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Building Blocks of Science™ 3D and Smithsonian's STCMS™ Correlation to Benchmark Advance CA NGSS Grades K–6

Building Blocks OF SCIENCE™ | 3D

Building Blocks of Science™ 3D and Smithsonian STCMS™ for Grades K–6
Correlation to Benchmark Advance CA NGSS

Grade K				
Grade	**Benchmark Unit**	**Topic**	**Standard**	**Building Blocks of Science**
K	3	Plants and Animals Have Needs	**K-LS1-1.** Use observations to describe patterns of what plants and animals (including humans) need to survive. **K-ESS2-2.** Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. **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.	**K-LS1-1.** *Living Things and Their Needs* **TG:** L1 pgs. 30–42 INV A, Plant Journal Sheet, THS; INV B; INV C; INV D, SIS 1D; SAQ 1, 3 **Digital:** IWB: Living vs. Nonliving; What Do All Living Things Do? **K-ESS2-2.** *Living Things and Their Needs* **TG:** L3 pgs. 68–77 INV A, Plant Data Sheet; INV B, SIS 3B, LA 3B; INV C; SAQ 4, 5, 8, 10 **Literacy:** SR: pgs. 6–12 **K-ESS3-1.** *Living Things and Their Needs* **TG:** L3 pgs. 68–77 INV A, Plant Data Sheet; INV B, SIS 3B, LA 3B; INV C; SAQ 4, 5, 8, 10 **Literacy:** SR: pgs. 6–12

K	5	Technology at Home and School	**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.	**K-2-ETS1-1.** *Push, Pull, Go* **TG:** L3 pgs. 64–71 INV A, LA 3A; INV B, SIS 3B; SAQ 10 **Literacy:** SR: pgs. 6, 11–14 **Digital:** SIM: Dominoes
K	8	Weather and Seasons	**K-ESS2-1.** Use and share observations of local weather conditions to describe patterns over time. **K-ESS3-2.** Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.	**K-ESS2-1.** *Weather and Sky* **TG:** L1 pgs. 32–42 INV A, THS; INV B, SIS 1B; INV C; INV D, SIS 1D; SAQ 1, 8 **Literacy:** SR: pgs. 2–5 **Digital:** IWB: Our Ideas About Weather; Daytime Sky; Nighttime Sky, Comparing Daytime and Nighttime Skies; SIM: Daytime/Nighttime **K-ESS3-2.** *Weather and Sky* **TG:** L3 pgs. 86–98 INV A; INV B, THS; INV C, SIS 3C, LA 3C; SAQ 6, 10 **Literacy:** SR: pgs. 10, 15 **Digital:** IWB: Dangerous Weather; Weather Safety; SIM: Rain Conditions
K	10	Forces & Motion	**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.	**K-PS2-1.** *Push, Pull, Go* **TG:** L2 pgs. 50-56 INV A, SIS 2A, LA 2A, THS; SAQ 8 **Literacy:** SR: pgs. 4–5, 10 **Digital:** SIM: Swing Set

			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.	**K-PS2-2.** *Push, Pull, Go* **TG:** L5 pgs. 90–100 INV A, SIS 5A; INV B; INV C; INV D, SIS 5D; SAQ 4 **Digital:** IWB: Our Ideas About Force and Motion; Our Problems and How We Fixed Them; What We Know About Force and Motion; SIM: Motion Series

Grade 1

Grade	Benchmark Unit	Topic	Standard	Building Blocks of Science
1	3	Plants and Animals Grow and Change	**1-LS3-1.** Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	**1-LS3-1.** *Exploring Organisms* **TG:** L4 pgs. 92–103 INV A, SIS 4A; INV B, SIS 4B, THS; INV C, LA 4C; SAQ 1, 3, 9 **Literacy:** SR: pgs. 8–10 **Digital:** SIM: Factors of Plant Growth, Part 1; Organism Growth
1	5	Technology at Work	**1-PS4-2.** Make observations to construct an evidence-based account that objects can be seen only when illuminated. **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.	**1-PS4-2.** *Light and Sound Waves* **TG:** L1 pgs. 34–44 INV A; INV B; INV C; SAQ 3 **Literacy:** SR: pgs. 2–3, 10–12 **Digital:** IWB: Our Ideas About Light and Sound; **1-PS4-4.** *Light and Sound Waves* **TG:** L6 pgs. 124–133 INV A; INV B, SIS 6B; INV C; SAQ 9 **Digital:** IWB: How Do We Communicate with Sound and Light?

