Second Grade NGSS/Benchmark Alignment

Life Science

2- Life Science2 (2-LS2) Interactions, Energy, and Dynamics
2- Life Science4 (2-LS4) Unity and Diversity
Engineering, Technology, and Applications of Science Engineering Design-1 (ETS-1) Engineering Design

Benchmark Unit 3 Life Science: Plants and Animals in their Habitats

NGSS Standard			Benchmark		
2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.			**Benchmark Essential Question** How do living things get what they need to survive?		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Planning and Carrying Out Investigations Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. (2-LS2-1)	**Interdependent Relationships in Ecosystems** Plants depend on water and light to grow (2-LS2-1)	**Cause and Effect** Events have causes that generate observable patterns (2-LS2-1)	***NOT ADDRESSED***	**Whole Group Text:** • News About Scorpions p. 4 (Text for Close Reading) • All the Penguins p. 5 (Text for Close Reading) • The Coldest Place on Earth pp. 6-9 (Text for Close Reading) • Habitats Around the World pp. 18-2 (Text for Close Reading) **Small Group Text:** • Plant and Animals in Different Seasons	***NOT ADDRESSED***

Second 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 second grade NGSS standards can be found at: https://achieve.lausd.net/Page/5990		
FOSS CA: *Insects and Plants*: Investigation 2		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Planning and Carrying Out Investigations	**Interdependent Relationships in Ecosystems**	**Cause and Effect**
Investigation 2 Part 2 **Focus Question (done after step 13):** What do Brassica plants need to live and grow?	**Investigation 2 Part 2** **Video**: *How Plants Grow (*Step 13)	**Investigation 2 Part 3** **Focus Question (done after step 23):** What changes happen to Brassica plants as they grow?
NGSS Standard	**Benchmark Unit 3 Life Science** Plants and Animals in their Habitats	
2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants*	***NOT ADDRESSED*** Benchmark covers different habitats that students could compare, but does not include students making **observations** of plants and animals to compare the diversity of life in different habitats.	
The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete second grade NGSS standards can be found at: https://achieve.lausd.net/Page/5990		
FOSS CA: *Insects and Plants*: Investigations 2 and 5		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Developing and Using Models Develop a simple model based on evidence to represent a proposed object or tool. (2-LS2-2)	**Interdependent Relationships in Ecosystems** Plants depend on animals for pollination or to move their seeds around. (2-LS2-2)	**Structure and Function** The shape and stability of structures of natural and designed objects are related to their function(s). (2-LS2-2)
Investigation 5 Part 3 **Focus Question (Step 12):** How do butterflies and milkweed bugs eat and drink?	**Investigation 2 Part 3** **Cross-Pollinate the Brassica Plants (Step 15)**	**Investigation 5 Part 1** **Focus Question (done after step 10):** What are the structures of the butterfly larva?

Second Grade Life Science (cont'd)					
NGSS Standard			**Benchmark Unit 3 Life Science** Plants and Animals in their Habitats		
2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.			**Benchmark Essential Question** How do living things get what they need to survive?		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Planning and Carrying Out Investigations Make observations (firsthand or from media) to collect data which can be used to make Comparisons. (2-LS4-1)	**Biodiversity and Humans** There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)	**Patterns** Patterns in the natural and human designed world can be observed.	***NOT ADDRESSED***	**Whole Group Text:** • News About Scorpions p. 4 (Text for Close Reading) • All the Penguins p. 5 (Text for Close Reading) • The Coldest Place on Earth pp. 6-9 (Text for Close Reading) • The Deserts of Utah p. 14 (Text for Close Reading) • A City Park Habitat p. 16 (Text for Close Reading) • Habitats Around the World pp. 18-25 (Text for Close Reading) • The Monarch's Journey p. 29 (Text for Close Reading) • Worms to the Rescue pp. 28-29 (Read Aloud Handbook) • Fly Away, Ladybug pp. 32-33 (Read Aloud Handbook) • Keeping Warm pp. 34-35 (Read Aloud Handbook) **Small Group Text:** • Food in the Forest • In the Forest • Living in Joshua Tree • Polar Habitats	***NOT ADDRESSED***

