CORRELATION OF INVESTIGATORS TO THE NEXT GENERATION SCIENCE STANDARDS INITIATIVE FOR SCIENCE GRADES K-5

Next Generation Science Standards **Kindergarten**	INVESTIGATORS
K-PS2 Motion and Stability: Forces and interactions K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. [Clarification Statement: Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other.] [Assessment Boundary: Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets.]	Supported by the Grade 1 Investigate: Toys Theme Set texts *Zip and Zoom: Toys That Roll*: Connect with Toys that Roll; Lesson Plan: Build Context, At Home: That's How You Roll *Up, Up, and Away: Toys That Fly;* Lesson Plan: Build Context, On Their Own: Science Center, At Home: Paper Plane Races; Literacy Center Card: Think, Pair, Do, Share *Guide and Slide: Toys That Float* Literacy Center Card: Think, Pair, Do, Share *Toy Time Interactive CD-ROM:* Push or Pull? Activity button p. 14, Speeding Along Info button activity p. 15, Moving Robots Video button p. 20
K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.* [Clarification Statement: Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn.] [Assessment Boundary: Assessment does not include friction as a mechanism for change in speed.]	Supported by Grade 1 Investigate: Toys Theme Set texts *Zip and Zoom: Toys That Roll:* Connect with Toys that Roll; Lesson Plan: At Home: That's How You Roll *Up, Up, and Away: Toys That Fly;* Lesson Plan: Build Context, On Their Own: Science Center, At Home: Paper Plane Races; Literacy Center Card: Think, Pair, Do, Share
K-PS3 Energy K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface. [Clarification Statement: Examples of Earth's surface could include sand, soil, rocks, and water] [Assessment Boundary: Assessment of temperature is limited to relative measures such as warmer/cooler.]	N/A
K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.* [Clarification Statement: Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.]	N/A
K-LS1 From Molecules to Organisms: Structures and Processes K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive. [Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.]	*Flap and Sing: Birds;* Lesson Plan: Build Context, Build Comprehension: predict and check information, At Home: Bird Feeder *Crawl and Fly: Ladybugs;* Lesson Plan: Build Comprehension: ask questions *Swim and Snap: Alligators*; Lesson Plan: Build Context, Build Comprehension: investigate cause and effect *Hop and Bounce: Kangaroos* *Jump and Croak: Frogs;* Lesson Plan: Build Context Also supported by the Grade 1 Investigate: Predators Theme Set including the following texts, their Lesson Plans, and Literacy Center Cards: *On the Prowl: How Animals Hunt* *Mighty Bears* *Wild Dogs* *Birds of Prey* *Big Cats* *Snakes: Strikers and Squeezers* *On the Prowl Interactive CD-ROM:* The Chase Video button p. 4, Let's Play Activity button p. 5, Sharp Teeth Info button p. 6, Quiz Activity button p. 6, An Ocean Food Chain Info button p. 10, The Hungry Shark Video button p. 11, Sequencing Activity button p. 11, The Biggest Bear of All Info button p. 12, Labeling Activity button p. 13, The Hungry Cheetah Video button p. 14

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Next Generation Science Standards **Kindergarten**	INVESTIGATORS
K-ESS2 Earth's Systems K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time. [Clarification Statement: Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months.] [Assessment Boundary: Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.]	N/A
K-ESS2-1. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. [Clarification Statement: Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.]	*Flap and Sing: Birds;* Lesson Plan, Build Context *What's It Like?: Investigating Materials;* A Material World Poster *What's It Like? Interactive CD-ROM:* Matching Activity button p. 22
K-ESS3 Earth and Human Activity K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. [Clarification Statement: Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.]	*Swim and Snap: Alligators* *Flap and Sing: Birds;* Lesson Plan: Build Context *Jump and Croak: Frogs* Also supported by the Grade 1 Investigate: Predators Theme Set including the following texts, their Lesson Plans, and Literacy Center Cards: *On the Prowl: How Animals Hunt* *Mighty Bears* *Wild Dogs* *Birds of Prey* *Big Cats* *Snakes: Strikers and Squeezers* *On the Prowl Interactive CD-ROM:* The Chase Video button p. 4, Let's Play Activity button p. 5, An Ocean Food Chain Info button p. 10, The Hungry Shark Video button p. 11, Sequencing Activity button p. 11, Labeling Activity button p. 13, The Hungry Cheetah Video button p. 14, Hidden Hunter Info button p. 16
K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.* [Clarification Statement: Emphasis is on local forms of severe weather.]	N/A
K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.* [Clarification Statement: Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.]	*Use It, Reuse It: Plastic;* Fantastic Plastic poster; Lesson Plan: Build Context, During Reading, Writing *Rip It, Tear It: Paper;* Paper Power Poster *What's It Like?: Investigating Materials* *Melt It, Shape It: Glass;* Recycling Glass Poster *Bend It, Stretch It: Rubber;* Reusing Tires Poster *What's It Like? Interactive CD-ROM:* Recycle It Video button p. 10, Recycling Info button p. 10, Sorting Activity button p. 11, Paper Info button p. 20

