SC.3.2.2 Grade 2: Observe that an organism's behavior is related to the nature of the organism's environment and when the environment changes, some organisms survive and other organisms die or move to new locations.

Benchmark

SC.3.3.1 Grade 3: Observe that organisms have basic needs and can survive in environments in which their basic needs are met and the world has many different environments and each distinct environment supports the life of different types of organisms.

Benchmark

SC.3.3.2 Grade 3: Observe that each plant and animal has different structures that serve different purposes.

Benchmark

SC.3.3.3 Grade 3: Observe that the behavior of individual organisms is influenced by internal and external cues.

Benchmark

SC.3.3.4 Grade 3: Observe that plants and animals have varying life cycles that include being born, developing into adults, reproducing, and eventually dying.

Benchmark

SC.3.3.5 Grade 3: Observe that plants and animals closely resemble their parents.

Benchmark

SC.3.3.6 Grade 3: Observe that many characteristics of an organism are inherited from the parent, but other characteristics result from interactions with the environment.

Benchmark

SC.3.3.7 Grade 3: Observe that even though some animals eat other animals and some animals eat plants, all animals depend on plants.

Benchmark

SC.3.3.8 Grade 3: Observe that an organism's behavior is related to the nature of the organism's environment and when the environment changes, some organisms survive and other organisms die or move to new locations.

Benchmark

SC.3.4.1 Grade 4: Observe that organisms have basic needs and can survive in environments in which their basic needs are met and the world has many different environments and each distinct environment supports the life of different types of organisms.

Benchmark

SC.3.4.2 Grade 4: Observe that an organism's behavior is related to the nature of the organism's environment and when the environment changes, some organisms survive and other organisms die or move to new locations.

Benchmark

SC.3.5.1 Grade 5: Observe that humans depend on both their natural and constructed environments and cause changes in the environment that can be either beneficial or detrimental for themselves or other organisms.

Benchmark

SC.3.6-8.1 Grade 6-8: Observe, measure, and describe the structure and function in living systems.

Benchmark

SC.3.6-8.2 Grade 6-8: Observe, measure, and describe reproduction and heredity.

Benchmark

SC.3.6-8.3 Grade 6-8: Observe, measure, and describe regulation and behavior.

Benchmark

SC.3.6-8.4 Grade 6-8: Observe, measure, and describe populations and ecosystems.

Benchmark

SC.3.6-8.5 Grade 6-8: Observe, measure, and describe diversity and adaptations of organisms.

Benchmark

SC.3.9-12.1 Grade 9-12: Describe and explain the levels of organization of living things.

Benchmark

SC.3.9-12.2 Grade 9-12: Explain how traits are passed from parents to offspring.

Standard

SC.4

Science Standard 4: Students will investigate, understand, and be able to apply earth and space science concepts.

Benchmark

SC.4.0.1 Grade K: Observe that the objects in the sky have patterns of movement.

Benchmark

SC.4.1.1 Grade 1: Observe that earth materials are solid rocks and soil, water, and gases of the atmosphere and that they have many different physical and chemical properties and provide many of the resources that humans use.

Benchmark

SC.4.1.2 Grade 1: Observe that the sun, moon, stars, and clouds have properties, locations, and movements that can be observed and described.

Benchmark

SC.4.1.3 Grade 1: Observe that the sun provides the light and heat necessary to maintain the temperature of the earth.

Benchmark

SC.4.1.4 Grade 1: Observe that the objects in the sky have patterns of movement.

Benchmark

SC.4.2.1 Grade 2: Observe that earth materials are solid rocks and soil, water, and gases of the atmosphere and that they have many different physical and chemical properties and provide many of the resources that humans use.

Benchmark

SC.4.2.2 Grade 2: Observe that soils have properties of color, texture, capacity to retain water, and the ability to support growth.

Benchmark

SC.4.2.3 Grade 2: Observe that fossils provide evidence about plants and animals that have lived long ago and their environment.

Benchmark

SC.4.2.4 Grade 2: Observe that the sun, moon, stars, and clouds have properties, locations, and movements that can be observed and described.

Benchmark

SC.4.2.5 Grade 1: Observe objects in the sky have patterns of movement.

Benchmark

SC.4.3.1 Grade 3: Observe that the sun, moon, stars, and clouds have properties, locations, and movements that can be observed and described.

Benchmark

SC.4.3.2 Grade 3: Observe that the objects in the sky have patterns of movement.

Benchmark

SC.4.5.1 Grade 5: Observe that earth materials are solid rocks and soil, water, and gases of the atmosphere and that they have many different physical and chemical properties and provide many of the resources that humans use.

Benchmark

SC.4.5.2 Grade 5: Observe that fossils provide evidence about plants and animals that have lived long ago and their environment.

Benchmark

SC.4.5.3 Grade 5: Observe that the sun, moon, stars, and clouds have properties, locations, and movements that can be observed and described.

Benchmark

SC.4.5.4 Grade 5: Observe that the sun provides the light and heat necessary to maintain the temperature of the earth.

Benchmark

SC.4.5.5 Grade 5: Observe that the surface of the earth changes either slowly, like erosion and weathering, or rapidly, like landslides, volcanic eruptions, or earthquakes.

