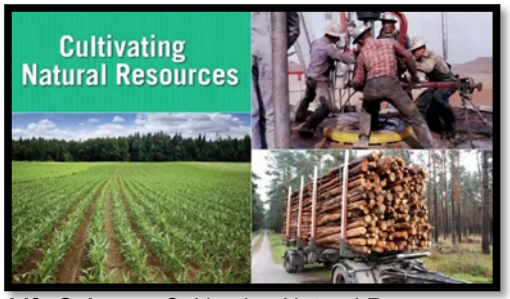
Fifth Grade NGSS/Benchmark Alignment

Life Science

5-LifeScience1 (5-LS1) From Molecules to Organisms: Structures and Processes
5-LifeScience2 (5-LS-2) Ecosystems: Interactions, Energy, and Dynamics



Benchmark Unit 3 Life Science: Cultivating Natural Resources

NGSS Standard			Benchmark		
5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water.			**Benchmark Essential Question** How do we decide which resources we should develop?		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Engaging in Argument from Evidence Construct an argument with evidence, data, and/or a model. (5-LS1-1)	**Organization for Matter and Energy Flow in Organisms** Plants acquire their material for growth chiefly from air and water. (5-LS1-1)	**Energy and Matter** Matter is transported into, out of, and within systems. (5-LS1-1)	***NOT ADDRESSED***	**Whole group text:** • The Structure of the Corn Plant pp. 4-5 (Texts for Close Reading) • The Past and Future of a Crop pp. 6-9 (Texts for Close Reading) • A Short History of a Special Plant pp. 12 19 (Texts for Close Reading) • The Peanut Man pp. 50-51 (Read Aloud Handbook) **Small group text:** • Cells • Growing a Kitchen Garden • Plant Atlas • Plant Genetics • Plants We Use • What Makes a Plant a Plant?	***NOT ADDRESSED***

Fifth Grade Life Science (cont'd)

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete Fifth grade NGSS standards can be found at: https://tinyurl.com/5thGradeCANGSS

FOSS CA: *Living Systems*: Investigation 3

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Engaging in Argument from Evidence	**Organization for Matter and Energy Flow in Organisms**	**Energy and Matter**
Investigation 3 Part 3 **Testing Cereals**	**Investigation 3 Part 1** **Science Resource Book (Step 4)**: "Making Food"	**Investigation 3 Part 2** **Focus Question (After Step 17):** How do plant and animal cells break down food (sugars) to get energy?

5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

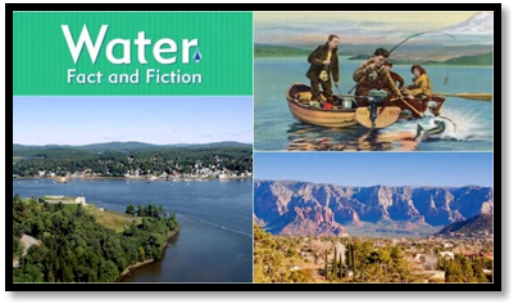
Benchmark Essential Question
How do we decide which resources we should develop?

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Developing and Using Models Develop a model to describe phenomena. (5-LS2-1)	**Interdependent Relationships in Ecosystems** The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as "decomposers." Decomposition eventually restores (recycles) some materials back to the soil. (5-LS2-1)	**Systems and System Models** A system can be described in terms of its components and their interactions. (5-LS2-1)	***NOT ADDRESSED***	**Whole group text:** • The Past and Future of a Crop pp. 6-9 (Texts for Close Reading) • A Short History of a Special Plant pp. 12 19 (Texts for Close Reading) • The Science of Growing Food pp. 24-29 (Texts for Close Reading) • Agriculture pp. 42-45 (Read Aloud Handbook) • Different Ways pp. 46-47 (Read Aloud Handbook) • The Peanut Man pp. 50-51 (Read Aloud Handbook) • Amber Waves of Grain pp. 52-53 (Read Aloud Handbook) **Small group text:** • Cotton Plant to Cotton Shirt • Growing a Kitchen Garden • Plant Atlas • Plant Genetics • Plants We Use	***NOT ADDRESSED***