1	8	Observing the Sky	**1-ESS1-1.** Use observations of the sun, moon, and stars to describe patterns that can be predicted.	**1-ESS-1.** *Sky Watchers* **TG:** L2 pgs. 60–70 INV A, LA 2A; INV B, SIS 2B; SAQ 6, 8, 9 **Literacy:** SR: pgs. 8–9 **Digital:** IWB: Why We Have Day and Night; SIM: Earth's Rotation
1	10	Exploring Sound and Light	**1-PS4-1.** Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. **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. **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.	**1-PS4-1.** *Light and Sound Waves* **TG:** L6 pgs. 124–133 INV A; INV B, SIS 6B; INV C; SAQ 9 **Digital:** IWB: How Do We Communicate with Sound and Light? **1-PS4-3.** *Light and Sound Waves* **TG:** L5 pgs. 100–110 INV A, SIS 5A.1, SIS 5A.2, THS; INV B, SIS 5B, LA 5B; SAQ 1, 2, 4, 7 **Literacy:** SR: pgs. 2–9 **Digital:** IWB: Does Light Pass Through? Reflection of Light; SIM: Translucent, Transparent, Opaque; Law of Reflection **1-PS4-4.** *Light and Sound Waves* **TG:** L6 pgs. 124–133 INV A; INV B, SIS 6B; INV C; SAQ 9 **Digital:** IWB: How Do We Communicate with Sound and Light?

			1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year.	**1-ESS1-2.** *Sky Watchers* **TG:** L3 pgs. 80–89 INV A, SIS 3A; INV B, SIS 3B, LA 3B; SAQ 2, 10 **Literacy:** SR: pgs. 10–13

Grade 2				
Grade	**Benchmark Unit**	**Topic**	**Standard**	**Building Blocks of Science**
2	3	Plants and Animals in Their Habitats	**2-LS2-1.** Plan and conduct an investigation to determine if plants need sunlight and water to grow. **2-LS4-1.** Make observations of plants and animals to compare the diversity of life in different habitats.	**2-LS2-1.** *Ecosystem Diversity* **TG:** L1 pgs. 32–44 INV A; INV B, LS 1B; INV C, SIS 1C; SAQ 1, 2, 3, 6, 7, 9, 12 **Literacy:** SR: pgs. 2–13 **Digital:** IWB: Living Things Matrix; Basic Needs of Living Things Map **2-LS4-1.** *Ecosystem Diversity* **TG:** L2 pgs. 54–62 INV A; INV B, SIS 2B.1, SIS 2B.2, LA 2B; SAQ 1, 3, 4, 7, 9 **Digital:** SIM: Factors of Plant Growth, Part 1; Plant Life Cycle

2	5	Solving Problems Through Technology	**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.	**K-3ETS1-1.** *Earth Materials* **TG:** L4 pgs. 132–143 INV A; INV B, SIS 4B; INV C, SIS 4C; SAQ 6, 8, 10, 12 **Literacy:** SR: pgs. 7, 12–13 **Digital:** IWB: Our Ideas About Soil; Comparing Sand and Soil; SIM: Soil Erosion
2	8	Wind and Water Change Earth	**2-ESS1-1.** Use information from several sources to provide evidence that Earth events can occur quickly or slowly. **2-ESS2-1.** Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	**2-ESS1-1.** *Earth Materials* **TG:** L3 pgs. 96–111 INV A, LS 3A; INV B, LA 3B; INV C, SIS 3C.1, SIS 3C.2; INV D, SIS 3D; SAQ 5, 10 **Literacy:** SR: pgs. 12–13 **Digital:** IWB: Our Ideas About Sand; Properties of Dry and Wet Sand; SIM: Erosion; Weathering **2-ESS2-1.** *Earth Materials* **TG:** L5 pgs. 158–174 INV A, SIS 5A; INV B, SIS 5B, LA 5B; INV C; SAQ 9, 10, 11 **Literacy:** SR: pgs. 5, 10–13 **Digital:** IWB: Changes to the Land; Landforms and Bodies of Water; SIM: Canyon Formation; Glacier Formation
2	10	States of Matter	**2-PS1-1.** Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	**2-PS1-1.** *Earth Materials* **TG:** L5 pgs. 158–174 INV A, SIS 5A; INV B, SIS 5B, LA 5B; INV C; SAQ 9, 10, 11 **Literacy:** SR: pgs. 5, 10–13 **Digital:** IWB: Changes to the Land; Landforms and Bodies of