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Next Generation Science Standards **Grade 1**	INVESTIGATORS
1-PS4 Waves and their Applications in Technologies for Information Transfer 1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. [Clarification Statement: Examples of vibrating materials that make sound could include tuning forks and plucking a stretched string. Examples of how sound can make matter vibrate could include holding a piece of paper near a speaker making sound and holding an object near a vibrating tuning fork.]	N/A
1-PS4-2. Make observations to construct an evidence-based account that objects can be seen only when illuminated. [Clarification Statement: Examples of observations could include those made in a completely dark room, a pinhole box, and a video of a cave explorer with a flashlight. Illumination could be from an external light source or by an object giving off its own light.]	*Birds of Prey* Lesson Plan: Build Context
1-PS4-3. Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light. [Clarification Statement: Examples of materials could include those that are transparent (such as clear plastic), translucent (such as wax paper), opaque (such as cardboard), and reflective (such as a mirror).] [Assessment Boundary: Assessment does not include the speed of light.]	N/A
1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.* [Clarification Statement: Examples of devices could include a light source to send signals, paper cup and string "telephones," and a pattern of drum beats.] [Assessment Boundary: Assessment does not include technological details for how communication devices work.]	N/A
1-LS1 From Molecules to Organisms: Structures and Processes 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.* [Clarification Statement: Examples of human problems that can be solved by mimicking plant or animal solutions could include designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills; and, detecting intruders by mimicking eyes and ears.]	*Birds of Prey* Lesson Plan: At Home: What You Do Also supported by the Grade K Investigate: Life Cycles Theme Set Lesson Plan for *Swim and Snap: Alligators.* Also supported by the Grade 2 Investigate: Survival Theme Set texts *Adapt or Die: How Animals Stay Alive;* Lesson Plan: On Their Own: Writing Center activity *Animal Armor*; Lesson Plan: On Their Own: Writing Center/Art Center activity *Harsh Homes*; Lesson Plan: Build Context, Out of School: Extreme Campsite
1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. [Clarification Statement: Examples of patterns of behaviors could include the signals that offspring make (such as crying, cheeping, and other vocalizations) and the responses of the parents (such as feeding, comforting, and protecting the offspring).]	*On the Prowl: How Animals Hunt* *Mighty Bears;* Lesson Plan: Guide the reading *Wild Dogs;* Lesson Plan: Build comprehension: making inferences *Birds of Prey* *Big Cats;* Lesson Plan: Build Comprehension: making inferences *On the Prowl Interactive CD-ROM:* Picture Puzzle Activity button p. 20, Playful Pups Video button p. 20 Also supported by the Grade K Investigate: Life Cycles Theme Set, including the following texts, their Lesson Plans and Literacy Center Cards: *Flap and Sing: Birds* *Crawl and Fly: Ladybugs* *Jump and Croak: Frogs* *Swim and Snap: Alligators*

Next Generation Science Standards Grade 1	INVESTIGATORS
	Hop and Bounce: Kangaroos *Animals Grow Up* *Animals Grow Up Interactive CD-ROM:* My Mother Takes Care of Me Info button p. 6, Taking Care of Baby video button p. 6, Busy Mama Bird Video button p. 13, On Their Own Activity button p. 14, Cracking Eggs Info button p. 15, Baby Alligator Video button p. 15, Animals with Pouches Info button p. 16, A Tight Fit! Video button p. 17 Also supported by the Grade 2 Investigate: Survival Theme Set texts *Safety in Numbers* *Gross Defenses* *Harsh Homes* *Adapt or Die Interactive CD-ROM:* A Cold Home Video button p. 12, At the Water Hole Video button p. 20
1-LS3 Heredity: Inheritance and Variation of Traits 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. [Clarification Statement: Examples of patterns could include features plants or animals share. Examples of observations could include leaves from the same kind of plant are the same shape but can differ in size; and, a particular breed of dog looks like its parents but is not exactly the same.] [Assessment Boundary: Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.]	*Mighty Bears* *Wild Dogs* *Birds of Prey* *Big Cats* *On the Prowl Interactive CD-ROM:* Picture Puzzle Activity button p. 20, Playful Pups Video button p. 20 Also supported by the Grade K Investigate: Life Cycles Theme Set, including the following texts, their Lesson Plans and Literacy Center Cards: *Flap and Sing: Birds* *Swim and Snap: Alligators* *Hop and Bounce: Kangaroos* *Animals Grow Up* *Animals Grow Up Interactive CD-ROM:* My Mother Takes Care of Me Info button p. 6, Taking Care of Baby Video button p. 6, Matching Activity button p. 8, Parents and Babies Info button p. 9, A Dog's Life Info button p. 10, Labeling Activity button p. 23, Matching Activity button p. 24 Also supported by the Grade 2 Investigate: Survival Theme Set texts *Safety in Numbers* *Animal Armor* *Gross Defenses* *Harsh Homes* *Adapt or Die Interactive CD-ROM:* Spring Info button p. 9
1-ESS1 Earth's Place in the Universe 1-ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted. [Clarification Statement: Examples of patterns could include that the sun and moon appear to rise in one part of the sky, move across the sky, and set; and stars other than our sun are visible at night but not during the day.] [Assessment Boundary: Assessment of star patterns is limited to stars being seen at night and not during the day.]	N/A
1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year. [Clarification Statement: Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.] [Assessment Boundary: Assessment is limited to relative amounts of daylight, not quantifying the hours or time of daylight.]	N/A