Fifth Grade Life Science (cont'd)		
The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete Fifth grade NGSS standards can be found at: https://tinyurl.com/5thGradeCANGSS		
FOSS CA: *Living Systems*: Investigation 3		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Developing and Using Models	**Interdependent Relationships in Ecosystems**	**Systems and System Models**
Investigation 3 Part 2 **Focus Question (Step 12)** • Explain how your cells get energy from the sun using examples?	**Investigation 3 Part 2** **Science Notebook Sheet, No. 10** "Response Sheet – Sugar and Cells" (Step 21)	**Investigation 3 Part 3** **Focus Question (Step 12)** • What happens to sugar when it is used in cells? •
ETS 1.B - Devloping Possible Solutions Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people	***NOT ADDRESSED*** Benchmark does not provide students opportunities to design solutions for a problem within this standard band	

Fifth Grade NGSS/Benchmark Alignment

Earth and Space Sciences

5- Earth and Space Sciences1 (5-ESS1) Earth's Place in the Universe **5- Earth and Space Sciences2 (5-ESS2) Earth's Systems** **5- Earth and Space Sciences3 (5-ESS3) Earth and Human Activity**	 **Benchmark Unit 8 Earth and Space Sciences: Water: Fact and Fiction**
NGSS Standard	**Benchmark**
5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.	**Benchmark Essential Question:** What does water mean to people and the societies they live in?

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete fourth grade NGSS standards can be found at: https://tinyurl.com/5thGradeCANGSS

FOSS CA: *Water Planet*: Investigation 1

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Engaging in Argument from Evidence Support an argument from evidence, data, or a model. (5-ESS1-1)	**The Universe and its Stars** The sun is a star that appears larger and brighter than other stars because it is closer. Stars range greatly in their distance from Earth. (5-ESS1-1)	**Scale, Proportion, and Quantity** Natural objects exist from the very small to the immensely large. (5-ESS1-1)
Investigation 1 Part 2 **Focus Question (After Step 6):** Why do planets go around the Sun in circular orbits?	**Investigation 1** **"Solar System"**	**Investigation 1 Part 1** Science Notebook Sheet, No. 1, Step 11 "Solar System Data"

Fifth Grade Earth and Space Sciences (cont'd)	
NGSS Standard	**Benchmark Unit 8 Earth and Space Sciences:** Water: Fact and Fiction
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.	***NOT ADDRESSED***

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FOSS CA: *Water Planet*: Investigations 1 and 2

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data Represent data in graphical displays to reveal patterns that indicate relationships. (5-ESS1-2)	**Earth and Solar System** The orbits of Earth around the sun and of the moon around Earth, together with the rotation of Earth about an axis between its North and South poles, cause observable patterns. These include day and night; daily changes in the length and direction of shadows; and different positions of the sun, moon, and stars at different times of the day, month, and year. (5-ESS1-2)	**Patterns** Similarities and differences in patterns can be used to sort, classify, communicate, and analyze simple rates of change for natural phenomena. (5-ESS1-2)
Investigation 2 Part 1 Science Notebook Sheet, No. 4, Step 13 "Swingers Picture Graph"	**Investigation 1 Part 1** **Science Resource Book (Step 19)**: "Tour of the Solar System"	**Investigation 1 Part 2** **Focus Question:** Why do planets go around the Sun in circular orbits?

