

Grade 4

Scientific Inquiry

Standard 4-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

PLT Activities

4-1.1	Classify observations as either quantitative or qualitative	<input type="checkbox"/> 4bd Sounds Around <input type="checkbox"/> 14 Renewable or Not? <input type="checkbox"/> 21b Adopt A Tree <input type="checkbox"/> 22bv Trees as Habitats <input type="checkbox"/> 23 The Fallen Log <input type="checkbox"/> 24 Nature’s Recyclers <input type="checkbox"/> 38 Every Drop Counts <input checked="" 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"/> 44 Water Wonders <input type="checkbox"/> 46 Schoolyard Safari <input type="checkbox"/> 47 Are Vacant Lots Vacant? <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 64 Looking at Leaves <input type="checkbox"/> 65 bursting Buds <input type="checkbox"/> 70a Soil Stories <input type="checkbox"/> 73 Waste Watchers <input type="checkbox"/> 76 Tree Cookies <input type="checkbox"/> 77 Trees in Trouble <input type="checkbox"/> 78 Signs of Fall <input type="checkbox"/> 81ab Living with Fire
4-1.2	Use appropriate instruments and tools (including a compass, an anemometer, mirrors, and a prism) safely and accurately when conducting simple investigations	<input checked="" type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 42 Sunlight and Shades of Green <input type="checkbox"/> 47 Are Vacant Lots Vacant? <input checked="" type="checkbox"/> 48 Field, Forest, and Stream <input checked="" type="checkbox"/> 67 How Big is Your Tree? <input type="checkbox"/> 70a Soil Stories <input type="checkbox"/> 77 Trees in Trouble
4-1.3	Summarize the characteristics of a simple scientific investigation that represent a fair test (including a question that identifies the problem, a prediction that indicates a possible outcome, a process that tests one manipulated variable at a time, and results that are communicated and explained).	<input checked="" type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 42 Sunlight and Shades of Green <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 70a Soil Stories <input type="checkbox"/> 77 Trees in Trouble

- Standard Fully Addressed
- Standard Partially Addressed or Reinforced

Indicators		PLT Activities	
4-1.4	Distinguish among observations, predictions, and inferences.	<input type="checkbox"/> 2 Get in Touch with Trees <input type="checkbox"/> 4bd Sounds Around <input type="checkbox"/> 14 Renewable or Not? <input type="checkbox"/> 21b Adopt A Tree <input type="checkbox"/> 22bv Trees as Habitats <input type="checkbox"/> 23 The Fallen Log <input type="checkbox"/> 24 Nature's Recyclers <input type="checkbox"/> 36a Pollution Search <input type="checkbox"/> 38 Every Drop Counts <input type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 42 Sunlight and Shades of Green <input type="checkbox"/> 46 Schoolyard Safari	<input type="checkbox"/> 47 Are Vacant Lots Vacant? <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 69 Forest for the Trees <input type="checkbox"/> 70a Soil Stories <input type="checkbox"/> 73 Waste Watchers <input type="checkbox"/> 76 Tree Cookies <input type="checkbox"/> 77 Trees in Trouble <input type="checkbox"/> 78 Signs of Fall <input type="checkbox"/> 81ab Living With Fire
4-1.5	Recognize the correct placement of variables on a line graph.		
4-1.6	Construct and interpret diagrams, tables, and graphs made from recorded measurements and observations.	<input type="checkbox"/> 4bd Sounds Around <input type="checkbox"/> 14 Renewable or Not? <input type="checkbox"/> 15 A Few Of My Favorite Things <input checked="" type="checkbox"/> 16 Pass The Plants, Please <input type="checkbox"/> 21b Adopt A Tree <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"/> 38 Every Drop Counts <input type="checkbox"/> 41 How Plants Grow	<input type="checkbox"/> 44 Water Wonders <input type="checkbox"/> 46 Schoolyard Safari <input type="checkbox"/> 47 Are Vacant Lots Vacant? <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 67 How Big is Your Tree? <input type="checkbox"/> 69 Forest for the Trees <input type="checkbox"/> 70a Soil Stories <input type="checkbox"/> 73 Waste Watchers <input type="checkbox"/> 76 Tree Cookies <input type="checkbox"/> 77 Trees in Trouble
4-1.7	Use appropriate safety procedures when conducting investigations.	<input type="checkbox"/> 2 Get in Touch with Trees <input type="checkbox"/> 24 Nature's Recyclers <input checked="" type="checkbox"/> 46 Schoolyard Safari <input checked="" type="checkbox"/> 47 Are Vacant Lots Vacant? <input checked="" type="checkbox"/> 48 Field, Forest, and Stream <input checked="" type="checkbox"/> 81ab Living with Fire	

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Organisms and Their Environments

Standard 4-2: The student will demonstrate an understanding of the characteristics and patterns of behavior that allow organisms to survive in their own distinct environments. (Life Science)