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Next Generation Science Standards Grade 2	INVESTIGATORS
2-PS1 Matter and its Interactions 2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. [Clarification Statement: Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.]	Supported by the Grade 1 Investigate: Toys Theme Set texts *Toy Time: Toys Old and New;* Lesson Plan: Gather information from a chart *Made to Move: Toys Like Us:* Connect with Toys Like Us; Lesson Plan: On Their Own: Science Center *Toy Time Interactive CD-ROM:* What's It Like? Activity button p. 7, Different Materials Info button activity p. 10
2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.* [Clarification Statement: Examples of properties could include, strength, flexibility, hardness, texture, and absorbency.] [Assessment Boundary: Assessment of quantitative measurements is limited to length.]	*Animal Armor* Lesson Plan: Build Context *Port to Port: By Water* Lesson Plan: At Home: Does Float or Does Not? Also supported by the Grade 1 Investigate: Toys Theme Set text *Glide and Slide: Toys That Float;* Lesson Plan: Build Context, Out of School: Boat Builders *Toy Time Interactive CD-ROM:* Paper Art Activity button p. 11 Also supported by the Grade 3 Investigate: Light Theme Set text *Bouncing Light;* Lesson Plan: Build Context, Compare information presented in a chart
2-PS1-3. Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object. [Clarification Statement: Examples of pieces could include blocks, building bricks, or other assorted small objects.]	*On the Move:* Connect with Transportation *On the Move Interactive CD-ROM:* Shape Vehicles Activity button p. 24 Also supported by the Grade 1 Investigate: Toys Theme Set text and CD *Lift and Shift: Toys that Build:* Connect with Toys for *Toy Time Interactive CD-ROM:* Building Blocks Activity button p. 5
2-PS1-4. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. [Clarification Statement: Examples of reversible changes could include materials such as water and butter at different temperatures. Examples of irreversible changes could include cooking an egg, freezing a plant leaf, and heating paper.]	Supported by the Grade 3 Investigate: The Sky Theme Set text *Cloud Cover* Lesson Plan: Build Context
2-LS2 Ecosystems: Interactions, Energy, and Dynamics 2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow. [Assessment Boundary: Assessment is limited to testing one variable at a time.]	Supported by the Grade 3 Investigate: Light Theme Set text *Glow in the Dark:* Connect with Light Sources
2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.*	N/A
2-LS4 Biological Evolution: Unity and Diversity 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats [Clarification Statement: Emphasis is on the diversity of living things in each of a variety of different habitats.] [Assessment Boundary: Assessment does not include specific animal and plant names in specific habitats.]	*Adapt or Die: How Animals Stay Alive;* Lesson Plan: Interpret information presented graphically, Build comprehension: Main Idea/Details *Safety in Numbers* *Tricks and Traps* *Animal Armor* *Gross Defenses* *Harsh Homes;* Lesson Plan: Understand how information is presented, Build comprehension: main idea and details *Adapt or Die Interactive CD-ROM:* A Cold Home Video button

Next Generation Science Standards Grade 2	INVESTIGATORS
	p. 12, Matching Activity button p. 13, Master of Disguise Video button p. 14, Camouflaged! Info button p. 15, At the Water Hole Video button p. 20, Living on the Edge Activity button p. 22 Also supported by the Grade 1 Investigate: Predators Theme Set texts: *On the Prowl: How Animals Hunt;* Literacy Center Card: Think, Pair, Do, Share; Lesson Plan: Use charts to compare *Mighty Bears;* Lesson Plan: Analyze information from a chart *Wild Dogs;* Literacy Center Card: Get information from charts; Wild Dog Wonders Poster *Big Cats* *Snakes: Strikers and Squeezers* *On the Prowl Interactive CD-ROM:* The Chase Video button p. 4, Let's Play Activity button p. 5, Let's Play Activity button p. 9, An Ocean Food Chain Info button p. 10, The Hungry Shark Video button p. 11, Sequencing Activity button p. 11, The Hungry Bear Video button p. 12, Labeling Activity button p. 13, The Hungry Cheetah Video button p. 14, Hidden Hunter Info button p. 16, Labeling Activity button p. 17, The Hungry Snake Video button p. 18 Also supported by the Grade 3 Investigate: Light Theme Set texts: *Eye to Eye* *Glow in the Dark*
2-ESS1 Earth's Place in the Universe 2-ESS1-1. Make observations from media to construct an evidence-based account that Earth events can occur quickly or slowly. [Clarification Statement: Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks, which occurs slowly.] [Assessment Boundary: Assessment does not include quantitative measurements of timescales.]	N/A
2-ESS2 Earth's Systems 2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.* [Clarification Statement: Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land.]	N/A
2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area. [Assessment Boundary: Assessment does not include quantitative scaling in models.]	N/A
2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid or liquid.	N/A
K-2-ETS1 Engineering Design K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	The Grade K Investigate: Materials texts, Lesson Plans and Literacy Center Cards provide numerous examples of engineering design. For example: *Rip It, Tear It: Paper* Lesson Plan: Out of School: Paper Scraps Collage *Use It, Reuse It: Plastic* Lesson Plan: Out of School: Container Lid Garland *What's It Like?: Investigating Materials* Lesson Plan: Out of School: Hot and Cold *Bend It, Stretch It: Rubber*: Connect with Rubber *Chop It, Carve It: Wood*: Connect with Wood