Fifth Grade Earth and Space Sciences (cont'd)					
5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.			**Benchmark Unit 8 Earth and Space Sciences:** Water: Fact and Fiction		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Develop a model to describe phenomena. (5-ESS2-1)	**Earth Materials and Systems** Earth's major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans). These systems interact in multiple ways to affect Earth's surface materials and processes. The ocean supports a variety of ecosystems and organisms, shapes landforms, and influences climate. Winds and clouds in the atmosphere interact with the landforms to determine patterns of weather. (5-ESS2-1)	**Systems and System Models** A system can be described in terms of its components and their interactions. (5-ESS2-1)	***NOT ADDRESSED***	**Whole Group Text:** • Water: The Liquid of Life pp. 120-123 (Read Aloud Handbook) • Questions and Answers About the Ocean pp. 22-29 9 (Texts for Close Reading) • The Great Barrier Reef p. 30 (Texts for Close Reading) **Small Group Text:** • Catastrophic Storms • Earth's Water Cycle • Severe Weather • Tsunamis • Weather on Earth • Weatherworks	***NOT ADDRESSED***

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FOSS CA: *Water Planet*: Investigations 4 and 5

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Developing and Using Models	**Earth Materials and Systems**	**Systems and System Models**
Investigation 4 Part 2 Science Notebook Sheet, No. 18 "Response Sheet - Heating Earth", Step 17	**Investigation 5 Part 4** **Science Resource Book (Step 9)**: "Summary Weather"	**Investigation 4 Part 1 and 2** "Heating Earth Materials" "Convection"

Fifth Grade Earth and Space Sciences (cont'd)					
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.			**Benchmark Unit 8 Earth and Space Sciences:** Water: Fact and Fiction		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Using Mathematics and Computational Thinking Describe and graph quantities such as area and volume to address scientific questions. (5-ESS2-2)	**The Roles of Water in Earth's Surface Processes** Nearly all of Earth's available water is in the ocean. Most fresh water is in glaciers or underground; only a tiny fraction is in streams, lakes, wetlands, and the atmosphere. (5-ESS2-2)	**Scale, Proportion, and Quantity** Standard units are used to measure and describe physical quantities such as weight, and volume. (5-ESS2-2)	***NOT ADDRESSED***	**Whole Group Text:** • Water-Wise Landscaper pp. 6-9 (Texts for Close Reading) • Questions and Answers About the Ocean pp. 22-29 9 (Texts for Close Reading) • Water: The Liquid of Life pp. 120-123 (Read Aloud Handbook) • Los Angeles: The City that Water Built pp. 124-125 (Read Aloud Handbook) • Encounters with Encantados pp. 126-129 (Read Aloud Handbook) • Great Flood pp. 130-131 (Read Aloud Handbook) **Small Group Text:** • Antarctica: A Year of Science • Catastrophic Storms • Earth's Water Cycle • Tsunamis **Unit Opener Video:** Water Fact or Fiction **Content Across Disciplines Inquiry Projects** (ADDITIONAL RESOURCES tab): Interview a Body of Water, Create Statistical Portraits, Draw an Annotated Map	***NOT ADDRESSED***

Fifth Grade Earth and Space Sciences (cont'd)

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete fourth grade NGSS standards can be found at: https://tinyurl.com/5thGradeCANGSS

FOSS CA: *Water Planet*: Investigation 5

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Using Mathematics and Computational Thinking	**The Roles of Water in Earth's Surface Processes**	**Scale, Proportion, and Quantity**
Investigation 5 Part 4 **Focus Question (Step 6):** Mealtime	**Investigation 5 Part 1** **Science Resource Book (Step 6)**: "Where is the Earth's Water?"	**Investigation 5 Part 1** **Water Cycle (Steps 1-18)**

5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Obtaining, Evaluating, and Communicating Information Obtain and combine information from books and/or other reliable media to explain phenomena or solutions to a design problem. (5-ESS3-1)	**Human Impacts on Earth's System** Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments. (5-ESS3-1)	**Systems and System Models** A system can be described in terms of its components and their interactions. (5-ESS3-1)

