

Grade 6

Scientific Inquiry

Standard 6-1: The student will demonstrate an understanding of technological design and scientific inquiry, including process skills, mathematical thinking, controlled investigative design and analysis, and problem solving.

Indicators

PLT Activities

6-1.1	Use appropriate tools and instruments (including a spring scale, beam balance, barometer, and sling psychrometer) safely and accurately when conducting a controlled scientific investigation	<input type="checkbox"/> 4bcd Sounds Around <input checked="" type="checkbox"/> 29 Rain Reasons <input checked="" type="checkbox"/> 41 How Plants Grow <input checked="" type="checkbox"/> 42 Sunlight and Shades of Green <input checked="" type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 70 Soil Stories	<input checked="" type="checkbox"/> 72 Air We Breathe <input checked="" type="checkbox"/> 73 Waste Watchers <input checked="" type="checkbox"/> 77 Trees in Trouble <input checked="" type="checkbox"/> 78b Signs of Fall <input type="checkbox"/> 80 Nothing Succeeds Like Succession <input type="checkbox"/> 83 A Peek at Packaging <input type="checkbox"/> 84 The Global Climate <input type="checkbox"/> 85 In the Drivers Seat
6-1.2	Differentiate between observation and inference during the analysis and interpretation of data.	<input type="checkbox"/> 2 Get in Touch with Trees <input type="checkbox"/> 4bcd Sounds Around <input checked="" type="checkbox"/> 9 Planet Diversity <input checked="" type="checkbox"/> 21b Adopt A Tree <input checked="" type="checkbox"/> 24 Nature’s Recyclers <input type="checkbox"/> 29 Rain Reasons <input type="checkbox"/> 35 Loving It Too Much <input type="checkbox"/> 36a Pollution Search <input type="checkbox"/> 37 Reduce, Reuse, and Recycle <input checked="" type="checkbox"/> 38 Every Drop Counts <input checked="" type="checkbox"/> 39bc Energy Sleuths	<input checked="" type="checkbox"/> 41 How Plants Grow <input checked="" type="checkbox"/> 42 Sunlight and Shades of Green <input type="checkbox"/> 43 Have Seeds, Will Travel <input type="checkbox"/> 44 Water Wonders <input checked="" type="checkbox"/> 47 Are Vacant Lots Vacant? <input checked="" type="checkbox"/> 48 Field, Forest, and Streams <input checked="" type="checkbox"/> 61 The Closer You Look <input type="checkbox"/> 65 Bursting Buds <input type="checkbox"/> 66 Germinating Giants <input checked="" type="checkbox"/> 67 How Big Is Your Tree? <input type="checkbox"/> 68 Name That Tree
6-1.3	Classify organisms, objects, and materials according to their physical characteristics by using a dichotomous key.	<input type="checkbox"/> 68 Name That Tree	
6-1.4	Use appropriate safety procedures when conducting investigations.	<input type="checkbox"/> 29 Rain Reasons <input checked="" type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 48 Field, Forest, and Stream <input checked="" type="checkbox"/> 82 Resource-Go-Round <input type="checkbox"/> 83 A Peek at Packaging	

- Standard Fully Addressed
- Standard Partially Addressed or Reinforced

Structures, Processes, and Responses of Plants

Standard 6-2: The student will demonstrate an understanding of structures, processes, and responses of plants that allow them to survive and reproduce. (Life Science)