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Next Generation Science Standards **Grade 2**	**INVESTIGATORS**
	Melt It, Shape It: Glass: Connect with Glass The Grade 1 Investigate: Toys texts, Lesson Plans and Literacy Center Cards provide numerous examples of engineering design. For example: *Lift and Shift: Toys That Build* Lesson Plan: At Home: Draw a Building Site *Made to Move: Toys Like Us* Lesson Plan: Out of School: Design a Robot; Literacy Center Card: Think, Pair, Do, Share *Toy Time: Toys Old and New* Lesson Plan: Out of School: Invent a Toy *Up, Up, and Away: Toys That Fly* Lesson Plan: At Home: Paper Plane Races *Zip and Zoom: Toys That Roll* Lesson Plan: At Home: That's How You Roll *Glide and Slide: Toys That Float* Lesson Plan; Out of School: Boat Builders; Literacy Center Card: Think, Pair, Do, Share The Grade 2 Investigate: Survival Theme Set texts provide the following examples of engineering design: *Animal Armor:* Connect with Animal Armor *Harsh Homes:* Connect with Harsh Homes
K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	*Lift and Shift: Toys that Build:* Connect with Toys for Building, Compare and Contrast *Up, Up, and Away: Toys that Fly* Lesson Plan: At Home: Paper Plane Races *On the Move:* Connect with Transportation *On A Roll with Wheels*: Connect with Wheels; Literacy Center Card: Think, Pair, Do, Share *Flying High: Through Air:* Connect with Flight *Blasting Off: Into Space:* Connect with Space *Port to Port: By Water:* Connect with Water; Literacy Center Card: Think, Pair, Do, Share; Lesson Plan: On Their Own: Science Center *Animal Armor;* Literacy Center Card: Think, Pair, Do, Share
K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	*Port to Port: By Water:* Literacy Center Card: Think, Pair, Do, Share; Lesson Plan: On Their Own: Science Center, At Home: Does Float or Does Not? *Glide and Slide: Toys that Float:* Connect with Toys that Float *Animal Armor* Literacy Center Card: Think, Pair, Do, Share *Flying High: Through Air* Lesson Plan: Build Context

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Next Generation Science Standards **Grade 3**	INVESTIGATORS
3-PS2 Motion and Stability: Forces and Interactions 3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. [Clarification Statement: Examples could include an unbalanced force on one side of a ball can make it start moving; and, balanced forces pushing on a box from both sides will not produce any motion at all.] [Assessment Boundary: Assessment is limited to one variable at a time: number, size, or direction of forces. Assessment does not include quantitative force size, only qualitative and relative. Assessment is limited to gravity being addressed as a force that pulls objects down.]	Supported by the Grade 2 Investigate: Transportation Theme Set text *Port to Port: By Water:* Connect with Water activity.
3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. [Clarification Statement: Examples of motion with a predictable pattern could include a child swinging in a swing, a ball rolling back and forth in a bowl, and two children on a see-saw.] [Assessment Boundary: Assessment does not include technical terms such as period and frequency.]	*Shadows on Show;* Lesson Plan: At Home: Make a Sundial *What's Up?;* Lesson Plan: Build Context *Planet Safari* Lesson Plan: Build Context *Super Stars;* Literacy Center Card: Think, Pair, Do, Share *Moon Power;* Lesson Plan: Build Context, Analyze information in a diagram *Rays of Light Interactive CD-ROM:* Shining Sun Video button p. 5, Colorful Gardens Video button p. 16, The Sun's Shadows Info button activity p. 19 *What's Up? Interactive CD-ROM:* Day and Night Info button activity p. 6, Light and Dark Video button p. 7, Moon Shapes Info button p. 16, Solar and Lunar Eclipse Activity button p. 17 Also supported by the Grade 2 Investigate: Survival Theme Set material *Adapt or Die Interactive CD-ROM:* What Causes the Seasons? Info button p. 9 Also supported by the Grade 4 Investigate: Sound Theme Set text *Music to the Ears* Lesson Plan: Build Context
3-PS2-3. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. [Clarification Statement: Examples of an electric force could include the force on hair from an electrically charged balloon and the electrical forces between a charged rod and pieces of paper; examples of a magnetic force could include the force between two permanent magnets, the force between an electromagnet and steel paperclips, and the force exerted by one magnet versus the force exerted by two magnets. Examples of cause and effect relationships could include how the distance between objects affects strength of the force and how the orientation of magnets affects the direction of the magnetic force.] [Assessment Boundary: Assessment is limited to forces produced by objects that can be manipulated by students, and electrical interactions are limited to static electricity.]	N/A
3-PS2-4. Define a simple design problem that can be solved by applying scientific ideas about magnets. * [Clarification Statement: Examples of problems could include constructing a latch to keep a door shut and creating a device to keep two moving objects from touching each other.]	N/A
3-LS1 From Molecules to Organisms: Structures and Processes 3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. [Clarification Statement: Changes organisms go through during their life form a pattern.] [Assessment Boundary: Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.]	Supported by the Grade 2 Investigate: Survival Theme Set text *Adapt or Die: How Animals Stay Alive* Lesson Plan: Out of School: Butterfly Diagram Supported by the Grade 4 Investigate: Ecology Theme Set texts *Desert Dwellers* *From City to Sea* *Wild Wetlands*