Benchmark Unit 8 Earth and Space Sciences:
Water: Fact and Fiction

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
NOT ADDRESSED	**Whole Group Text:** • Water-Wise Landscaper pp. 6-9 (Texts for Close Reading) ▪ Los Angeles: The City that Water Built pp. 124-125 (Read Aloud Handbook) ▪ Encounters with Encantados pp. 126-129 (Read Aloud Handbook) ▪ Great Flood pp. 130-131 (Read Aloud Handbook) ▪ Water Served with Pressure pp. 132-133 131 (Read Aloud Handbook) **Small Group Text:** • Severe Weather • Tsunamis • Weather on Earth • Weatherworks **Content Across Disciplines Inquiry Projects** (ADDITIONAL RESOURCES tab): Draw an Annotated Map	***NOT ADDRESSED***

Fifth Grade Earth and Space Sciences (cont'd)		
The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete fourth grade NGSS standards can be found at: https://tinyurl.com/5thGradeCANGSS		
FOSS CA: *Water Planet*: Investigations 5		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Obtaining, Evaluating, and Communicating Information	**Human Impacts on Earth's System**	**Systems and System Models**
Investigation 5 Part 3 **Focus Question (Step 5):** • What weather variables do meteorologists measure when they are preparing to make a weather forecast? • What causes wind?	**Investigation 5 Part 1** **Science Resource Book (Step 21)**: "Earth's Water"	**Investigation 5 Part 1** **Focus Question (Step 20)** Use examples to describe how is water recycled on earth?

Fifth Grade NGSS/Benchmark Alignment

Physical Science

5-Physical Science1 (5-PS1) Matter and its Interactions
5-Physical Science2 (5-PS2) Motion and Stability: Forces and Interactions
5-Physical Science3 (5-PS3) Energy

Benchmark Unit 10 Physical Science: Transforming Matter

NGSS Standard			Benchmark		
5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen.			**Benchmark Essential Question:** Why do we measure and describe the world?		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Developing and Using Models Develop a model to describe phenomena. (5-PS1-1)	**Structure and Properties of Matter** Matter of any type can be subdivided into particles that are too small to see, but even then the matter still exists and can be detected by other means. A model showing that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations, including: the inflation and shape of a balloon, and the effects of air on larger particles or objects. (5-PS1-1)	**Scale, Proportion, and Quantity** Natural objects exist from the very small to the immensely large. (5-PS1-1)	***NOT ADDRESSED***	**Whole Group Text:** • John Dalton: Father of Atomic Theory pp. 4-5 (Texts for Close Reading) • Matter is Everywhere! pp. 6-9 (Texts for Close Reading) • Investigate: Changes in Matter pp. 12-19 (Texts for Close Reading) • Nylon pp. 156-159 (Read Aloud Handbook) **Small Group Text:** • Carbon Chemistry • Diamonds • Foundations of Matter • Interactions of Matter • The Nature of Matter	***NOT ADDRESSED***

Fifth Grade Physical Science (cont'd)

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete Fifth grade NGSS standards can be found at: https://tinyurl.com/5thGradeCANGSS

FOSS CA: *Mixtures and Solutions*: Investigation 3

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Developing and Using Models	**Structure and Properties of Matter**	**Scale, Proportion, and Quantity**
Investigation 3 Part 3 **Focus Question (After Step 10):** What happens to the atoms in the reactants during a chemical reaction?	**Investigation 3 Part 1** **Science Resource Book (Step 23)**: "When Substances Change"	**Investigation 3 Part 2** **Focus Question (Step 15):** • What forms can reaction products take? • How can you identify the products of a reaction?

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.

