

Grade 5

Scientific Inquiry

Standard 5-1: The student will demonstrate an understanding of scientific inquiry, including the foundations of technological design and the processes, skills, and mathematical thinking necessary to conduct a controlled scientific investigation.

Indicators

PLT Activities

5-1.1	Identify questions suitable for generating a hypothesis	<input type="checkbox"/> 4bd Sounds Around <input checked="" type="checkbox"/> 9 Planet Diversity <input type="checkbox"/> 24 Nature’s Recyclers <input checked="" 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"/> 44 Water Wonders <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 type="checkbox"/> 70b Soil Stories <input type="checkbox"/> 73 Waste Watchers <input type="checkbox"/> 77 Trees in Trouble <input type="checkbox"/> 78 Signs of Fall <input type="checkbox"/> 80 Nothing Succeeds Like Succession
5-1.2	Identify independent (manipulated), dependent (responding), and controlled variables in an experiment	<input checked="" type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 77 Trees in Trouble	
5-1.3	Plan and conduct controlled scientific investigations, manipulating one variable at a time.	<input checked="" type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 77 Trees in Trouble	
5-1.4	Use appropriate tools and instruments (including a timing device and a 10x magnifier) safely and accurately when conducting a controlled scientific investigation.	<input type="checkbox"/> 22bv Trees as Habitats <input type="checkbox"/> 24 Nature’s Recyclers <input checked="" type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 42 Sunlight and Shades of Green <input checked="" type="checkbox"/> 44 Water Wonders	<input type="checkbox"/> 46 Schoolyard Safari <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 70b Soil Stories <input type="checkbox"/> 77 Trees in Trouble <input type="checkbox"/> 78 Signs of Fall
5-1.5	Construct a line graph from recorded data with correct placement of independent (manipulated) and dependent (responding) variables	<input checked="" type="checkbox"/> 41 How Plants Grow <input type="checkbox"/> 48 Field, Forest, and Stream	

- Standard Fully Addressed
- Standard Partially Addressed or Reinforced

Indicators		PLT Activities	
5-1.6	Evaluate results of an investigation to formulate a valid conclusion based on evidence and communicate the findings of the evaluation in oral or written form.	<input type="checkbox"/> 4bd Sounds around <input type="checkbox"/> 9 Planet Diversity <input type="checkbox"/> 22bv Trees as Habitats <input type="checkbox"/> 24 Nature's Recyclers <input type="checkbox"/> 25 Birds and Worms <input type="checkbox"/> 28 Air Plants <input type="checkbox"/> 36a Pollution Search <input type="checkbox"/> 37 Reduce, Reuse, Recycle <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"/> 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"/> 70b 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"/> 80 Nothing Succeeds Like Succession
5-1.7	Use a simple technological design process to develop a solution or a product, communicating the design by using descriptions, models, and drawings.	<input type="checkbox"/> 53 On the Move <input type="checkbox"/> 60 Publicize It! <input type="checkbox"/> 69 Forest for the Trees <input type="checkbox"/> 73 Waste Watchers <input type="checkbox"/> 96 Improve Your Place	
5-1.8	Use appropriate safety procedures when conducting investigations.	<input type="checkbox"/> 9 Planet Diversity <input type="checkbox"/> 24 Nature's Recyclers <input type="checkbox"/> 37 Reduce, Reuse, Recycle <input type="checkbox"/> 46 Schoolyard Safari <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 78 Signs of Fall <input type="checkbox"/> 81ab Living with Fire	

Ecosystems: Terrestrial and Aquatic

Standard 5-2: The student will demonstrate an understanding of relationships among biotic and abiotic factors within terrestrial and aquatic ecosystems. (Life Science)

Indicators		PLT Activities
5-2.1	Recall the cell as the smallest unit of life and identify its major structures (including cell membrane, cytoplasm, nucleus, and vacuole).	