Indicators

PLT Activities

6-2.1	Summarize the characteristics that all organisms share (including the obtainment and use of resources for energy, the response to stimuli, the ability to reproduce, and process of physical growth and development).	<input type="checkbox"/> 2 Get in Touch With Trees <input type="checkbox"/> 3 Peppermint Beetle <input type="checkbox"/> 8 The Forest Of S.T. Shrew <input type="checkbox"/> 11 Can It Be Real? <input type="checkbox"/> 12 Invasive Species <input type="checkbox"/> 22bv Trees as Habitats <input type="checkbox"/> 23 The Fallen Log <input type="checkbox"/> 24 Nature’s Recyclers <input type="checkbox"/> 25 Birds and Worms <input type="checkbox"/> 26 Dynamic Duos <input type="checkbox"/> 27 Every Tree for Itself	<input type="checkbox"/> 28 Air Plants <input type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 42 Sunlight and Shades of Green <input type="checkbox"/> 43 Have Seeds, Will Travel <input type="checkbox"/> 45 Web of Life <input type="checkbox"/> 47 Are Vacant Lots Vacant? <input checked="" type="bullet"/> 48 Field, Forest, and Stream <input type="checkbox"/> 70E Soil Stories <input type="checkbox"/> 91 In the Good Old Days
6-2.2	Recognize the hierarchical structure of the classification (taxonomy) of organisms (including the seven major levels or categories of living things—namely, kingdom, phylum, class, order, family, genus, and species).		
6-2.3	Compare the characteristic structures of various groups of plants (including vascular or nonvascular, seed or spore-producing, flowering or cone-bearing, and monocot or dicot).	<input type="checkbox"/> 2 Get in Touch with Trees <input type="checkbox"/> 7 Habitat Pen Pals <input type="checkbox"/> 8 The Forest Of S.T. Shrew <input type="checkbox"/> 9 Planet Diversity <input type="checkbox"/> 10 Charting Diversity <input checked="" type="bullet"/> 11 Can It Be Real? <input type="checkbox"/> 13b We All Need Trees <input type="checkbox"/> 16 Pass The Plants, Please <input type="checkbox"/> 18 Tale of the Sun	<input type="checkbox"/> 42 Sunlight and Shades of Green <input type="checkbox"/> 47 Are Vacant Lots Vacant? <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 49 Tropical Treehouse <input checked="" type="bullet"/> 61 The Closer You Look <input type="checkbox"/> 65 Bursting Buds <input checked="" type="bullet"/> 66 Germinating Giants <input checked="" type="bullet"/> 68 Name That Tree <input checked="" type="bullet"/> 77 Trees in Trouble <input type="checkbox"/> 78b Signs of Fall

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		<input type="checkbox"/> 20 Environmental Exchange Box <input type="checkbox"/> 21b Adopt A Tree <input type="checkbox"/> 22bv Trees as Habitats <input type="checkbox"/> 26 Dynamic Duos <input type="checkbox"/> 29 Rain Reasons <input checked="" type="checkbox"/> 41 How Plants Grow	<input checked="" type="checkbox"/> 79 Tree Lifecycle <input type="checkbox"/> 88 Life on the Edge <input type="checkbox"/> 91 In the Good Old Days
6-2.4	Summarize the basic functions of the structures of a flowering plant for defense, survival, and reproduction	<input type="checkbox"/> 2 Get in Touch with Trees <input type="checkbox"/> 8 the Forest Of S.T. Shrew <input type="checkbox"/> 9 Planet Diversity <input type="checkbox"/> 10 Charting Diversity <input checked="" type="checkbox"/> 11 Can It Be Real? <input type="checkbox"/> 12 Invasive Species <input type="checkbox"/> 18 Tale of the Sun <input type="checkbox"/> 22bv Trees as Habitats <input type="checkbox"/> 28 Air Plants <input checked="" type="checkbox"/> 29 Rain Reasons <input type="checkbox"/> 31 Plant a Tree <input type="checkbox"/> 34 Who Works in this Forest? <input checked="" type="checkbox"/> 41 How Plants Grow	<input type="checkbox"/> 42 Sunlight and Shades of Green <input checked="" type="checkbox"/> 43 Have Seeds, Will Travel? <input type="checkbox"/> 45 Web of Life <input type="checkbox"/> 47 Are Vacant Lots Vacant? <input type="checkbox"/> 49 Tropical Treehouse <input type="checkbox"/> 65 Bursting Buds <input checked="" type="checkbox"/> 68 Name That Tree <input type="checkbox"/> 70E Soil Stories <input checked="" type="checkbox"/> 77 Trees in Trouble <input type="checkbox"/> 78b Signs of Fall <input type="checkbox"/> 91 In the Good Old Days
6-2.5	Summarize each process in the life cycle of flowering plants (including germination, plant development, fertilization, and seed production).	<input type="checkbox"/> 6 Picture This <input type="checkbox"/> 29 Rain Reasons <input type="checkbox"/> 43 Have Seeds, Will Travel <input type="checkbox"/> 47 Are Vacant Lots Vacant?	<input type="checkbox"/> 66 Germinating Giants <input type="checkbox"/> 70E Soil Stories <input checked="" type="checkbox"/> 79 Tree Lifecycle <input type="checkbox"/> 91 In the Good Old Days
6-2.6	Differentiate between the processes of sexual and asexual reproduction of flowering plants.	<input checked="" type="checkbox"/> 29 Rain Reasons <input type="checkbox"/> 41 How Plants Grow	
6-2.7	Summarize the processes required for plant survival (including photosynthesis, respiration, and transpiration).	<input type="checkbox"/> 26 Dynamic Duos <input type="checkbox"/> 27 Every Tree for Itself <input checked="" type="checkbox"/> 28 Air Plants <input checked="" type="checkbox"/> 29 Rain Reasons <input type="checkbox"/> 41 How Plants Grow <input checked="" type="checkbox"/> 42 Sunlight and Shades of Green <input type="checkbox"/> 45 Web of Life	<input type="checkbox"/> 48Field, Forest, and Stream <input type="checkbox"/> 65 Bursting Buds <input type="checkbox"/> 77 Trees in Trouble <input checked="" type="checkbox"/> 78b Signs of Fall <input type="checkbox"/> 91 In the Good Old Days