Benchmark Unit 10 Physical Science
Transforming Matter

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Using Mathematics and Computational Thinking Describe and graph quantities such as area and volume to address scientific questions. (5-PS1-2)	**Chemical Reactions** The amount (weight) of matter is conserved when it changes form, even in transitions in which it seems to vanish. (5-PS1-2)	**Scale, Proportion, and Quantity** Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume. (5-PS1-2)	***NOT ADDRESSED***	**Whole Group Text:** • Matter is Everywhere! pp. 6-9 (Texts for Close Reading) • Investigate: Changes in Matter pp. 12-19 (Texts for Close Reading) **Small Group Text:** • Carbon Chemistry • Diamonds • Foundations of Matter • Interactions of Matter • The Nature of Matter **Unit Opener Video:** Transforming Matter	***NOT ADDRESSED***

Fifth Grade Physical Science (cont'd)		
The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete Fifth grade NGSS standards can be found at: https://tinyurl.com/5thGradeCANGSS		
FOSS CA: *Mixtures and Solutions*: Investigation 3		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Developing and Using Models	**Structure and Properties of Matter**	**Scale, Proportion, and Quantity**
Investigation 3 Part 3 **Focus Question (After Step 10):** What happens to the atoms in the reactants during a chemical reaction?	**Investigation 3 Part 1** **Science Resource Book (Step 23)**: "When Substances Change"	**Investigation 3 Part 2** **Focus Question (Step 15):** • What forms can reaction products take? • How can you identify the products of a reaction?

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.			**Benchmark Unit 10 Physical Science** Transforming Matter		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Using Mathematics and Computational Thinking Describe and graph quantities such as area and volume to address scientific questions. (5-PS1-2)	**Chemical Reactions** The amount (weight) of matter is conserved when it changes form, even in transitions in which it seems to vanish. (5-PS1-2)	**Scale, Proportion, and Quantity** Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume. (5-PS1-2)	***NOT ADDRESSED***	**Whole Group Text:** • Matter is Everywhere! pp. 6-9 (Texts for Close Reading) • Investigate: Changes in Matter pp. 12-19 (Texts for Close Reading) **Small Group Text:** • Carbon Chemistry • Diamonds • Foundations of Matter • Interactions of Matter • The Nature of Matter **Unit Opener Video:** Transforming Matter	***NOT ADDRESSED***

Fifth Grade Physical Science (cont'd)		
The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete Fifth grade NGSS standards can be found at: https://tinyurl.com/5thGradeCANGSS		
FOSS CA: *Mixtures and Solutions*: Investigations 1 and 2		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Using Mathematics and Computational Thinking	**Chemical Reactions**	**Scale, Proportion, and Quantity**
Investigation 2 Part 1 **Science Notebook Sheet**, No. 7 "Saturating a Solution" Step 14	**Investigation 1 Part 2** **Science Notebook Sheet**, No. 3 "Making a Solution" Step 6	**Investigation 2 Part 2** **Focus Question (Step 7):** How can you determine the amount of Epsom salts present in a saturated volume of water?
NGSS Standard	**Benchmark Unit 10 Physical Science:** Transforming Matter	
5-PS1-3. Make observations and measurements to identify materials based on their properties.	***NOT ADDRESSED***	
The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete Fifth grade NGSS standards can be found at: https://tinyurl.com/5thGradeCANGSS		
FOSS CA: *Mixtures and Solutions*: Investigations 1 and 2		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Constructing Explanations and Designing Solutions	**Conservation of Energy and Energy Transfer**	**Energy and Matter**
Planning and Carrying Out an Investigation Make observations and measurements to produce data to serve as a basis for evidence.	**Structure and Properties of Matter** Measurements of a variety of properties can be used to identify materials.	**Scale, Proportion, and Quantity** Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume. (5-PS1-3)
Investigation 1 Part 3 **Focus Question (Step 2):** How can you design an efficient method to separate a mixture of three solid materials?	**Investigation 2 Part 3** **Science Notebook Sheet**, No. 9 "Substance Data Sheet" Step 8	**Investigation 2 Part 2** **Focus Question (Step 7):** How can you determine the amount of Epsom salts present in a saturated volume of water?

