AMPLIFY SCIENCE CORRELATION TO THE NEBRASKA COLLEGE AND CAREER READY STANDARDS FOR SCIENCE
2017
GRADES K-8

Grade K		
Standard	**Indicator**	**Where Taught**
SC.K.1 SC.K.1.1 Gather, analyze, and communicate evidence of forces and their interactions.	SC.K.1.1.A 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. 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.	[DCI, CCC] *Pushes and Pulls* unit: ● Lesson 6.3 ○ **Activity 1,** Instructional Guide ○ **Lesson Brief,** Digital Resources, "Assessment Guide" [DCI, Different strengths] *Pushes and Pulls* unit: ● Lesson 2.2 ○ **Lesson Brief,** Lesson Overview ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide and On-the-Fly Assessment ○ **Activity 4,** Instructional Guide ● **Printable Resources,** Print Materials (8.5" x 11"), Force Cards, pages 8–19 ● **Student book,** *Forces in Ball Games* ● Lesson 2.3, **Activity 1,** Instructional Guide, Critical Juncture Assessment [DCI, Different directions] *Pushes and Pulls* unit: ● Lesson 3.1 ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide ● Lesson 3.2 ○ **Lesson Brief,** Lesson Overview ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide and On-the-Fly Assessment ○ **Student book,** *Building with Forces* ● Lesson 3.3 ○ **Lesson Brief,** Lesson Overview ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide and Critical Juncture Assessment

		[DCI, Starting, stopping, and changing the motion] *Pushes and Pulls* unit: ● Lesson 1.2 ○ **Activity 4,** Instructional Guide ○ **Activity 1,** Instructional Guide, steps 7–13 ○ **Student book,** *Talking About Forces* ● Lesson 2.2 ○ **Activity 4,** Teacher Support tab (“Instructional Suggestion, Going Further: Forces and Speed”) ○ **Lesson Brief**, Digital Resources, “Chapter 2 Home Investigation: Making a Forces Kit copymaster” ● Lesson 3.3 ○ **Activity 3,** Teacher Support tab (“Instructional Suggestion, Going Further: Forces and Speed” and “Assessment, Assessment Opportunity: Assessing Student Understanding of Force and Speed”) ○ **Lesson Brief,** Digital Resources, “Chapter 3 Home Investigation 1: More Practice with a Forces Kit copymaster” ● Lesson 4.2 ○ **Activity 1,** Instructional Guide ○ **Student book** *Forces in Ball Games* ○ **Activity 2,** Instructional Guide [DCI, touching or colliding objects] *Pushes and Pulls* unit: ● Lesson 1.3 ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide ● Lesson 1.4, **Activity 3**, Instructional Guide (step 6), Teacher Support tab (“Rationale, Literacy Note: *Touch* Versus *Collide*”) ● Lesson 4.1 ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide ● Lesson 4.2 ○ **Lesson Brief,** Lesson Overview ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide ○ **Student book,** *Forces in Ball Games* ● Lesson 4.3 ○ **Activity 1,** Instructional Guide

		○ **Activity 2,** Instructional Guide (steps 3–7), and Critical Juncture Assessment [SEP, CCC] *Pushes and Pulls* unit: ● Lesson 2.1, **Activity 2,** Instructional Guide and On-the-Fly Assessment [SEP] *Needs of Plants and Animals* unit: ● Lesson 3.1, **Activity 2,** Instructional Guide, steps 3–7, and On-the-Fly Assessment
SC.K.1 SC.K.1.1 Gather, analyze, and communicate evidence of forces and their interactions.	SC.K.1.1.B 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. Assessment does not include friction as a mechanism for change in speed.	[SEP, DCI] *Pushes and Pulls* unit: ● Lesson 3.4, **Activity 2,** Instructional Guide, steps 4–7, and On-the-Fly Assessment ● Lesson 5.1, **Activity 4,** Instructional Guide, steps 1–6, and On-the-Fly Assessment [DCI, CCC] *Pushes and Pulls* unit: ● Lesson 6.3 ○ **Activity 1,** Instructional Guide ○ **Lesson Brief,** Digital Resources, Assessment Guide [DCI, Starting or stopping] *Pushes and Pulls* unit: ● Lesson 1.2 ○ **Activity 1,** Instructional Guide, steps 7–13 ○ **Activity 4,** Instructional Guide ○ **Student book**, *Talking About Forces* [DCI, Changing the speed of an object] *Pushes and Pulls* unit: ● Lesson 2.2 ○ **Activity 4,** Teacher Support tab (“Instructional Suggestion, Going Further: Forces and Speed”)