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6-2.8	Explain how plants respond to external stimuli (including dormancy and the forms of tropism known as phototropism, gravitropism, hydrotropism, and thigmotropism).	<input type="checkbox"/> 11 Can It Be Real? <input type="checkbox"/> 12 Invasive Species <input type="checkbox"/> 21b Adopt A Tree <input type="checkbox"/> 22bv Trees as Habitats <input type="checkbox"/> 26 Dynamic Duos <input type="checkbox"/> 28 Air Plants <input type="checkbox"/> 29 Rain Reasons <input type="checkbox"/> 31 Plant a Tree <input type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 42*	<input type="checkbox"/> 45 Web of Life <input type="checkbox"/> 47 Are Vacant Lots Vacant? <input type="checkbox"/> 48Field, Forest, and Stream <input type="checkbox"/> 49 Tropical Treehouse <input type="checkbox"/> 61 The Closer You Look <input checked="" type="checkbox"/> 65 Bursting Buds <input type="checkbox"/> 68 Name That Tree <input type="checkbox"/> 77 Trees in Trouble <input type="checkbox"/> 78b Signs of Fall
6-2.9	Explain how disease-causing fungi can affect plants.	<input type="checkbox"/> 12 Invasive Species <input type="checkbox"/> 34 Who Works in this Forest? <input type="checkbox"/> 77 Trees in Trouble	

Structures, Processes, and Responses of Animals

Standard 6-3: The student will demonstrate an understanding of structures, processes, and responses of animals that allow them to survive and reproduce. (Life Science)