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Next Generation Science Standards **Grade 3**	INVESTIGATORS
3-LS2 Ecosystems: Interactions, Energy, and Dynamics 3-LS2-1. Construct an argument that some animals form groups that help members survive.	Supported by the Grade 2 Investigate: Survival Theme Set texts *Adapt or Die*: *How Animals Stay Alive;* Literacy Center Card: Think, Pair *Safety in Numbers;* Literacy Center Card: Think, Pair, Do, Share; Lesson Plan: Before Reading, During Reading, Out of School *Harsh Homes* *Adapt or Die Interactive CD-ROM:* Sorting Activity button p. 11, A Safe Circle Info button p. 20, Picture Puzzle Activity button p. 20, At the Water Hole Video button p. 20, What a Crowd! Info button p. 21 Supported by the Grade 4 Investigate: Ecology Theme Set text *Grassland Greats*
3-LS3 Heredity: Inheritance and Variation of Traits 3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. [Clarification Statement: Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.] [Assessment Boundary: Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.]	Supported by the Grade 4 Investigate: Sound Theme Set text *Hoot and Holler*
3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment. [Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.]	Supported by the Grade 2 Investigate: Survival Theme Set texts *Tricks and Traps* Lesson Plan: At Home: Spider Walk *Harsh Homes* Supported by the Grade 4 Investigate: Sound Theme Set text *Hear This!* Supported by the Grade 4 Investigate: Ecology Theme Set text *Out of the Woods*
3-LS4 Biological Evolution: Unity and Diversity 3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. [Clarification Statement: Examples of data could include type, size, and distributions of fossil organisms. Examples of fossils and environments could include marine fossils found on dry land, tropical plant fossils found in Arctic areas, and fossils of extinct organisms.] [Assessment Boundary: Assessment does not include identification of specific fossils or present plants and animals. Assessment is limited to major fossil types and relative ages.]	Supported by the Grade 2 Investigate: Survival Theme Set material *Adapt or Die Interactive CD-ROM:* Death of the Dinosaurs Info button p. 6
3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. [Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.]	*Eye to Eye* Also supported by the Grade 2 Investigate: Survival Theme Set texts *Adapt or Die: How Animals Stay Alive;* Literacy Center Card: Think, Pair, Do, Share *Tricks and Traps* *Animal Armor* *Gross Defenses* *Harsh Homes* Also supported by the Grade 4 Investigate: Sound Theme Set text *Hoot and Holler*

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3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]	*Eye to Eye* *Rays of Light Interactive CD-ROM:* Shining Eyes Info button activity p. 15 Also supported by the Grade 2 Investigate: Survival Theme Set texts *Adapt or Die: How Animals Stay Alive;* Lesson Plan: Interpret information presented graphically, Build comprehension: Main Idea/Details *Tricks and Traps* *Harsh Homes;* Lesson Plan: Understand how information is presented, Build comprehension: main idea and details *Adapt or Die Interactive CD-ROM:* A Cold Home Video button p. 12, Living on the Edge Video button p. 22 Also supported by the Grade 4 Investigate: Ecology Theme Set texts *Living Together: How Living Things Interact;* Lesson Plan: Build comprehension: understand cause and effect *Desert Dwellers;* Lesson Plan: Locate information on a chart, Build comprehension: distinguish main ideas from details; Literacy Center Card: Think, Pair, Do, Share *Grassland Greats;* Literacy Center Card: Think, Pair, Do, Share *From City to Sea* *Out of the Woods*; Lesson Plan: Locate information on a chart, Out of School: At Home in a Tree, At Home: Forest Animal Expert; Literacy Center Card: Think, Pair, Do, Share *Wild Wetlands;* Lesson Plan: Compare information in a chart; Literacy Center Card: Think, Pair, Do, Share *Living Together Interactive CD-ROM:* Ocean Life Video button p. 5, Cold and Hot Biomes Activity button p. 8, Living in Antarctica Video button p. 9, Cactus Visitors Info button p. 14, Different Forests, Different Climate Info button p. 16, Living in a Forest Video button p. 16, One Tree, Many Animals Info button p. 17, World of Wetlands Info button p. 19
3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.* [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.] [Assessment Boundary: Assessment is limited to a single environmental change. Assessment does not include the greenhouse effect or climate change.]	Supported by the Grade 4 Investigate: Ecology Theme Set texts *From City to Sea* Lesson Plan: At Home: Wanted Volunteers; Literacy Center Card: Think, Pair, Do, Share *Out of the Woods;* Literacy Center Card: Think *Wild Wetlands;* Literacy Center Card: Think *Living Together Interactive CD-ROM:* Urban Care Info button p. 20, Saving Sea Turtles Video button p. 20, The Pollution Solution Info button p. 21
3-ESS2 Earth's Systems 3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. [Clarification Statement: Examples of data at this grade level could include average temperature, precipitation, and wind direction.] [Assessment Boundary: Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.]	*Cloud Cover;* Lesson Plan: Out of School: Weather Forecasters, At Home: Cloud Test *What's Up? Interactive CD-ROM:* Cloud Shapes Activity button p. 13 Supported by the Grade 4 Investigate: Ecology Theme Set material *Living Together Interactive CD-ROM:* Hot and Cold Info

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	button activity p. 9
3-ESS2-2. Obtain and combine information to describe climates in different regions of the world.	Supported by the Grade 4 Investigate: Ecology Theme Set texts *Living Together: How Living Things Interact* *Desert Dwellers* *Grassland Greats;* Lesson Plan: Compare information in a Chart *Out of the Woods* *Living Together Interactive CD-ROM:* Hot and Cold Info button activity p. 9, Different Deserts Info button p. 15, Different Forests, Different Climates Info button p. 16
3-ESS3 Earth and Human Activity 3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.* [Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lighting rods.]	*Sky Signals;* Lesson Plan: Out of School: Message Received, At Home: What's the Weather?