		○ **Lesson Brief,** Digital Resources, “Chapter 2 Home Investigation: Making a Forces Kit copymaster” ● Lesson 3.3 ○ **Activity 3,** Teacher Support tab (“Instructional Suggestion, Going Further: Forces and Speed”) ○ **Lesson Brief,** Digital Resources, “Chapter 3 Home Investigation 1: More Practice with a Forces Kit copymaster” ○ **Activity 3,** Teacher Support tab (“Assessment, Assessment Opportunity: Assessing Student Understanding of Force and Speed”) [DCI, Changing the direction of an object] *Pushes and Pulls* unit: ● Lesson 3.2 ○ **Lesson Brief,** Lesson Overview ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide and On-the-Fly Assessment ○ **Student book,** *Building with Forces* [DCI, CCC] *Pushes and Pulls* unit: ● Lesson 3.3 ○ **Lesson Brief,** Lesson Overview ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide and Critical Juncture Assessment [DCI] *Pushes and Pulls* unit: ● Lesson 4.2 ○ **Activity 1,** Instructional Guide ○ **Student book,** *Forces in Ball Games* ○ **Activity 2,** Instructional Guide
SC.K.7 Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment		

SC.K.7.2 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	SC.K.7.2.A Use observations to describe patterns of what plants and animals (including humans) need to survive.	[DCI, CCC, SEP] *Needs of Plants and Animals* unit: ● Lesson 1.4, ○ **Activity 3,** Instructional Guide, steps 3–11 ○ **Printable Resources,** Print Materials (8.5" x 11"), Animals Eating Station Cards, pages 21–30 ○ **Activity 4,** Instructional Guide and Teacher Support tab ("Background, Crosscutting Concept: What Is Meant by Patterns?" and "Background, Crosscutting Concept: Patterns Across This Unit") [DCI] *Needs of Plants and Animals* unit: ● Lesson 2.6, **Activity 1,** Instructional Guide, steps 5–9, and On-the-Fly Assessment [DCI] *Needs of Plants and Animals* unit: ● Ch. 3, Chapter Overview ● Lesson 3.1 ○ **Activity 2,** Instructional Guide, steps 3–8 ○ **Activity 3,** Instructional Guide and Possible Responses tab [DCI, SEP] *Needs of Plants and Animals* unit: ● Lesson 3.2, **Activity 1,** Instructional Guide, steps 4–9 [DCI] *Needs of Plants and Animals* unit: ● Lesson 3.3, **Activity 4,** Instructional Guide, steps 5–10, and On-the-Fly Assessment [DCI, SEP] *Needs of Plants and Animals* unit: ● Lesson 4.4 ○ **Activity 1,** Instructional Guide, steps 2–7 ○ **Lesson Brief,** Digital Resources, Assessment Guide, Rubrics 1 and 3 [CCC] *Needs of Plants and Animals* unit: ● Lesson 4.2 ○ **Activity 2,** Instructional Guide, steps 3–5, and On-the-Fly Assessment

		○ **Activity 3,** Instructional Guide, steps 2–6 ● **Printable Resources,** Print Materials (8.5" x 11"), Human Needs Cards, pages 83–92
SC.K.7.2 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	SC.K.7.2.B Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.	[DCI, SEP] *Needs of Plants and Animals* unit: ● Lesson 4.3 ○ **Activity 1,** Instructional Guide and On-the-Fly Assessment ○ **Activity 2**, Instructional Guide, steps 3–5 ○ **Activity 3,** Instructional Guide, steps 2, 4–5 [DCI] *Needs of Plants and Animals* unit: ● Lesson 3.4 ○ **Activity 3,** Instructional Guide, steps 4–5 ○ **Student book,** *Above and Below*, pages 9, 11 ● Lesson 4.2 ○ **Activity 3**, Instructional Guide, step 7 and Teacher Support tab ("Background, Science Note: About Meeting Needs While Protecting Land, Water, Air, and Other Living Things") ○ **Activity 1,** Instructional Guide, steps 6–8 and Teacher Support tab ("Instructional Suggestion, Going Further: Acting Out and Discussing the Effect of Human Activities on Monarch Habitats") ○ **Student book,** *Investigating Monarchs*, pages 12–19 [DCI, CCC] *Needs of Plants and Animals* unit: ● Lesson 4.4 ○ **Activity 1,** Instructional Guide, steps 2–4, 6 ○ **Lesson Brief,** Digital Resources, Assessment Guide, Rubrics 1 and 2 [SEP] *Needs of Plants and Animals* unit: ● Lesson 1.3, **Activity 3,** Instructional Guide, steps 5–7, and On-the-Fly Assessment [SEP] *Pushes and Pulls* unit:

		● Lesson 2.2, **Activity 2,** Instructional Guide, steps 2–8, and Teacher Support tab ("Background, Science Practices: About Engaging in Argument from Evidence and Rationale, Pedagogical Goals: Engaging in Argument from Evidence During Rugbal")
SC.K.7.2 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	SC.K.7.2.C Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.	[DCI] *Needs of Plants and Animals* unit: ● Lesson 1.5 ○ **Activity 1,** Instructional Guide ○ **Activity 3,** Instructional Guide and On-the-Fly Assessment ○ **Printable Resources,** Print Materials (8.5" x 11"), Animal Habitat Table Cards and Animals and Their Foods Cards, pages 44–58 ● Lesson 2.4 ○ **Lesson Brief,** Lesson Overview ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide ○ **Student book,** *A Plant in the Desert, pages 9–15* ● Lesson 4.3, **Activity 1,** Instructional Guide, steps 3–8, and On-the-Fly Assessment ● Lesson 2.7, **Activity 3,** Instructional Guide ● Lesson 3.4, **Activity 1,** Instructional Guide ● Lesson 4.1, **Activity 3,** Instructional Guide and On-the-Fly Assessment [DCI, CCC] *Needs of Plants and Animals*: ● Lesson 4.4 ○ **Activity 1,** Instructional Guide, steps 2–4, 6 ○ **Lesson Brief,** Digital Resources, Assessment Guide, Rubrics 1 and 2 [SEP] *Sunlight and Weather*: ● Lesson 2.1, **Activity 4,** Instructional Guide, steps 2–5, and On-the-Fly Assessment ● Lesson 4.1, **Activity 3,** Instructional Guide, steps 3–9, and On-the-Fly Assessment ● Lesson 5.6 ○ **Activity 1,** Instructional Guide, steps 6–7 ○ **Lesson Brief,** Digital Resources, Assessment Guide, Rubric 3

SC.K.7.2 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	SC.K.7.2.D Communicate solutions that will increase the positive impact of humans on the land, water, air, and/or other living things in the local environment.	[SEP, DCI] *Needs of Plants and Animals* unit: ● Lesson 4.3 ○ **Activity 1,** Instructional Guide, steps 5–8 ○ **Activity 2,** Instructional Guide, steps 3–5 ○ **Activity 3,** Instructional Guide, steps 2–5 ● Lesson 4.4 ○ **Activity 1,** Instructional Guide ○ **Lesson Brief,** Digital Resources, Assessment Guide [DCI] *Needs of Plants and Animals* unit: ● Lesson 4.2 ○ **Activity 3,** Instructional Guide, step 7 and Teacher Support tab ("Background, Science Note: About Meeting Needs While Protecting Land, Water, Air, and Other Living Things") ○ **Activity 1,** Instructional Guide, steps 6–8 and Teacher Support tab ("Instructional Suggestion, Going Further: Acting Out and Discussing the Effect of Human Activities on Monarch Habitats") ○ **Student book,** *Investigating Monarchs*, pages 12–19 [DCI] *Pushes and Pulls* unit: ● Lesson 5.1, **Activity 4,** Instructional Guide, steps 1–6, and On-the-Fly Assessment [CCC] *Sunlight and Weather* unit: ● Lesson 4.4, **Activity 1,** Instructional Guide, steps 2–9, and On-the-Fly Assessment
SC.K.12 Weather and Climate		
SC.K.12.3 Gather, analyze, and communicate evidence of weather and climate.	SC.K.12.3.A Use and share observations of local weather conditions to describe patterns over time. Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.	[DCI] *Sunlight and Weather* unit: ● Lesson 1.3 ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide ● Lesson 1.1 ○ **Activity 2,** Instructional Guide