Indicators

PLT Activities

4-2.1	Classify organisms into major groups (including plants or animals, flowering or non-flowering plants, and vertebrates [fish, amphibians, reptiles, birds, and mammals] or invertebrates) according to their physical characteristics	<input type="checkbox"/> 2 Get in Touch with Trees <input type="checkbox"/> 5 Poet-Tree <input type="checkbox"/> 6b Picture This! <input checked="" 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 type="checkbox"/> 13b We All Need Trees <input type="checkbox"/> 20 Environmental Exchange Box <input type="checkbox"/> 21b Adopt a Tree <input type="checkbox"/> 22bv Trees as Habitats <input type="checkbox"/> 23* <input type="checkbox"/> 24* <input type="checkbox"/> 27 Every Tree for Itself	<input type="checkbox"/> 31 Plant a Tree <input type="checkbox"/> 32 A Forest of Many Uses <input type="checkbox"/> 43 Have Seeds, Will Travel <input type="checkbox"/> 46 Schoolyard Safari <input type="checkbox"/> 47 Are Vacant Lots Vacant? <input type="checkbox"/> 54bc I'd Like to Visit a Place Where.... <input type="checkbox"/> 61 The Closer You Look <input type="checkbox"/> 64 Looking at Leaves <input type="checkbox"/> 65 Bursting Buds <input type="checkbox"/> 66 Germinating Giants <input checked="" type="checkbox"/> 68 Name That Tree <input type="checkbox"/> 76 Tree Cookies <input type="checkbox"/> 77 Trees in Trouble <input type="checkbox"/> 88 Life on the Edge
4-2.2	Explain how the characteristics of distinct environments (including swamps, rivers and streams, tropical rain forests, deserts, and the polar regions) influence the variety of organisms in each.	<input type="checkbox"/> 6b Picture This! <input checked="" type="checkbox"/> 7 Habitat Pen Pals <input type="checkbox"/> 8 The Forest of S.T. Shrew <input checked="" type="checkbox"/> 9 Planet Diversity <input type="checkbox"/> 10 Charting Diversity <input checked="" type="checkbox"/> 20 Environmental Exchange Box <input checked="" type="checkbox"/> 21b Adopt a Tree <input checked="" type="checkbox"/> 22bv Trees as Habitats <input checked="" type="checkbox"/> 23 The Fallen Log	<input checked="" type="checkbox"/> 24 Nature's Recyclers <input checked="" type="checkbox"/> 32 A Forest of Many Uses <input checked="" type="checkbox"/> 46 Schoolyard Safari <input type="checkbox"/> 49ab Tropical Treehouse <input checked="" type="checkbox"/> 54bc I'd Like to Visit a Place Where.... <input checked="" type="checkbox"/> 78 Signs of Fall <input checked="" type="checkbox"/> 88 Life on the Edge
4-2.3	Explain how humans and other animals use their senses and sensory organs to detect signals from the environment and how their behaviors are influenced by these signals.	<input checked="" type="checkbox"/> 3 Peppermint Beetle <input checked="" type="checkbox"/> 4bd Sounds Around <input type="checkbox"/> 8 The Forest of S.T. Shrew <input type="checkbox"/> 10 Charting Diversity <input type="checkbox"/> 11 Can It Be Real?	<input type="checkbox"/> 24 Nature's Recyclers <input type="checkbox"/> 25 Birds and Worms <input type="checkbox"/> 27 Every Tree for Itself <input type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 88 Life on the Edge

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Indicators		PLT Activities	
4-2.4	Distinguish between the characteristics of an organism that are inherited and those that are acquired over time	<input type="checkbox"/> 3 Peppermint Beetle <input type="checkbox"/> 9 Planet Diversity <input type="checkbox"/> 10 Charting Diversity <input type="checkbox"/> 11 Can It Be Real? <input type="checkbox"/> 24 Nature's Recyclers	
4-2.5	Explain how an organism's patterns of behavior are related to its environment (including the kinds and the number of other organisms present, the availability of food and other resources, and the physical characteristics of the environment).	<input type="checkbox"/> 3 Peppermint Beetle <input type="checkbox"/> 6b Picture This! <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"/> 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"/> 27 Every Tree for Itself	<input type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 45 Web of Life <input type="checkbox"/> 46 Schoolyard Safari <input type="checkbox"/> 47 Are Vacant Lots Vacant? <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 79 Tree Lifecycle <input type="checkbox"/> 80 Nothing Succeeds Like Succession <input type="checkbox"/> 88 Life on the Edge
4-2.6	Explain how organisms cause changes in their environment.	<input type="checkbox"/> 6b Picture This! <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"/> 23 The Fallen Log <input type="checkbox"/> 24 Nature's Recyclers <input type="checkbox"/> 30 Three Cheers for Trees <input type="checkbox"/> 31 Plant a Tree <input type="checkbox"/> 2 Get in Touch with Trees <input type="checkbox"/> 36a Pollution Search <input type="checkbox"/> 40 Then and Now <input type="checkbox"/> 45 Web of Life	<input type="checkbox"/> 46 Schoolyard Safari <input type="checkbox"/> 47 Are Vacant Lots Vacant? <input type="checkbox"/> 54bc I'd Like to Visit a Place Where... <input type="checkbox"/> 69 Forest for the Trees <input type="checkbox"/> 77 Trees in Trouble <input type="checkbox"/> 78 Signs of Fall <input type="checkbox"/> 79 Tree Lifecycle <input type="checkbox"/> 80 Nothing Succeeds Like Succession <input type="checkbox"/> 87 Earth Manners <input type="checkbox"/> 88 Life on the Edge <input type="checkbox"/> 89av Trees for Many Reasons <input type="checkbox"/> 90 Native Ways