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4-PS3 Energy 4-PS3-1. Use evidence to construct an explanation relating the speed of an object to the energy of that object. [Assessment Boundary: Assessment does not include quantitative measures of changes in the speed of an object or on any precise or quantitative definition of energy.]	N/A
4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. [Assessment Boundary: Assessment does not include quantitative measurements of energy.]	*Sounds All Around* *Music to the Ears*: Connect with Music; Literacy Center Card: Think, Pair, Do, Share *Hear This!*: Connect with Hearing; Lesson Plan: Build Context, Out of School: Loud or Soft, At Home; Volume Control *Wired for Sound* *Catch the Waves*: Connect with Sounds; Lesson Plan: Building Context, Compare and contrast information on a chart, At Home: Stay Connected *Sounds All Around Interactive CD-ROM:* Sound Waves on Show Info button p. 4, How We Hear Sounds Activity button p. 7 Also supported by the Grade 3 Investigate: Light Theme Set text *Rays of Light*
4-PS3-3. Ask questions and predict outcomes about the changes in energy that occur when objects collide. [Clarification Statement: Emphasis is on the change in the energy due to the change in speed, not on the forces, as objects interact.] [Assessment Boundary: Assessment does not include quantitative measurements of energy.]	N/A
4-PS3-4. Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.* [Clarification Statement: Examples of devices could include electric circuits that convert electrical energy into motion energy of a vehicle, light, or sound; and, a passive solar heater that converts light into heat. Examples of constraints could include the materials, cost, or time to design the device.] [Assessment Boundary: Devices should be limited to those that convert motion energy to electric energy or use stored energy to cause motion or produce light or sound.]	*Music to the Ears*: Connect with Music; Lesson Plan: On Their Own: Science Center, At Home: Homemade Band *Wired for Sound*: Connect with Sound Technology; Literacy Center Card: Think, Pair, Do, Share *Catch the Waves* Lesson Plan: At Home: Stay Connected *Sounds All Around Interactive CD-ROM:* Hearing Loss Info button p. 13 Also supported by the Grade 3 Investigate: Light Theme Set text *Glow in the Dark* Literacy Center Card: Think Pair, Do, Share
4-PS4 Waves and their Applications in Technologies for Information Transfer 4-PS4-1. Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. [Clarification Statement: Examples of models could include diagrams, analogies, and physical models using wire to illustrate wavelength and amplitude of waves.] [Assessment Boundary: Assessment does not include interference effects, electromagnetic waves, non-periodic waves, or quantitative models of amplitude and wavelength.]	*Sounds All Around* Lesson Plan: Build Context *Music to the Ears;* Lesson Plan: Build Context *Hear This!;* Lesson Plan: Build Context *Wired for Sound*: Connect with Sound Technology *Catch the Waves;* Lesson Plan: Build Context *Sounds All Around Interactive CD-ROM:* Sound Waves on Show Info button p. 4, How We Hear Sounds Activity button p. 7
4-PS4-2. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen. [Assessment Boundary: Assessment does not include knowledge of specific colors reflected and seen, the cellular mechanisms of vision, or how the retina works.]	Supported by the Grade 3 Investigate: Light Theme Set text and CD *Eye to Eye;* Lesson Plan: Build Context *Rays of Light Interactive CD-ROM:* Bright Light, Dim Light Info button activity p. 9, The Organ of Sight Info button activity p. 15
4-PS4-3. Generate and compare multiple solutions that use patterns to transfer information.* [Clarification Statement: Examples of solutions could include drums sending coded information through sound waves, using a grid of 1's and 0's representing black and white to send information	*Music to the Ears* Literacy Center Card: Think, Pair, Do, Share *Wired for Sound* Lesson Plan: Build Context

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about a picture, and using Morse code to send text.]	
4-LS1 From Molecules to Organisms: Structures and Processes 4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.] [Assessment Boundary: Assessment is limited to macroscopic structures within plant and animal systems.]	*Hear This!* *Hoot and Holler:* Connect with Animal Hearing; Lesson Plan: Compare information on a chart *Catch the Waves* *Sounds All Around Interactive CD-ROM:* Balancing Act Info button p.7, Super Hearing Info button p. 14, Super Sounds p. 15 *Living Together: How Living Things Interact* *Desert Dwellers;* Lesson Plan: Build comprehension: main ideas and details; Literacy Center Card: Think, Pair, Do, Share *Grassland Greats*; Literacy Center Card: Think, Pair, Do, Share *From City to Sea* *Out of the Woods;* Lesson Plan: Out of School: At Home in a Tree, At Home: Forest Animal Expert; Literacy Center Card: Think, Pair, Do, Share *Wild Wetlands;* Literacy Center Card: Think, Pair, Do, Share *Living Together Interactive CD-ROM:* Cactus Survival Info button p. 14, Cactus Homes Video button p. 14, Different Forests, Different Climates Info button p. 15, Living in a Forest Video button p. 16 Also supported by the Grade 3 Investigate: Light Theme Set texts *Rays of Light* *Eye to Eye;* Lesson Plan: Compare information on a chart *Bold and Bright* *Glow in the Dark* Lesson Plan: Build Context Also supported by the Grade 5 Investigate: Forces Theme Set texts *Grip, Slip, Slide:* Connect with Friction *North and South: A World of Magnets* Also supported by the Grade 5 Investigate: Architecture Theme Set text *Built for a Purpose:* Connect with Architecture
4-LS1-2. Use a model to describe that animals' receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. [Clarification Statement: Emphasis is on systems of information transfer.] [Assessment Boundary: Assessment does not include the mechanisms by which the brain stores and recalls information or the mechanisms of how sensory receptors function.]	*Hear This!* *Hoot and Holler* *Catch the Waves* *Sounds All Around Interactive CD-ROM:* Balancing Act Info button p.7, How We Hear Sounds Activity button p. 7 Also supported by the Grade 3 Investigate: Light Theme Set text *Rays of Light* *Eye to Eye;* Lesson Plan: Build Context *Bold and Bright*
4-ESS1 Earth's Place in the Universe 4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. [Clarification Statement: Examples of evidence from patterns could include rock layers with shell fossils above rock layers with plant fossils and no shells, indicating a change from water to land over time; and, a canyon with different rock layers in the walls and a river in the bottom, indicating that over time a river cut through the rock.] [Assessment Boundary: Assessment does not include specific knowledge of the mechanism of rock	N/A