Benchmark

SC.4.6-8.1 Grade 6-8: Observe, measure, and explain the structure of earth's system.

Benchmark

SC.4.6-8.2 Grade 6-8: Observe, measure, and explain earth's history.

Benchmark

SC.4.6-8.3 Grade 6-8: Observe, measure, and explain the earth in the solar system.

Benchmark

SC.4.9-12.1 Grade 9-12: Observe, measure, and explain the structure of earth system.

Benchmark

SC.4.9-12.2 Grade 9-12: Observe, measure, and explain earth's history.

Benchmark

SC.4.9-12.3 Grade 9-12: Observe, measure, and explain the earth in the solar system.

Standard

SC.5 : Students will investigate, understand and apply science and technology concepts.

Benchmark

SC.5.6-8.1 Grade 6-8: Identify appropriate problems for technological design.

Benchmark

SC.5.6-8.2 Grade 6-8: Communicate the process of technological design.

Benchmark

SC.5.9-12.1 Grade 9-12: Explain how technology has influenced science and scientific applications.

Benchmark

SC.5.9-12.2 Grade 9-12: Use technology to aid in analyzing and communicating results of scientific study.

Standard

SC.6: Students will investigate, understand and apply concepts of science in personal and social perspectives.

Benchmark

SC.6.0.1 Grade K: Apply the concept that safety and security are basic needs of humans and safety rules can be found at school, home, and in the community.

Benchmark

SC.6.0.2 Grade K: Apply the concept that individuals have some responsibility for their own health and should understand how to care for themselves and prevent the spread of communicable diseases.

Benchmark

SC.6.0.3 Grade K: Apply the concept that nutrition is essential to health.

Benchmark

SC.6.1.1 Grade 1: Apply the concept that safety and security are basic needs of humans and safety rules can be found at school, home, and in the community.

Benchmark

SC.6.2.1 Grade 2: Apply the concept that safety and security are basic needs of humans and safety rules can be found at school, home, and in the community.

Benchmark

SC.6.3.1 Grade 3: Apply the concept that safety and security are basic needs of humans and safety rules can be found at school, home, and in the community.

Benchmark

SC.6.3.2 Grade 3: Apply the concept that human populations include groups of individuals living in a particular location.

Benchmark

SC.6.3.3 Grade 3: Apply the concept that population density is the number of individuals of a particular population that lives in a given amount of space.

Benchmark

SC.6.3.4 Grade 3: Apply the concept that resources are things we get from the living and nonliving environment to meet the needs and wants of the population.

Benchmark

SC.6.3.5 Grade 3: Apply the concept that some resources are basic materials such as air, water, and soil; some are produced from basic resources, such as food, fuel, and building materials; and some resources are nonmaterial, such as quiet places, beauty, security, and safety.

Benchmark

SC.6.4.1 Grade 4: Apply the concept that safety and security are basic needs of humans and safety rules can be found at school, home, and in the community.

Benchmark

SC.6.4.2 Grade 4: Apply the concept that nutrition is essential to health and understand how the body uses food and how various foods contribute to their health.

Benchmark

SC.6.5.1 Grade 5: Apply the concept that safety and security are basic needs of humans and safety rules can be found at school, home, and in the community.

Benchmark

SC.6.5.2 Grade 5: Apply the concept that different substances, such as tobacco, alcohol, illicit drugs, and over-the-counter drugs, can damage the body and how it functions,

Benchmark

SC.6.5.3 Grade 5: Apply the concept that resources are things we get from the living and nonliving environment to meet the needs and wants of the population.

Benchmark

SC.6.5.4 Grade 5: Apply the concept that some resources are basic materials such as air, water, and soil; some are produced from basic resources, such as food, fuel, and building materials; and some resources are nonmaterial, such as quiet places, beauty, security, and safety.

Benchmark

SC.6.6-8.1 Grade 6-8: Understand and apply science concepts relating to personal health.

Benchmark

SC.6.6-8.2 Grade 6-8: Understand and apply science concepts relating to populations, resources, and environments.

Benchmark

SC.6.6-8.3 Grade 6-8: Understand and apply concepts relating to natural hazards.

Benchmark

SC.6.6-8.4 Grade 6-8: Apply science concepts relating to science and technology in society.

Benchmark

SC.6.9-12.1 Grade 9-12: Recognize the fragility of and man's effect on the environment.

Benchmark

SC.6.9-12.2 Grade 9-12: Develop awareness of ethical issues raised by scientific advances.

Standard

SC.7: Students will investigate, understand and apply concepts relating to history and nature of science.

Benchmark

SC.7.3.1 Grade 3: Apply the concept that although men and women using scientific inquiry have learned much about the objects, events, and phenomena in nature, much more remains to be understood and that science will never be finished.

Benchmark

SC.7.3.2 Grade 3: Apply the concept that many people choose science as a career and devote their entire lives to studying it.

Benchmark

SC.7.6-8.1 Grade 6-8: Understand and apply concepts relating to the nature of science.

Benchmark

SC.7.6-8.2 Grade 6-8: Understand and apply science concepts relating to the history of science.

Benchmark

SC.7.9-12.1 Grade 9-12: Investigate and explain the nature of scientific knowledge.

Benchmark

SC.7.9-12.2 Grade 9-12: Investigate and explain historical perspectives of scientific study.