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Indicators		PLT Activities	
5-2.2	Summarize the composition of an ecosystem, considering both biotic factors (including populations to the level of microorganisms and communities) and abiotic factors.	<ul style="list-style-type: none"> ● 6b Picture This! ● 7 Habitat Pen Pals ● 9 Planet Diversity ● 10 Charting Diversity <input type="checkbox"/> 20 Environmental Exchange Box <input type="checkbox"/> 21b Adopt A Tree <input type="checkbox"/> 22bv Trees as Habitats ● 23 The Fallen Log ● 24 Nature's Recyclers ● 27 Every Tree for Itself <input type="checkbox"/> 28 Air Plants <input type="checkbox"/> 31 Plant a Tree ● 32b A Forest of Many Uses <input type="checkbox"/> 34 Who Works in this Forest? <input type="checkbox"/> 42 Sunlight and Shades of Green <input type="checkbox"/> 44 Water Wonders 	<ul style="list-style-type: none"> ● 45 Web of Life <input type="checkbox"/> 46 Schoolyard Safari ● 47Are Vacant Lots Vacant? ● 48 Field, Forest, and Stream <input type="checkbox"/> 49ab Tropical Treehouse <input type="checkbox"/> 54bc I'd Like to Visit a Place Where <input type="checkbox"/> 61 The Closer You Look <input type="checkbox"/> 69 Forest for the Trees <input type="checkbox"/> 70b Soil Stories ● 80 Nothing Succeeds Like Succession ● 86 Our Changing World ● 88 Life on the Edge
5-2.3	Compare the characteristics of different ecosystems (including estuaries/salt marshes, oceans, lakes and ponds, forests, and grasslands).	<ul style="list-style-type: none"> ● 6b Picture This! ● 7 Habitat Pen Pals <input type="checkbox"/> 8 The Forest of S.T. Shrew <input type="checkbox"/> 9 Planet Diversity ● 10 Charting Diversity <input type="checkbox"/> 20 Environmental Exchange Box ● 23 The Fallen Log <input type="checkbox"/> 27 Every Tree for Itself ● 32 A Forest of Many Uses 	<ul style="list-style-type: none"> <input type="checkbox"/> 44 Water Wonders ● 45 Web of Life <input type="checkbox"/> 46 Schoolyard Safari <input type="checkbox"/> 47Are Vacant Lots Vacant? <input type="checkbox"/> 48 Field, Forest, and Stream ● 49ab Tropical Treehouse <input type="checkbox"/> 66 Germinating Giants <input type="checkbox"/> 80 Nothing Succeeds Like Succession
5-2.4	Identify the roles of organisms as they interact and depend on one another through food chains and food webs in an ecosystem, considering producers and consumers (herbivores, carnivores, and omnivores), decomposers (microorganisms,	<ul style="list-style-type: none"> <input type="checkbox"/> 3 Peppermint Beetle <input type="checkbox"/> 6b Picture This! <input type="checkbox"/> 7 Habitat Pen Pals ● 8 The Forest of S.T. Shrew <input type="checkbox"/> 9 Planet Diversity ● 10 Charting Diversity <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 	<ul style="list-style-type: none"> <input type="checkbox"/> 32b A Forest of Many Uses <input type="checkbox"/> 42 Sunlight and Shades of Green ● 45 Web of Life <input type="checkbox"/> 46 Schoolyard Safari ● 47Are Vacant Lots Vacant? <input type="checkbox"/> 48 Field, Forest, and Stream <input type="checkbox"/> 61 The Closer You Look <input type="checkbox"/> 69 Forest for the Trees

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	termites, worms, and fungi), predators and prey, and parasites and hosts.	Habitats <ul style="list-style-type: none"> ● 23 The Fallen Log ● 24 Nature’s Recyclers □ 25 Birds and Worms □ 26 Dynamic Duos 	<ul style="list-style-type: none"> □ 70b Soil Stories □ 86 Our Changing World ● 88 Life on the Edge
5-2.5	Explain how limiting factors (including food, water, space, and shelter) affect populations in ecosystems.	<ul style="list-style-type: none"> □ 6b Picture This! □ 7 Habitat Pen Pals □ 8 The Forest of S.T. Shrew ● 9 Planet Diversity □ 10 Charting Diversity □ 12 Invasive Species □ 24 Nature’s Recyclers □ 25 Birds and Worms □ 27 Every Tree for Itself □ 28 Air Plants □ 31 Plant a Tree □ 32b A Forest of Many Uses □ 34 Who Works in this Forest? □ 41 How Plants Grow 	<ul style="list-style-type: none"> □ 42 Sunlight and Shades of Green □ 44 Water Wonders ● 45 Web of Life □ 46 Schoolyard Safari ● 47 Are Vacant Lots Vacant? □ 48 Field, Forest, and Stream □ 49ab Tropical Treehouse □ 54bc I’d Like to Visit a Place Where..... □ 69 Forest for the Trees □ 70b Soil Stories □ 79 Tree Lifecycle □ 80 Nothing Succeeds Like Succession □ 86 Our Changing World ● 88 Life on the Edge

Landforms and Oceans

Standard 5-3:The student will demonstrate an understanding of features, processes, and changes in Earth’s land and oceans. (Earth Science)