Fifth Grade Physical Science (cont'd)					
5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.			**Benchmark Unit 10 Physical Science** Transforming Matter		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Planning and Carrying Out an Investigation Make observations and measurements to produce data to serve as a basis for evidence. (5-PS1-4)	**Chemical Reactions** When two or more different substances are mixed, a new substance with different properties may be formed. (5-PS1-4)	**Cause and Effect** Cause and effect relationships are routinely identified, tested, and used to explain change. (5-PS1-4)	***NOT ADDRESSED***	**Whole Group Text:** • John Dalton: Father of Atomic Theory pp. 4-5 (Texts for Close Reading) • Investigate: Changes in Matter pp. 12-19 (Texts for Close Reading) • Nylon pp. 156-159 (Read Aloud Handbook) • Changes in the Kitchen p. 161 (Read Aloud Handbook) **Small Group Text:** • Carbon Chemistry • Interactions of Matter • The Nature of Matter	***NOT ADDRESSED***

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete Fifth grade NGSS standards can be found at: https://tinyurl.com/5thGradeCANGSS

FOSS CA: *Mixtures and Solutions*: Investigation 3

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Planning and Carrying Out an Investigation	**Chemical Reactions**	**Cause and Effect**
Investigation 3 Part 4 **Focus Question (After Step 13):** What observations give evidence that a chemical reaction has happened?	**Investigation 3 Part 1** **Science Resource Book (Step 23)**: "When Substances Change"	**Investigation 3 Part 1** **Focus Question (After Step 17):** If you mix two different solid substances with water, will you end up with a solution?

Fifth Grade Physical Science (cont'd)					
5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down.			**Benchmark Unit 10 Physical Science** Transforming Matter		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Engaging in Argument from Evidence Support an argument from evidence, data, or a model. (5-PS2-1)	**Types of Interactions** The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center. (5-PS2-1)	**Cause and Effect** Cause and effect relationships are routinely identified and used to explain change. (5-PS2-1)	***NOT ADDRESSED***	**Small Group Text:** • Forces and Motion in Sports • Forces and Motion on Earth • Forces on Earth • Isaac Newton and his Laws of Motion • Isaac Newton: The World in Motion • The Nature of Motion	***NOT ADDRESSED***

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FOSS CA: *Water Planet*: Investigation 1		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Engaging in Argument from Evidence	**Types of Interactions**	**Cause and Effect**
Investigation 1 Part 2 **Focus Question (After Step 6):** Why do planets go around the Sun in circular orbits?	**Investigation 1 Part 2** **Science Resource Book (Step 5)**: "Why Doesn't the Earth Fly Off into Space"	**Investigation 1 Part 2** **Focus Question:** Why do planets go around the Sun in circular orbits?

Fifth Grade Physical Science (cont'd)					
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.			**Benchmark Unit 10 Physical Science** Transforming Matter		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Developing and Using Models Use models to describe phenomena. (5-PS3-1)	**Energy in Chemical Processes and Everyday Life** The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). (5-PS3-1)	**Energy and Matter** Energy can be transferred in various ways and between objects. (5-PS3-1)	***NOT ADDRESSED***	**Whole Group Text:** • Marie M. Daly: Biochemist Pioneer pp. 22-29 (Texts for Close Reading) **Small Group Text:** • Carbon Chemistry	***NOT ADDRESSED***

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete Fifth grade NGSS standards can be found at: https://tinyurl.com/5thGradeCANGSS

FOSS CA: *Living Systems*: Investigation 3		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Developing and Using Models	**Energy in Chemical Processes and Everyday Life**	**Energy and Matter**
Investigation 3 Part 1 **After Step 9:** Have them draw a model of how they think photosynthesis happens. Have them revise it after Step 13.	**Investigation 3 Part 1** **Science Resource Book (Step 12)**: "Photosynthesis"	**Investigation 3 Part 1** **Step 1:** Have them draw a model of a food chain and indicate how the energy is flowing.