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Astronomy

Standard 4-3: The student will demonstrate an understanding of the properties, movements, and locations of objects in the solar system. (Earth Science)

Indicators

PLT Activities

4-3.1	Recall that Earth is one of many planets in the solar system that orbit the Sun	
4-3.2	Compare the properties (including the type of surface and atmosphere) and the location of Earth to the Sun, which is a star, and the Moon.	
4-3.3	Explain how the Sun affects Earth.	<input type="checkbox"/> 28 Air Plants <input type="checkbox"/> 49bc Tropical Treehouse <input type="checkbox"/> 42 Sunlight and Shades of Green <input type="checkbox"/> 48 Field, Forest, and Stream
4-3.4	Explain how the tilt of Earth’s axis and the revolution around the Sun results in the seasons of the year	<input type="checkbox"/> 65 Bursting Buds <input type="checkbox"/> 78 Signs of Fall
4-3.5	Explain how the rotation of Earth results in day and night.	
4-3.6	Illustrate the phases of the Moon and the Moon’s effect on ocean tides.	<input type="checkbox"/> 67 How Big Is Your Tree?
4-3.7	Interpret the change in the length of shadows during the day in relation to the position of the Sun in the sky	
4-3.8	Recognize the purpose of telescopes	

Weather

Standard 4-4: The student will demonstrate an understanding of weather patterns and phenomena. (Earth Science)

Indicators

PLT Activities

4-4.1	Summarize the processes of the water cycle (including evaporation, condensation, precipitation, and runoff).	<input type="checkbox"/> 38 Every Drop Counts <input checked="" type="checkbox"/> 44 Water Wonders <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 49ab Tropical Treehouse <input type="checkbox"/> 73 Waste Watchers
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Indicators		PLT Activities
4-4.2	Classify clouds according to their three basic types (cumulus, cirrus, and stratus) and summarize how clouds form.	<input type="checkbox"/> 44 Water Wonders
4-4.3	Compare daily and seasonal changes in weather conditions (including wind speed and direction, precipitation, and temperature) and patterns.	<input type="checkbox"/> 44 Water Wonders <input type="checkbox"/> 49ab Tropical Treehouse <input type="checkbox"/> 78 Signs of Fall
4-4.4	Summarize the conditions and effects of severe weather phenomena (including thunderstorms, hurricanes, and tornadoes) and related safety concerns.	
4-4.5	Carry out the procedures for data collecting and measuring weather conditions (including wind speed and direction, precipitation, and temperature) by using appropriate tools and instruments.	
4-4.6	Predict weather from data collected through observation and measurements.	

Properties of Light and Electricity

Standard 4-5: The student will demonstrate an understanding of the properties of light and electricity. (Physical Science)

Indicators		PLT Activities
4-5.1	Summarize the basic properties of light (including brightness and colors).	<input type="checkbox"/> 42 Sunlight and Shades of Green <input type="checkbox"/> 78 Signs of Fall
4-5.2	Illustrate the fact that light, as a form of energy, is made up of many different colors.	
4-5.3	Summarize how light travels and explain what happens when it strikes an object (including reflection, refraction, and absorption).	

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Indicators		PLT Activities
4-5.4	Compare how light behaves when it strikes transparent, translucent, and opaque materials.	
4-5.5	Explain how electricity, as a form of energy, can be transformed into other forms of energy (including light, heat, and sound).	<input type="checkbox"/> 39bc Energy Sleuths <input type="checkbox"/> 53a On the Move
4-5.6	Summarize the functions of the components of complete circuits (including wire, switch, battery, and light bulb).	
4-5.7	Illustrate the path of electric current in series and parallel circuits	
4-5.8	Classify materials as either conductors or insulators of electricity	
4-5.9	Summarize the properties of magnets and electromagnets (including polarity, attraction/repulsion, and strength).	
4-5.10	Summarize the factors that affect the strength of an electromagnet	

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