			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. **2-PS1-4.** Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	Water; SIM: Canyon Formation; Glacier Formation **2-PS1-3.** *Matter* **TG:** L1 pgs. 32–41 INV A, SIS 1A; INV B, SIS 1B; SAQ 1, 13 **Literacy:** SR: pg. 7 **Digital:** IWB: Specifications to Build a Pyramid; SIM: Parts Make a Whole **2-PS1-4.** *Matter* **TG:** L5 pgs. 116–130 INV A, SIS 5A; INV B, SIS 5B, THS; INV C, SIS 5C; SAQ 9 **Literacy:** SR: pg. 12 **Digital:** SIM: Identity Change; Physical Change

Grade 3				
Grade	**Benchmark Unit**	**Topic**	**Standard**	**Building Blocks of Science**
3	3	Animal Adaptations	**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. **3-LS3-2.** Use evidence to support the explanation that traits can be influenced by the environment.	**3-LS3-1.** *Life in Ecosystems* **TG:** L2 pgs. 68–79 INV A, SIS 2A, LA 2A; INV B, SIS 2B; SAQ 5, 11 **Literacy:** SR: pgs. 10–11 **Digital:** IWB: Class Inherited Traits; SIM: Trait Variation **3-LS3-2.** *Life in Ecosystems* **TG:** L4 pgs. 130–143 INV A, SIS 4A, LA 4A; INV B, SIS 4B.1, SIS 4B.2, SIS 4B.3;

				SAQ 7, 9, 10, 14 **Literacy:** SR: pgs. 12–13, 15 **Digital:** IWB: Environmental Factors and Plant Growth; Organisms' Needs; SIM: Factors of Plant Growth; Phototropism; Fossil Formation
3	5	Advancements in Technology	**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.	**3-5-ETS1-1.** *Forces and Interactions* **TG:** L5 pgs. 152–159 INV A; INV B, SIS 5B; SAQ 12 **Digital:** SIM: Newton's First Law; Newton's Third Law
3	8	Weather and Climate	**3-ESS2-1.** Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. **3-ESS2-2**. Obtain and combine information to describe climates in different regions of the world. **3-ESS3-1.** Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.	**3-ESS2-1.** *Weather and Climate Patterns* **TG:** L1 pgs. 32–45 INV A, SIS 1A; INV B, SIS 1B, THS; INV C, SIS 1C; SAQ 1, 3, 5, 9 **Literacy:** SR: pgs. 2–9, 14–15 **Digital:** IWB: Our Ideas About Weather; Seasons; SIM: Air Pressure; Earth's Revolution; Earth's Rotation; Rain Gauge **3-ESS2-2.** *Weather and Climate Patterns* **TG:** L3 pgs. 102–115 INV A, SIS 3A, LA 3A; INV B, SIS 3B; INV C, SIS 3C; SAQ 7, 12, 13, 14, 15 **Literacy:** SR: pgs. 10–13 **Digital:** IWB: Our Ideas About Climate; SIM: Earth's Rotation; Earth's Revolution; Land Breezes and Sea Breezes **3-ESS3-1.** *Weather and Climate Patterns* **TG:** L5 pgs. 172–182 INV A, SIS 5A; INV B, SIS 5B.1, SIS 5B.2