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formation or memorization of specific rock formations and layers. Assessment is limited to relative time.]	
4-ESS2 Earth's Systems 4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. [Clarification Statement: Examples of variables to test could include angle of slope in the downhill movement of water, amount of vegetation, speed of wind, relative rate of deposition, cycles of freezing and thawing of water, cycles of heating and cooling, and volume of water flow.] [Assessment Boundary: Assessment is limited to a single form of weathering or erosion.]	*Out of the Woods* Lesson Plan: Build Context
4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features. [Clarification Statement: Maps can include topographic maps of Earth's land and ocean floor, as well as maps of the locations of mountains, continental boundaries, volcanoes, and earthquakes.]	*Desert Dwellers* *Grassland Greats* *Out of the Woods* *Wild Wetlands*
4-ESS3 Earth and Human Activity 4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. [Clarification Statement: Examples of renewable energy resources could include wind energy, water behind dams, and sunlight; non-renewable energy resources are fossil fuels and fissile materials. Examples of environmental effects could include loss of habitat due to dams, loss of habitat due to surface mining, and air pollution from burning of fossil fuels.]	*Living Together*: *How Living Things Interact* *From City to Sea* *Wild Wetlands:* Connect with Wetlands Also supported by the Grade 5 Investigate: Architecture Theme Set text *Building a Future;* Lesson Plan: Build Context, Get information from a chart, At Home: Take Action; Literacy Center Card: Think, Pair, Do, Share
4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.* [Clarification Statement: Examples of solutions could include designing an earthquake resistant building and improving monitoring of volcanic activity.] [Assessment Boundary: Assessment is limited to earthquakes, floods, tsunamis, and volcanic eruptions.]	Supported by the Grade 3 Investigate: Light Theme Set materials *Rays of Light Interactive CD-ROM:* Keeping Safe Info button activity p. 11 Supported by the Grade 5 Investigate: Architecture Theme Set text and CD *Building a Future* Lesson Plan: Out of School: Building Codes *Built for a Purpose Interactive CD-ROM:* Standing Strong Info button activity p. 11

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5-PS1 Matter and Its Interactions 5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen. [Clarification Statement: Examples of evidence could include adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water.] [Assessment Boundary: Assessment does not include the atomic-scale mechanism of evaporation and condensation or defining the unseen particles.]	Supported by the Grade 4 Investigate: Sound Theme Set texts *Wired for Sound:* Connect with Sound Technology *Catch the Waves*
5-PS1-2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. [Clarification Statement: Examples of reactions or changes could include phase changes, dissolving, and mixing that forms new substances.] [Assessment Boundary: Assessment does not include distinguishing mass and weight.]	N/A
5-PS1-3. Make observations and measurements to identify materials based on their properties. [Clarification Statement: Examples of materials to be identified could include baking soda and other powders, metals, minerals, and liquids. Examples of properties could include color, hardness, reflectivity, electrical conductivity, thermal conductivity, response to magnetic forces, and solubility; density is not intended as an identifiable property.] [Assessment Boundary: Assessment does not include density or distinguishing mass and weight.]	*North and South*: Connect with Magnets; Lesson Plan: On Their Own: Science Center; Literacy Center Card: Think, Pair, Do, Share *Forces in Action Interactive CD-ROM:* Magnetic Pull Video button p. 19 *Built for a Purpose:* Connect with Architecture; Lesson Plan: Build Context *Built for a Purpose Interactive CD-ROM:* Animal Architects Activity button on p. 25 *From Mud to Marble;* Lesson Plan: Get information from a chart; Literacy Center Card: Think, Pair, Do, Share *High and Mighty* *Tower Power* *Building a Future*
5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	N/A
5-PS2 Motion and Stability: Forces and Interactions 5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down. [Clarification Statement: "Down" is a local description of the direction that points toward the center of the spherical Earth.] [Assessment Boundary: Assessment does not include mathematical representation of gravitational force.]	*Forces in Action*; Lesson Plan: Build Context, Compare information from a chart, Guide the reading, Build comprehension: identify main idea and details, On Their Own: Science Center; Literacy Center Card; Think, Pair, Do, Share *Down to Earth*; Lesson Plan: Build Context, Get information from a chart, At Home: Parachutes; Literacy Center Card: Think, Pair, Do, Share *Spring Into Action;* Lesson Plan: Compare information in a chart *Forces in Action Interactive CD-ROM:* Fun With Gravity Video Button p. 12, Gadgets and Gravity Activity button p. 12, Gravity in Action Info button p. 12
5-PS3 Energy 5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. [Clarification Statement: Examples of models could include diagrams, and flow charts.]	Supported by the Grade 4 Investigators: Ecology Theme Set texts *Living Together*: *How Living Things Interact:* Connect with Ecology; Lesson Plan: Build Context, At Home: Make a Food Chain; Literacy Center Card: Think, Pair, Do, Share *Wild Wetlands* *Living Together Interactive CD-ROM:* Food Chains and Food Webs Activity button p. 24
5-LS1 From Molecules to Organisms: Structures and Processes 5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water. **[Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.]**	Supported by the Grade 4 Investigators: Ecology Theme Set texts *Desert Dwellers* *Out of the Woods* *Wild Wetlands*