Second Grade Life Science (cont'd)					
NGSS Standard			**Benchmark Unit 3 Life Science** Plants and Animals in their Habitats		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Planning and Carrying Out Investigations Make observations (firsthand or from media) to collect data which can be used to make Comparisons. (2-LS4-1)	**Biodiversity and Humans** There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)	**Patterns** Patterns in the natural and human designed world can be observed.	***NOT ADDRESSED***	**Content Across Disciplines Inquiry Projects:** (ADDITIONAL RESOURCES tab): Label a U.S. Map, make a Habitat Mural, Create a Zoo **Unit Opener Video:** Plants and Animals in their Habitats	***NOT ADDRESSED***

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete second grade NGSS standards can be found at: https://achieve.lausd.net/Page/5990

FOSS CA: *Insects and Plants* Investigations 3 and 5

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Planning and Carrying Out Investigations	**Biodiversity and Humans**	**Patterns**
Investigation 3 Part 2 **Focus Question (done after Step 9):** Are milkweed bugs' needs the same or different compared to other insects?	**Investigation 5 Part 3** **Focus Question (Steps 15 & 16)** How are all adult insects and same and different?	**Investigation 3 Part 3** **Content Chart Entries (Step 13)** What stages does the milkweed bug go through as it grows?

NGSS Standard	Benchmark Unit 3 Life Science Plants and Animals in their Habitats
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

Second Grade NGSS/Benchmark Alignment

Earth and Space Sciences

2- Earth and Space Sciences1 (2-ESS1) Earth's Place in the Universe
2- Earth Science2 (2-(ESS2) Earth's Systems
Engineering, Technology, and Applications of Science Engineering Design -1 (ETS-1) Engineering Design

Benchmark Unit 8 Earth and Space Sciences: Wind and Water Change Earth

NGSS Standard			Benchmark		
2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.			**Benchmark Essential Question** How do we react to changes in nature?		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Constructing Explanations and Designing Solutions Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (2-ESS1-1)	**ESS1.C: The History of Planet Earth** Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1)	**Stability and Change** Things may change slowly or rapidly. (2-ESS1-1)	***NOT ADDRESSED***	**Whole Group Text:** • Volcano! p.4 (Text for Close Reading) • I am Wind p.5 (Text for Close Reading) • Tornado! pp.6-9 (Text for Close Reading) • Water's Awesome Wonder pp.10-13 (Text for Close Reading) • The Big Blizzard p.14 (Text for Close Reading) • How a Mountain Changes p.16 (Text for Close Reading) • Earth's Changes pp.18-25 (Text for Close Reading) • My Beach p.26 (Text for Close Reading) • Beautiful sand Dunes p. 28 (Text for Close Reading)	***NOT ADDRESSED***

Second Grade Earth and Space Sciences (cont'd)					
NGSS Standard			**Benchmark Unit 8 Earth and Space Sciences: Wind and Water Change Earth**		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Constructing Explanations and Designing Solutions Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (2-ESS1-1)	**ESS1.C: The History of Planet Earth** Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1)	**Stability and Change** Things may change slowly or rapidly. (2-ESS1-1)	***NOT ADDRESSED***	• Fishing in the Desert p.29 (Text for Close Reading) • What Makes Wind (Mentor Read-Aloud) **Small Group Text:** • Earth's Surface • Erosion • Mountains • Rivers are Amazing • Twisters Water Goes Up! Water Comes Down **Unit Opener Video:** Wind and Water Change Earth **Content Across Disciplines Inquiry Projects:** (ADDITIONAL RESOURCES tab): Investigate a Natural Landmark Created by Erosion	***NOT ADDRESSED***

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete second grade NGSS standards can be found at: https://achieve.lausd.net/Page/5990

FOSS CA: *Pebbles, Sand, and Silt*: Investigations 1 and 2		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Constructing Explanations and Designing Solutions	**The History of Planet Earth**	**Stability and Change**
Investigation 2 Part 3 **Focus Question Step 20):** Is there an earth material smaller than sand? What did you do to find the silt?	**Investigation 2 Part 4** **Bottle Drawing Sheet (Step 20)**	**Investigation 1 Parts 1 & 2** **Focus Question** What happens when rocks are rubbed together **(done with Steps 8 & 9-Part 1)**, and washed in water (done with **Step 14-Part 2**)?