				Digital: IWB: Impacts of Weather Hazards; Our Ideas About Weather; Our Ideas About Climate; What We Know About Weather and Climate
3	10	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. **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. **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. **3-PS2-4.** Define a simple design problem that can be solved by applying scientific ideas about magnets.	**3-PS2-1.** *Forces and Interactions* **TG:** L2 pgs. 54–69 INV A, SIS 2A; INV B, SIS 2B; INV C, SIS 2C, LS 2C, LA 2C; SAQ 3, 4, 6, 7, 8, 9 **Literacy:** SR: pgs. 5–7 **Digital:** SIM: Friction; Rolling Car; Spring Scale **3-PS2-2.** *Forces and Interactions* **TG:** L3 pgs. 86–97 INV A, SIS 3A; INV B, SIS 3B, LA 3B; INV C, SIS 3C; SAQ 3, 6, 10 **Literacy:** SR: pgs. 2–3, 10–11 **Digital:** SIM: Force, Motion, Speed **3-PS2-3.** *Forces and Interactions* **TG:** L4 pgs. 112–128 INV A; INV B, SIS 4B; INV C, SIS 4C.1, SIS 4C.2, LA 4C; INV D, SIS 4D.1, SIS 4D.2; SAQ 5, 12, 13 **Literacy:** SR: pg. 9 **Digital:** IWB: Which Objects Are Magnetic?; SIM: Magnetic Attraction and Repulsion; Iron Fillings **3-PS2-4.** *Forces and Interactions* **TG:** L5 pgs. 152–159 INV A; INV B, SIS 5B; SAQ 12 **Digital:** SIM: Newton's First Law; Newton's Third Law

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Grade 4				
Grade	**Benchmark Unit**	**Topic**	**Standard**	**Building Blocks of Science**
4	3	Observing Nature	**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.	**4-LS1-2.** *Plant and Animal Structures* **TG:** L4 pgs. 118–131 INV A, SIS 4A.1, SIS 4A.2; INV B, SIS 4B, LA 4B; INV C, SIS 4C; SAQ 4, 7, 9 **Literacy:** SR: pgs. 6–7 **Digital:** IWB: Information Processing; SIM: Information Processing; Reaction Time Test
4	5	Technology for a Green Future	**4-ESS3-1.** Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. **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. **3-5-ETS1-2.** Generate and compare multiple possible solutions to a problem based	**4-ESS3-1.** *Energy Works* **TG:** L2 pgs. 48–62 INV A, SIS 2A, LA 2A; INV B, SIS 2B; INV C, SIS 2C; SAQ 1, 4, 5 **Literacy:** SR: pgs. 6–9 **Digital:** IWB: Exploring Stored and Motion Energy; SIM: Stored and Motion Energy; Ping-Pong Ball Energy; Energy Transfer **3-5-ETS1-1.** *Energy Works* **TG:** L5 pgs. 168–181 INV A, LA 5A; INV B, SIS 5B; INV C, SIS 5C, THS; SAQ 12, 13, **Literacy:** SR: pgs. 10–14 **Digital:** IWB: Alternative Energy; SIM: Wind Turbine; Waterwheel **3-5-ETS1-2.** *Changing Earth* **TG:** L6 pgs. 112–121

			on how well each is likely to meet the criteria and constraints of the problem.	INV A, SIS 6A; INV B, SIS 6B; INV C; SAQ 4, 10 **Digital:** IWB: Our Earth; SIM: Soil Erosion
4	8	Earth Changes	**4-ESS2-2.** Analyze and interpret data from maps to describe patterns of Earth's features. **4-ESS3-2.** Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	**4-ESS2-2.** *Changing Earth* **TG:** L4 pgs. 86–93 INV A, SIS 4A, LA 4A; INV B, SIS 4B; SAQ 8, 9, 10, 12 **Literacy:** SR: pgs. 10–11 **4-ESS3-2.** *Changing Earth* **TG:** L6 pgs. 112–121 INV A, SIS 6A; INV B, SIS 6B; INV C; SAQ 4, 10 **Digital:** IWB: Our Earth; SIM: Soil Erosion
4	10	The Power of Electricity	**4-PS3-2.** Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	**4-PS3-2.** *Energy Works* **TG:** L6 pgs. 208–216 INV A, SIS 6A; INV B, SIS 1B; INV C; SAQ 8 **Digital:** IWB: My Energy Experiment