		○ **Student book,** *What is the Weather Like Today?* ○ **Activity 3,** Instructional Guide ● Lesson 1.2 ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide [SEP, DCI] *Sunlight and Weather* unit: ● Lesson 1.4 ○ **Activity 1,** Instructional Guide, steps 5–10 and Teacher Support tab ("Assessment, Assessment Opportunity: Assessing Students' Understanding of Types of Weather") ○ **Lesson Brief,** Digital Resources, "Playground Weather Calendars and Playground Weather Graphs (Completed)" ○ **Activity 2,** Instructional Guide, steps 1–8 ○ **Activity 3,** Instructional Guide, steps 2–5 [DCI] *Sunlight and Weather* unit: ● Lesson 5.1 ○ **Activity 1,** Instructional Guide, steps 6–7 and Teacher Support tab ("Assessment, Assessment Opportunity: Assessing Students' Understanding of Weather and Why We Measure It") ○ **Student book,** *Tornado! Predicting Severe Weather*, pages 6–9 [SEP] *Sunlight and Weather* unit: ● Lesson 3.2 ○ **Lesson Brief,** Overview ○ **Activity 1,** Instructional Guide, steps 5–6 ○ **Activity 2,** Instructional Guide, steps 1–8 [SEP, CCC] *Sunlight and Weather* unit: ● Lesson 3.2, **Activity 3,** Instructional Guide, steps 4–8, and On-the-Fly Assessment, and Teacher Support tab ("Instructional Suggestion, Student Thinking: Looking for Patterns") [CCC] *Needs of Plants and Animals* unit: ● Lesson 4.2 ○ **Activity 2,** Instructional Guide, steps 3–5, and On-the-Fly Assessment

		○ **Activity 3,** Instructional Guide, steps 2–6 ○ **Printable Resources,** Print Materials (8.5" x 11"), Human Needs Cards, pages 83–92
SC.K.12.3 Gather, analyze, and communicate evidence of weather and climate.	SC.K.12.3.B Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.	[DCI] *Sunlight and Weather* unit: ● Lesson 5.1 ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide ○ **Student book**, *Tornado! Predicting Severe Weather* ● Lesson 5.3 ○ **Activity 1,** Instructional Guide ○ **Student book**, *Tornado! Predicting Severe Weather* ● Lesson 5.5 ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide and On-the-Fly Assessment ○ **Activity 3,** Instructional Guide ○ **Lesson Brief,** Digital Resources, "Severe Weather Preparation Poster" [SEP] *Sunlight and Weather* unit: ● Lesson 3.1 ○ **Activity 1,** Instructional Guide, step 2 ○ **Activity 2,** Instructional Guide ○ **Student book,** *Getting Warm in the Sunlight* ● Lesson 5.6 ○ **Activity 1,** Instructional Guide ○ **Lesson Brief,** Digital Resources, "Assessment Guide" [SEP, DCI] *Pushes and Pulls* unit: ● Lesson 2.1, **Activity: Identifying New Design Goals,** Instructional Guide, steps 4–11 and Teacher Support tab ("Rationale, Pedagogical Goals: Engaging Kindergarteners in Posing Questions and Assessment, Assessment Opportunity: Assessing Students' Ability to Ask Questions Based on Observations")

		[DCI] *Pushes and Pulls* unit: ● Lesson 2.3, **Activity 4**, Instructional Guide, step 4 ● Lesson 5.1, **Activity 4,** Instructional Guide, steps 1–6, and On-the-Fly Assessment
SC.K.12.3 Gather, analyze, and communicate evidence of weather and climate.	SC.K.12.3.C Make observations to determine the effect of sunlight on Earth's surface.	[SEP, DCI] *Sunlight and Weather* unit: ● Lesson 3.1 ○ **Activity 3,** Instructional Guide, steps 3–6 ○ **Activity 4,** Instructional Guide ○ **Investigation Notebook**, page 7 ● Lesson 4.1 ○ **Activity 3,** Instructional Guide, steps 1–4, and On-the-Fly Assessment ○ **Activity 4**, Instructional Guide ○ **Lesson Brief,** Digital Resources, Assessment Guide ○ **Investigation Notebook**, pages 8–9 ● Lesson 2.2 ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide ○ **Investigation Notebook**, page 6 ● Lesson 2.3, **Activity 2,** Instructional Guide [DCI] *Sunlight and Weather* unit: ● Lesson 2.4 ○ **Lesson Brief,** Lesson Overview ○ **Activity 1,** Instructional Guide, steps 5–9, and On-the-Fly Assessment ○ **Activity 2,** Instructional Guide and Critical Juncture Assessment ○ **Activity 4,** Instructional Guide, steps 1–9 ● Lesson 2.1 ○ **Lesson Brief,** Lesson Overview ○ **Activity 2,** Instructional Guide ○ **Activity 4,** Instructional Guide [DCI, CCC] *Sunlight and Weather* unit: ● Lesson 5.6 ○ **Activity 1,** Instructional Guide, steps 1–5 ○ **Lesson Brief,** Digital Resources, “Assessment Guide”