Indicators

PLT Activities

5-3.1	Explain how natural processes (including weathering, erosion, deposition, landslides, volcanic eruptions, earthquakes, and floods) shape Earth in constructive and destructive ways.	<ul style="list-style-type: none"> ● 44 Water Wonders □ 70b Soil Stories
5-3.2	Illustrate the geologic landforms of the ocean	

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	floor (including the continental shelf and slope, the mid-ocean ridge, rift zone, trench, and the ocean basin).	
5-3.3	Compare continental and oceanic landforms.	
5-3.4	Explain how waves, currents, tides, and storms affect the geologic features of the ocean shore zone (including beaches, barrier islands, estuaries, and inlets).	
5-3.5	Compare the movement of water by waves, currents, and tides.	
5-3.6	Explain how human activity (including conservation efforts and pollution) has affected the land and the oceans of Earth.	<input type="checkbox"/> 6b Picture This! <input type="checkbox"/> 9 Planet Diversity <input checked="" type="checkbox"/> 14 renewable or Not? <input checked="" type="checkbox"/> 15 A Few of My Favorite Things <input checked="" type="checkbox"/> 32b A Forest of Many Uses <input type="checkbox"/> 34 Who Works in this Forest? <input checked="" type="checkbox"/> 36a Pollution Search <input checked="" type="checkbox"/> 38 Every Drop Counts <input checked="" type="checkbox"/> 39bc Energy Sleuths <input type="checkbox"/> 40 Then and Now <input type="checkbox"/> 44 Water Wonders <input checked="" type="checkbox"/> 49ab Tropical Treehouse <input checked="" type="checkbox"/> 52 A Look at Aluminum <input type="checkbox"/> 53 On the Move <input type="checkbox"/> 70b Soil Stories <input type="checkbox"/> 73 Waste Watchers <input type="checkbox"/> 77 Trees in Trouble <input type="checkbox"/> 82 Resource-Go-Round <input type="checkbox"/> 83 A Peek at Packaging <input type="checkbox"/> 85 In the Driver's Seat <input type="checkbox"/> 86 Our Changing World <input type="checkbox"/> 88 Life on the Edge <input type="checkbox"/> 89 Trees for Many Reasons <input type="checkbox"/> 90 Native Ways

Properties of Matter

Standard 5-4: The student will demonstrate an understanding of properties of matter. (Physical Science)

Indicators

PLT Activities

5-4.1	Recall that matter is made up of particles too small to be seen.	
5-4.2	Compare the physical properties of the states of matter (including volume,	

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	shape, and the movement and spacing of particles).	
5-4.3	Summarize the characteristics of a mixture, recognizing a solution as a kind of mixture.	<input type="checkbox"/> Make Your Own Paper <input type="checkbox"/> 70b Soil Stories
5-4.4	Use the processes of filtration, sifting, magnetic attraction, evaporation, chromatography, and floatation to separate mixtures.	<input type="checkbox"/> 70b Soil Stories <input type="checkbox"/> 78 Signs of Fall
5-4.5	Explain how the solute and the solvent in a solution determine the concentration.	<input type="checkbox"/> 51 Make Your Own Paper
5-4.6	Explain how temperature change and stirring affect the rate of dissolving.	
5-4.7	Illustrate the fact that when some substances are mixed together, they chemically combine to form a new substance that cannot easily be separated.	<input type="checkbox"/> 81ab Living with Fire
5-4.8	Explain how the mixing and dissolving of foreign substances is related to the pollution of the water, air, and soil.	<input type="checkbox"/> 36a Pollution Search <input type="checkbox"/> 70b Soil Stories <input checked="" type="checkbox"/> 77 Trees in Trouble <input type="checkbox"/> 81ab Living with Fire <input type="checkbox"/> 85 In the Driver's Seat <input type="checkbox"/> 86 Our Changing World

Forces and Motion

Standard 5-5: The student will demonstrate an understanding of the nature of force and motion. (Physical Science)

Indicators

PLT Activities

5-5.1	Illustrate the affects of force (including magnetism, gravity, and friction) on motion.	
5-5.2	Summarize the motion of an object in terms of position, direction, and speed.	<input type="checkbox"/> Water Wonders <input type="checkbox"/> 85 In the Driver's Seat
5-5.3	Explain how unbalanced forces affect the rate and direction of motion in objects.	<input type="checkbox"/> 44 Water Wonders

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5-5.4	Explain ways to change the effect that friction has on the motion of objects (including changing the texture of the surfaces, changing the amount of surface area involved, and adding lubrication).	
5-5.5	Use a graph to illustrate the motion of an object.	
5-5.6	Explain how a change of force or a change in mass affects the motion of an object.	<input type="checkbox"/> 44 Water Wonders <input type="checkbox"/> 85 In the Driver's Seat

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