Indicators

PLT Activities

6-3.1	Compare the characteristic structures of invertebrate animals (including sponges, segmented worms, echinoderms, mollusks, and arthropods) and vertebrate animals (fish, amphibians, reptiles, birds, and mammals).	<input type="checkbox"/> 7 Habitat Pen Pals <input type="checkbox"/> 8 The Forest Of S.T. Shrew <input type="checkbox"/> 9 Planet Diversity <input type="checkbox"/> 10 Charting Diversity <input type="checkbox"/> 11 Can It Be Real? <input type="checkbox"/> 18 Tale of the Sun	<input type="checkbox"/> 20 Environmental Exchange Box <input type="checkbox"/> 22bv Trees as Habitats <input type="checkbox"/> 23 The Fallen Log <input checked="" type="checkbox"/> 24 Nature's Recyclers <input type="checkbox"/> 26 Dynamic Duos
6-3.2	Summarize the basic functions of the structures of animals that allow them to defend themselves, to move, and to obtain resources.	<input type="checkbox"/> 3 Peppermint Beetles <input type="checkbox"/> 7 Habitat Pen Pals <input type="checkbox"/> 8 The Forest of S.T. Shrew <input type="checkbox"/> 9 Planet Diversity <input checked="" type="checkbox"/> 10 Charting Diversity <input checked="" type="checkbox"/> 11 Can It Be Real? <input type="checkbox"/> 12 Invasive Species <input type="checkbox"/> 18 Tale of the Sun <input type="checkbox"/> 22bv Trees As Habitats <input type="checkbox"/> 23 The Fallen Log	<input checked="" type="checkbox"/> 24 Nature's Recyclers <input checked="" type="checkbox"/> 25 Birds and Worms <input type="checkbox"/> 26 Dynamic Duos <input type="checkbox"/> 32b A Forest of Many Uses <input type="checkbox"/> 34 Who Works in This forest <input type="checkbox"/> 48Field, Forest, and Stream <input type="checkbox"/> 49 Tropical Treehouse <input type="checkbox"/> 88 Life on the Edge

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6-3.3	Compare the response that a warm-blooded (endothermic) animal makes to a fluctuation in environmental temperature with the response that a cold-blooded (ectothermic) animal makes to such a fluctuation.	<input type="checkbox"/> 7 Habitat Pen Pals
6-3.4	Explain how environmental stimuli cause physical responses in animals (including shedding, blinking, shivering, sweating, panting, and food gathering).	<input type="checkbox"/> 3 Peppermint Beetles <input type="checkbox"/> 7 Habitat Pen Pals <input type="checkbox"/> 11 Can It Be Real? <input type="checkbox"/> 22bv Trees As Habitats <input type="checkbox"/> 26 Dynamic Duos <input type="checkbox"/> 45 Web of Life
6-3.5	Illustrate animal behavioral responses (including hibernation, migration, defense, and courtship) to environmental stimuli.	<input type="checkbox"/> 3 Peppermint Beetle <input type="checkbox"/> 7 Habitat Pen Pals <input type="checkbox"/> 8 The Forest of S.T. Shrew <input type="checkbox"/> 9 Planet Diversity <input type="checkbox"/> 10 Charting Diversity <input type="checkbox"/> 11 Can It Be Real? <input type="checkbox"/> 12 Invasive Species <input type="checkbox"/> 22bv Trees as Habitats <input type="checkbox"/> 26 Dynamic Duos <input type="checkbox"/> 49 Tropical Treehouse
6-3.6	Summarize how the internal stimuli (including hunger, thirst, and sleep) of animals ensure their survival.	<input type="checkbox"/> 3 Peppermint Beetles <input type="checkbox"/> 7 Habitat Pen Pals <ul style="list-style-type: none"> ● 11 Can It Be Real?
6-3.7	Compare learned to inherited behaviors in animals.	

Earth's Atmosphere and Weather

Standard 6-4: The student will demonstrate an understanding of the relationship between Earth's atmospheric properties and processes and its weather and climate. (Earth Science)