Second Grade Earth and Space Sciences (cont'd)					
NGSS Standard			**Benchmark Unit 8 Earth Science** Plants and Animals in their Habitats		
2-ESS2-1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.			**Benchmark Essential Question** How do we react to changes in nature?		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**	**Science and Engineering Practices**	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Constructing Explanations and Designing Solutions ▪ Compare multiple solutions to a problem. (2-ESS2-1)	**Earth Materials and Systems** ▪ Wind and water can change the shape of the land. (2-ESS2-1)	**Stability and Change** ▪ Things may change slowly or rapidly. ▪ (2-ESS2-1)	***NOT ADDRESSED***	**Whole Group Text:** • Earth's Changes (Extended Read 1 Week 2) pp. 22 & 23 (Text for Close Reading) • Surf Haven Debates Its Future pp.30-37 (Text for Close Reading) • Where's the Water? pp. 86-87 (Read Aloud Handbook) **Content Across Disciplines Inquiry Projects:** (ADDITIONAL RESOURCES tab): Make a List of Shoreline Dos and Don'ts	***NOT ADDRESSED***
The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete second grade NGSS standards can be found at: https://achieve.lausd.net/Page/5990					

FOSS CA: *Pebbles, Sand, and Silt*: Investigations 1 and 2		
Science and Engineering Practices	**Disciplinary Core Ideas**	**Crosscutting Concepts**
Constructing Explanations and Designing Solutions	**Earth Materials and Systems**	**Stability and Change**
Investigation 2 Part 2 **Focus Question (done with Steps 4 & 5):** How can rocks be separated by size?	**Investigation 2 Part 3** **Science Resource Book (Step 21)**: "The Story of Sand"	**Investigation 1 Parts 1 & 2** **Focus Question** What happens when rocks are rubbed together **(done** with **Steps 8 & 9-Part 1)**, and washed in water (done with **Step 14-Part 2)**?

Second Grade Earth and Space Sciences (cont'd)	
NGSS Standard	**Benchmark Unit 8 Earth Science** Plants and Animals in their Habitats
2-ESS2-2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.	***NOT ADDRESSED*** Multisensory observations, developing/using models, planning/carrying out investigations. More asking questions and child generated questions, analyzing data from various sources and experiences, creating arguments from evidence and experiences, connections to mathematics and computational thinking, constructing explanations.

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete second grade NGSS standards can be found at: https://achieve.lausd.net/Page/5990

FOSS CA: *Pebbles, Sand, and Silt*: Investigations 1 and 4

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
SEP Developing and Using Models Develop a model to represent patterns in the natural world.	**Plate Tectonics and Large-Scale System Interactions** Maps show where things are located. One can map the shapes and kinds of land and water in any area. (2-ESS2-2)	**Patterns** Patterns in the natural world can be observed. (2-ESS2-2), (2-ESS2-3)
Investigation 4 Part 1 Science Notebook Sheet, No. 14 "Soil Drawings" (Step 20)	**Benchmark Text** Where's the Water? pp. 86-87 (Read Aloud Handbook)	**Investigation 1 Part 3** **Focus Question (Step 5):** What are some of the ways that rocks can be sorted?

Second Grade Earth and Space Sciences (cont'd)	
NGSS Standard	**Benchmark Unit 8 Earth Science** Plants and Animals in their Habitats
2-ESS2-3 Obtain information to identify where water is found on Earth and that it can be solid or liquid	***NOT ADDRESSED*** Multisensory observations, developing/using models, planning/carrying out investigations. More asking questions and child generated questions, analyzing data from various sources and experiences, creating arguments from evidence and experiences, connections to mathematics and computational thinking, constructing explanations.

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete second grade NGSS standards can be found at: https://achieve.lausd.net/Page/5990

FOSS CA: *Pebbles, Sand and Silt*: Investigation 2, 3 and 4

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Obtaining, Evaluating, and Communicating Obtain information using various texts and other media that will be useful in answering a scientific question. (2-ESS2-3)	**The Roles of Water in the Earth's Surface Processes** Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form. (2-ESS2-3)	**Patterns** Patterns in the natural world can be observed. (2-ESS2-3)
Investigation 4 - Part 5 Fossils (Steps 1 and 2 – Video and Steps 3 and 4 – Science Resource Book	**Investigation 3 - Part 1** **Science Resource Book**: "Rocks Move" (Steps 7 and 8)	**Investigation 2 - Part 2** **Focus Question (done after of Step 4):** How can you sort rocks using squares the size of the squares on the different sized screens?