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5-LS2 Ecosystems: Interactions, Energy, and Dynamics 5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.] [Assessment Boundary: Assessment does not include molecular explanations.]	Supported by the following Grade 4 Investigate: Ecology Theme Set texts, Lesson Plans and Literacy Center Cards: *Living Together*: *How Living Things Interact* *Desert Dwellers* *Grassland Greats* *Out of the Woods* *Wild Wetlands* *Living Together Interactive CD-ROM:* Helping Soil Info button activity p. 7
5-ESS1 Earth's Place in the Universe 5-ESS1-1. Support an argument that the apparent brightness of the sun and stars is due to their relative distances from Earth. [Assessment Boundary: Assessment is limited to relative distances, not sizes, of stars. Assessment does not include other factors that affect apparent brightness (such as stellar masses, age, stage).]	N/A
5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. [Clarification Statement: Examples of patterns could include the position and motion of Earth with respect to the sun and selected stars that are visible only in particular months.] [Assessment Boundary: Assessment does not include causes of seasons.]	N/A
5-ESS2 Earth's Systems 5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. [Clarification Statement: Examples could include the influence of the ocean on ecosystems, landform shape, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere. The geosphere, hydrosphere, atmosphere, and biosphere are each a system.] [Assessment Boundary: Assessment is limited to the interactions of two systems at a time.]	Supported by the Grade 4 Investigate: Ecology Theme Set texts *Living Together: How Living Things Interact* *Desert Dwellers* *Grassland Greats* *From City To Sea* *Out of the Woods* *Wild Wetlands*
5-ESS2-2. Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. [Assessment Boundary: Assessment is limited to oceans, lakes, rivers, glaciers, ground water, and polar ice caps, and does not include the atmosphere.]	N/A
5-ESS3 Earth and Human Activity 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	*Built for a Purpose* *Building a Future;* Lesson Plan: Build Context, Get information from a chart, At Home: Take Action; Literacy Center Card: Think, Pair, Do, Share *Built for a Purpose Interactive CD-ROM:* Saving Energy Info button activity p. 21 Also supported by the Grade 4 Investigate: Ecology Theme Set texts *Living Together: How Living Things Interact* *From City To Sea*; Lesson Plan: At Home: Wanted Volunteers; Literacy Center Card: Think, Pair, Do, Share *Out of the Woods* *Wild Wetlands:* Connect with Wetlands
3-5-ETS1 Engineering Design 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	The Grade 3 Investigate: Light Theme Set provides the following example of engineering design: *Glow in the Dark* Literacy Center Card: Think, Pair, Do, Share The Grade 4 Investigate: Sound Theme Set provides the

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	following examples of engineering design: *Music to the Ears;* Lesson Plan: On Their Own: Science Center *Hear This!:* Connect with Hearing *Catch the Waves* Lesson Plan: At Home: Stay Connected The Grade 4 Investigate: Ecology Theme Set provides the following example of engineering design: *From City to Sea:* Connect with Urban Life The Grade 5 Investigate: Forces Theme Set provides the following examples of engineering design: *Down to Earth:* Connect with Gravity; Lesson Plan: At Home: Parachutes *Machines on the Move:* Connect with Machines; Lesson Plan: Out of School: Design a Playground; Literacy Center Card: Think, Pair, Do, Share The Grade 5 Investigate: Architecture Theme Set provides the following examples of engineering design: *Built For a Purpose* Lesson Plan: Out of School: Architectural Design *From Mud to Marble* Lesson Plan: Out of School: Design a Structure *Get Over It*: Connect with Bridges; Lesson Plan: At Home: Design a Bridge *High and Mighty:* Connect with Castles and Forts; Literacy Center Card: Think, Pair, Do, Share *Tower Power:* Connect with Towers; Literacy Center Card: Think, Pair, Do, Share *Building a Future* Literacy Center Card: Think, Pair, Do, Share
3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	*Hear This!:* Connect with Hearing *Down to Earth* Lesson Plan: At Home: Parachutes *Machines on the Move:* Connect with Machines *Get Over It*: Connect with Bridges; Lesson Plan: On Their Own: Science Center *Tower Power:* Connect with Towers; Lesson Plan: On Their Own: Science Center
3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	*Wired for Sound* Lesson Plan: On Their Own: Science Center *Forces in Action:* Connect with Forces; Lesson Plan: On Their Own: Science Center Get *Over It*: Connect with Bridges; Literacy Center Card: Think, Pair, Do, Share *Tower Power:* Connect with Towers; Lesson Plan: On Their Own: Science Center; Literacy Center Card: Think, Pair, Do, Share