Indicators

PLT Activities

6-4.1	Compare the composition and structure of Earth's atmospheric layers (including the gases and differences in temperature and pressure within the layers).	<input type="checkbox"/> 72 Air We Breathe <ul style="list-style-type: none"> ● 84 The Global Climate
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6-4.2	Summarize the interrelationships among the dynamic processes of the water cycle (including precipitation, evaporation, transpiration, condensation, surface-water flow, and groundwater flow).	<input type="checkbox"/> 34 Who Works in this Forest? <input checked="" type="checkbox"/> 38 Every Drop Counts <input checked="" type="checkbox"/> 39bc Energy Sleuths <input checked="" type="checkbox"/> 44 Water Wonders <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 49 Tropical Treehouse
6-4.3	Classify shapes and types of clouds according to elevation and their associated weather conditions and patterns.	
6-4.4	Summarize the relationship of the movement of air masses, high and low pressure systems, and frontal boundaries to storms (including thunderstorms, hurricanes, and tornadoes) and other weather conditions.	
6-4.5	Use appropriate instruments and tools to collect weather data (including wind speed and direction, air temperature, humidity, and air pressure).	
6-4.6	Predict weather conditions and patterns based on weather data collected from direct observations and measurements, satellites, and radar.	
6-4.7	Explain how solar energy affects Earth's atmosphere and surface (land and water).	<input type="checkbox"/> 39bc Energy Sleuths <input type="checkbox"/> 44 Water Wonders <input type="checkbox"/> 48 Field, Forest, and Stream <input checked="" type="checkbox"/> 84 The Global Climate
6-4.8	Explain how convection affects weather patterns and climate.	<input checked="" type="checkbox"/> 84 The Global Climate
6-4.9	Explain the influence of global winds and the jet stream on weather and climatic conditions.	

Conservation of Energy

Standard 6-5: The student will demonstrate an understanding of the law of conservation of energy and the properties of energy and work. (Physical Science)

Indicators

PLT Activities

6-5.1	Identify the sources and properties of heat, solar, chemical, mechanical, and electrical energy.	<input type="checkbox"/> 37 Reduce, Reuse, Recycle <input checked="" type="checkbox"/> 39bc Energy Sleuths <input type="checkbox"/> 44 Water Wonders <input type="checkbox"/> 51 Make Your Own Paper
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		<input type="checkbox"/> 52 A Look at Aluminum <input type="checkbox"/> 53 On the Move <input checked="" type="checkbox"/> 73 Waste Watchers <input type="checkbox"/> 82 Resource-Go-Round <input type="checkbox"/> 83 A Peek at Packaging <input type="checkbox"/> 84 The Global Climate <input checked="" type="checkbox"/> 85 In the Driver's Seat <input type="checkbox"/> 92 A Look at Lifestyles
6-5.2	Explain how energy can be transformed from one form to another (including the two types of mechanical energy, potential and kinetic, as well as chemical and electrical energy) in accordance with the law of conservation of energy.	<input type="checkbox"/> 37 Reduce, Reuse, Recycle <input checked="" type="checkbox"/> 39bc Energy Sleuths <input type="checkbox"/> 51 Make Your Own Paper <input type="checkbox"/> 52 A Look at Aluminum <input type="checkbox"/> 73 Waste Watchers <input type="checkbox"/> 82 Resource-Go-Round <input type="checkbox"/> 84 The Global Climate <input checked="" type="checkbox"/> 85 In the Driver's Seat
6-5.3	Explain how magnetism and electricity are interrelated by using descriptions, models, and diagrams of electromagnets, generators, and simple electrical motors	<input type="checkbox"/> 39bc Energy Sleuths <input type="checkbox"/> 85 In the Driver's Seat
6-5.4	Illustrate energy transformations (including the production of light, sound, heat, and mechanical motion) in electrical circuits.	<input type="checkbox"/> 39bc Energy Sleuths <input type="checkbox"/> 73 Waste Watchers <input type="checkbox"/> 85 In the Driver's Seat
6-5.5	Illustrate the directional transfer of heat energy through convection, radiation, and conduction.	<input type="checkbox"/> 39bc Energy Sleuths <input type="checkbox"/> 81 Living with Fire <input type="checkbox"/> 84 The Global Climate
6-5.6	Recognize that energy is the ability to do work (force exerted over a distance).	<input type="checkbox"/> 85 In the Driver's Seat
6-5.7	Explain how the design of simple machines (including levers, pulleys, and inclined planes) helps reduce the amount of force required to do work.	<input type="checkbox"/> 85 In the Driver's Seat
6-5.8	Illustrate ways that simple machines exist in common tools and in complex machines	<input type="checkbox"/> 85 In the Driver's Seat

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