NGSS Standard	Benchmark Unit 8 Earth Science Plants and Animals in their Habitats
ETS 1.C – Optimizing the Design Solution Because there is always more than one possible solution to a problem, it is useful to compare and test designs.	***NOT ADDRESSED*** Benchmark does not provide students opportunities to optimize design solutions for a problem within this standard band.

Second Grade NGSS/Benchmark Alignment

Physical Science

NGSS Standard	Benchmark
2- **Physical Science1 (2-PS1) Matter and its Interactions**	 **Benchmark Unit 10 Physical Science: States of Matter**
2-PS1-1 *Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.*	**Benchmark Essential Question** How can something old become new?

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Planning and Carrying Out an Investigation Plan/conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. (2-PS1-1)	**Structure and Properties of Matter** Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. (2-PS1-1)	**Patterns** Patterns in the natural and human designed world can be observed. (2-PS1-1)	***NOT ADDRESSED***	**Whole Group Text:** Changing Matter pp.18-25 **Unit Opener Video:** States of Matter **Content Across Disciplines Inquiry Projects** (ADDITIONAL RESOURCES tab): Classify Solids and Liquids, Conduct a Gummy Bear Experiment	***NOT ADDRESSED***

Second 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 second grade NGSS standards can be found at: https://achieve.lausd.net/Page/5990

FOSS CA: *Balance and Motion* Investigation 1 and 2

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Planning and Carrying Out Investigations	**Structure and Properties of Matter**	**Patterns**
Investigation 1 Part 3 **Making Comparisons** (Steps 7 & 8)	**Investigation 2 Part 4** **Mobiles** (Step 2)	**Investigation 2 Part 1** **Focus Question (**Step 10): How many ways can you make a stable position? How do you know when it is a stable position?

NGSS Standard	Benchmark Unit 10 Physical Science States of Matter
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.	***NOT ADDRESSED***

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete second grade NGSS standards can be found at: https://achieve.lausd.net/Page/5990

FOSS CA: *Balance and Motion* Investigations 1, 5 and 6

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data Analyze data from tests of an object or tool to determine if it works as intended. (2-PS1-2)	**Structure and Properties of Matter** Different properties are suited to different purposes. (2-PS1-2)	**Cause and Effect** Simple tests can be designed to gather evidence to support or refute student ideas about causes. (2-PS1-2)
Investigation 3 Part 1 **Tops** (Steps 9 and 10)	**Investigation 5 Part 2** **Science Resource Book**: "Strings in Motion" (Steps 16-18)	**Investigation 6 Part 1** **Focus Question** (Step 11) What do magnets do when they come close together?

Second Grade Physical Science (cont'd)	
NGSS Standard	**Benchmark Unit 10 Physical Science States of Matter**
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.	***NOT ADDRESSED***

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete second grade NGSS standards can be found at: https://achieve.lausd.net/Page/5990

FOSS CA: *Balance and Motion* Investigations 2, 4 and 5

Constructing Explanations and Designing Solutions Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (2-PS1-3)	**Structure and Properties of Matter** A great variety of objects can be built up from a small set of pieces. (2-PS1-3)	**Energy and Matter** Objects may break into smaller pieces and be put together into larger pieces, or change shapes. (2-PS1-3)
Investigation 5 Part 1 **Focus Question (Step 13):** Where do sounds come from?	**Investigation 4 Part 1** **Focus Question (after Step 12):** How can you change how a wheel system rolls down a slope?	**Investigation 4 Part 3** **Make a Long Runway (Step 9)**

Second Grade Physical Science (cont'd)	
NGSS Standard	**Benchmark Unit 10 Physical Science** States of Matter
2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	***NOT ADDRESSED***

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete second grade NGSS standards can be found at: https://tinyurl.com/2ndGradeCANGSS

FOSS CA: *Balance and Motion* Investigation 4 and 5

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Engaging in Argument from Evidence Construct an argument with evidence to support a claim. (2-PS1-4)	**PS1.B: Chemical Reactions** Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not. (2-PS1-4)	**Cause and Effect** Events have causes that generate observable patterns. (2-PS1-4)
Investigation 2 Part 1 **Focus Question (After Step 7):** How do you know when something is balanced?	**Benchmark Text** Changing Matter pp.18-25	**Investigation 2 Part 2** Science Notebook Sheet, No. 3 "Predict Stable Positions" (Step 7)