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Grade 5				
Grade	**Benchmark Unit**	**Topic**	**Standard**	**Building Blocks of Science**
5	3	Cultivating Natural Resources	**5-ESS3-1.** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. **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. **5-LS1-1.** Support an argument that plants get the materials they need for growth chiefly from air and water. **5-LS2-1.** Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	**5-ESS3-1.** *Matter and Energy in Ecosystems* **TG:** L6 pgs. 168–174 INV A, SIS 6A; INV B; SAQ 9, 14 **5-PS3-1.** *Matter and Energy in Ecosystems* **TG:** L2 pgs. 58–68 INV A, SIS 2A; INV B, SIS 2B, LA 2B; SAQ 2, 3, 5, 11, 13, 15 **Literacy:** SR: pgs. 12–13 **Digital:** IWB: Food Chain **5-LS1-1.** *Matter and Energy in Ecosystems* **TG:** L1 pgs. 34–46 INV A; INV B, SIS 1B; INV C, SIS 1C; SAQ 1, 6 **Literacy:** SR: pgs. 6–9 **Digital:** IWB: Biotic and Abiotic Factors; SIM: Photosynthesis; Factors of Plant Growth, Part 2 **5-LS2-1.** *Matter and Energy in Ecosystems* **TG:** L2 pgs. 58–68 INV A, SIS 2A; INV B, SIS 2B, LA 2B; SAQ 2, 3, 5, 11, 13, 15 **Literacy:** SR: pgs. 12–13 **Digital:** IWB: Food Chain *Matter and Energy in Ecosystems* **TG:** L2 pgs. 58–68

Key: INV – Investigation, **IWB** – Interactive Whiteboard, **L** – Lesson, **LA** – Literacy Article, **SIM** – Simulation, **SR** – Student Reader, **TG** – Teacher Guide, **THS** – Take-Home Science, **TMM** – Tell Me More Science Notebook Entry; **SAQ**–Summative Assessment Question

				INV A, SIS 2A; INV B, SIS 2B, LA 2B; SAQ 2, 3, 5, 11, 13, 15 **Literacy:** SR: pgs. 12–13 **Digital:** IWB: Food Chain
5	5	Technology's Impact on Society	**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. **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.	**3-5 ETS1-1.** *Forces and Interactions* **TG:** L5 pgs. 152–159 INV A; INV B, SIS 5B; SAQ 12 **Digital:** SIM: Newton's First Law; Newton's Third Law **3-5 ETS1-2.** *Earth and Space Systems* **TG:** L5 pgs. 176–185 INV A, SIS 5A; INV B; SAQ 4, 6, 7, 11 **Digital:** IWB: Human Impacts on Earth's Systems; Knowledge and Questions About Earth and Space Systems; What We Learned About Earth and Space Systems
5	8	Water: Fact and Fiction	**5-ESS2-1.** Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. **5-ESS3-1.** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	**5-ESS2-1.** *Earth and Space Systems* **TG:** L4 pgs. 140–150 INV A, SIS 4A; INV B, SIS 4B, LA 4B; SAQ 2, 5, 12, 13, 14 **Literacy:** SR: pgs. 10–21, 23 **Digital:** IWB: Water Cycle; SIM: Water Cycle **5-ESS3-1.** *Earth and Space Systems* **TG:** L5 pgs. 176–185 INV A, SIS 5A; INV B; SAQ 4, 6, 7, 11 **Digital:** IWB: Human Impacts on Earth's Systems; Knowledge and Questions About Earth and Space Systems; What We Learned About Earth and Space Systems

5	10	Transforming Matter	**5-PS1-1.** Develop a model to describe that matter is made of particles too small to be seen. **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. **5-PS1-3.** Make observations and measurements to identify materials based on their properties. **5-PS1-4.** Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	**5-PS1-1.** *Structure and Properties of Matter* **TG:** L2 pgs. 62–75 INV A, SIS 2A; INV B, SIS 2B, LA 2B; INV C, SIS 2C; SAQ 2, 4, 5, 6, 9, 10, 13, 14 **Literacy:** SR: pgs. 6–7 **Digital:** SIM: Particle Attraction; States of Water **5-PS1-2.** *Structure and Properties of Matter* **TG:** L2 pgs. 62–75 INV A, SIS 2A; INV B, SIS 2B, LA 2B; INV C, SIS 2C; SAQ 2, 4, 5, 6, 9, 10, 13, 14 **Literacy:** SR: pgs. 6–7 **Digital:** SIM: Particle Attraction; States of Water **5-PS1-3.** *Structure and Properties of Matter* **TG:** L3 pgs. 92–101 INV A, SIS 3A, LA 3A; INV B, SIS 3B.1, SIS 3B.2; SAQ 5, 11, 13 **Literacy:** SR: pgs. 8–13 **Digital:** SIM: Hardness, Buoyancy, Magnetism; Layering by Density; Viscosity Racetrack **5-PS1-4.** *Structure and Properties of Matter* **TG:** L4 pgs. 116–127 INV A, SIS 4A; INV B, SIS 4B, LA 4B; INV C, SIS 4C; SAQ 7, 12, 15 **Literacy:** SR: pgs. 14–17 **Digital:** SIM: Create a Mixture

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Grade 6				
Grade	**Benchmark Unit**	**Topic**	**Standard**	**Building Blocks of Science**
6	3	Relationships in Nature	**MS-ESS3-3.** Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	**MS-ESS3-3.** *Ecosystems and Their Interactions* **TE**: Lesson 1 pgs. 1a-27; Lesson 10 pgs. 221a-243; Lesson 11 pgs. 249
6	5	Technology in the 21st Century	**MS-ETS1-1.** Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions. **MS-ESS3-2.** Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects. **MS-ESS3-3.** Apply scientific principles to design a method for monitoring and minimizing a human	**MS-ETS1-1.** *Ecosystems and Their Interactions* **TE**: Lesson 2 pgs. 27a-49; Lesson 9 pgs. 199a-221; Lesson 11 pgs. 243a-249 **MS-ESS3-2.** *Weather and Climate Systems* **TE**: Lesson 1 pgs. vi-9; Lesson 6 pgs. 81a-101; Lesson 7 pgs. 101a-117b; Lesson 8 pgs. 117c-139; Lesson 12 pgs. 199a-205 **MS-ESS3-3.** *Ecosystems and Their Interactions* **TE**: Lesson 1 pgs. 1a-27; Lesson 10 pgs. 221a-243; Lesson 11 pgs. 243a-249 **MS-ESS2-4.** *Weather and Climate Systems* **TE**: Lesson 1 pgs. vi-9; Lesson 3 pgs. 23a-41; Lesson 12 pgs. 199a-205 **MS-LS2-1.** *Ecosystems and Their Interactions* **TE**: Lesson 1 pgs. 1a-27; Lesson 2 pgs. 27a-49; Lesson 3 pgs. 49a-71; Lesson 6 pgs. 125a-147; Lesson 11 pgs. 243a-249 **MS-LS2-3.** *Ecosystems and Their Interactions* **TE**: Lesson 1 pgs. 1a-27; Lesson 4 pgs. 79a-97; Lesson 5 pgs. 97a-125; Lesson 11 pgs. 243a-249 **MS-LS2-4.**

			impact on the environment. **MS-ESS2-4.** Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity. **MS-LS2-1.** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. **MS-LS2-3.** Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. **MS-LS2-4.** Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.	*Ecosystems and Their Interactions* **TE**: Lesson 1 pgs. 1a-27; Lesson 7 pgs. 147a-179; Lesson 11 pgs. 243a-249

6	8	Exploring Earth's Structures	**MS-ESS2-2.** Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.	**MS-ESS2-2.** *Earth's Dynamic Systems* **TE**: Lesson 1 pgs. 1a-13a; Lesson 3 pgs. 49a-7139c-73a; Lesson 4 pgs.73c-117a; Lesson 5pgs. 117c-147a; Lesson 6 pgs. 147a-181; Lesson 7 pgs. 181a-209a; Lesson 8 pgs. 219c-241a; Lesson 11 pgs. 295c-319a; Lesson 12 pgs. 319c-329
6	10	Understanding Our Energy Resources	**MS-ESS2-5.** Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions. **MS-PS3-1.** Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.	**MS-ESS2-5.** *Weather and Climate Systems* TE: Lesson 1 pgs. vi-9; Lesson 3 pgs. 23a-41; Lesson 4 pgs. 41a-63a; Lesson6 pgs. 1a-101; Lesson 7 pgs. 101a-117b; Lesson 8 pgs. 117c-139; Lesson 12 pgs. 199a-205 **MS-PS3-1.** *Energy, Forces, and Motion* TE: Lesson 1 pgs. iv-13; Lesson 5 pgs. 63a-81; Lesson 9 pgs. 141a-153