SC.K.12.3 Gather, analyze, and communicate evidence of weather and climate.	SC.K.12.3.D Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	[SEP, DCI] *Sunlight and Weather* unit: ● Lesson 4.4, **Activity 1,** Teacher Support tab ("Instructional Suggestion, Providing More Experience: Designing Shade Structures") [CCC, DCI] *Sunlight and Weather* unit: ● Lesson 4.4 ○ **Activity 1,** Instructional Guide and On-the-Fly Assessment ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide [DCI] *Sunlight and Weather* unit: ● Lesson 2.2 ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide ● Lesson 2.3, **Activity 2,** Instructional Guide and On-the-Fly Assessment ● Lesson 2.4 ○ **Lesson Brief,** Lesson Overview ○ **Activity 1,** Instructional Guide, steps 5–9 and On-the-Fly Assessment ○ **Activity 2,** Instructional Guide and Critical Juncture Assessment ○ **Activity 4,** Instructional Guide, steps 1–9 [SEP] *Pushes and Pulls* unit: ● Lesson 1.4 ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide ● Lesson 2.3, **Activity 1,** Instructional Guide, steps 4–7 ● Lesson 4.3, **Activity 1,** Instructional Guide ● Lesson 5.1, **Activity 4,** Instructional Guide, steps 1–6, and On-the-Fly Assessment
SC.K.12.3 Gather, analyze, and communicate evidence of weather and climate.	SC.K.12.3.E 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.	[SEP, DCI] *Pushes and Pulls* unit: ● Lesson 2.1, **Activity: Identifying New Design Goals,** Instructional Guide, steps 6–7 and Teacher Support tab ("Rationale, Pedagogical Goals: Engaging Kindergarteners in Posing Questions" and "Assessment, Assessment

		Opportunity: Assessing Students' Ability to Ask Questions Based on Observations") ● Lesson 3.1, **Activity: Setting the Context with the Pinball Video**, Instructional Guide, steps 2–8 [DCI] *Pushes and Pulls* unit: ● Lesson 4.1, **Activity: Framing the Chapter,** Instructional Guide, steps 2–10 ● Lesson 1.1, **Activity 1,** Instructional Guide, steps 2–3 ● Lesson 1.4, **Activity 1,** Instructional Guide, steps 2–5 ● Lesson 1.5, **Activity 1,** Instructional Guide ● Lesson 2.3, **Activity 4,** Instructional Guide, steps 4, 14 ● Lesson 3.4, **Activity 4,** Instructional Guide, steps 4–5 ● Lesson 5.1, **Activity 2,** Instructional Guide, step 1–5 ● Lesson 5.1, **Activity 4,** Instructional Guide, steps 1–6, and On-the-Fly Assessment
Grade 1		
Standard	**Indicator**	**Where Taught**
SC.1.2 Waves: Light and Sound		
SC.1.2.1 Gather, analyze, and communicate evidence of light and sound waves.	SC.1.2.1.A Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	[SEP, DCI, CCC] *Light and Sound* unit: ● Lesson 4.1 ○ **Activity 3**, Instructional Guide, steps 1–12 ○ **Investigation Notebook**, page 24 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 4.3, **Activity 1**, Instructional Guide, steps 4–11, 13, and Teacher Support tab ("Instructional Suggestion, and Going Further: Sound Can Cause Vibrations") [SEP, DCI] *Light and Sound* unit: ● Lesson 4.2 ○ **Activity 2**, Instructional Guide and On-the-Fly Assessment ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ○ **Investigation Notebook**, page 25 [SEP] *Light and Sound* unit:

		● Lesson 4.4 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide [DCI] *Light and Sound* unit: ● Lesson 4.2 ○ **Activity 4,** Instructional Guide ○ **Student book**, *What Vibrates?* [DCI, CCC] *Light and Sound* unit: ● Lesson 4.3 ○ **Activity 3**, Instructional Guide and Teacher Support tab ("Background, Literacy Note: Using Explanation Language Frames to Write") ○ **Activity 4**, Instructional Guide and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "*I Hear a Sound. What Vibrates?* Mini-Book copymaster"
SC.1.2.1 Gather, analyze, and communicate evidence of light and sound waves.	SC.1.2.1.B Make observations to construct an evidence-based account that objects can be seen only when illuminated.	[DCI, SEP] *Light and Sound* unit: ● Lesson 1.2 ○ **Activity 2**, Instructional Guide ○ **Activity: Observing a Dark Place**, Instructional Guide, Cave and Flashlight video ○ **Activity 3**, Instructional Guide ○ **Student book**, *Can You See in the Dark?* ○ **Activity 4**, Instructional Guide [DCI, SEP, CCC] *Light and Sound* unit: ● Lesson 1.5 ○ **Activity 1**, Instructional Guide, steps 5–10 and Critical Juncture Assessment ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Investigation Notebook**, page 6 ○ **Activity 3**, Instructional Guide, steps 3–12 and Teacher Support tab ("Rationale, Literacy Note: Explanation Language Frames") [DCI]

		Light and Sound unit: Lesson 1.3 ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide [CCC] *Light and Sound*: ● Lesson 4.3, **Activity 1**, Instructional Guide, steps 4–11 ● Lesson 4.1 ○ **Activity 3**, Instructional Guide, steps 1–12 ○ **Investigation Notebook**, page 24 ○ **Lesson Brief**, Digital Resources, Assessment Guide, Rubric 2 [SEP] *Spinning Earth* unit: ● Ch. 5, Lesson 5.3 ○ **Activity 1**, Instructional Guide ○ **Lesson Brief**, Digital Resources, Assessment Guide ○ **Student book**, *What Spins?*, pages 18–23
SC.1.2.1 Gather, analyze, and communicate evidence of light and sound waves.	SC.1.2.1.C Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light. Assessment does not include the speed of light	[DCI, SEP] *Light and Sound* unit: ● Lesson 3.1 ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Investigation Notebook**, page 16 ○ **Activity 3**, Instructional Guide [DCI, CCC] *Light and Sound* unit: ● Lesson 3.2, **Activity 4**, Instructional Guide [DCI] *Light and Sound* unit: ● Lesson 3.2 ○ **Activity 1**, Instructional Guide ○ **Student book**, *Let's Test!*, pages 6–11 ● Lesson 3.3 ○ **Activity 3**, Instructional Guide ○ **Student book**, *Engineering with Light and Sound*, pages 13–21 ● Lesson 3.4 ○ **Activity 1**, Instructional Guide

		○ **Activity 2**, Instructional Guide, Possible Responses tab, and Critical Juncture Assessment ○ **Activity 3**, Instructional Guide ● Lesson 3.5, **Activity 2**, Instructional Guide ● Lesson 2.3, **Activity 2**, Instructional Guide, steps 3–4, 6, On-the-Fly Assessment, and Teacher Support tab ("Instructional Suggestion, Going Further: Mirrors and Additional Blocking and Reflection Activities") ● Lesson 4.1 ○ **Activity 3**, Instructional Guide, steps 1–12 ○ **Investigation Notebook**, page 24 ○ **Lesson Brief**, Digital Resources, "Assessment Guide"
SC.1.2.1 Gather, analyze, and communicate evidence of light and sound waves.	SC.1.2.1.D Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance. Assessment does not include technological details for how communication devices work.	[DCI] *Light and Sound* unit: Ch. 4, Lesson 4.5 ○ **Activity 3**, Instructional Guide, step 10 and Teacher Support tab ("Instructional Suggestion, Going Further: Using Light and Sound to Communicate Over Long Distances") ○ **Student book**, *Engineering with Light and Sound*, pages 8, 10, 23, 27, 29 ○ **Activity 4**, Teacher Support tab ("Assessment, Assessment Opportunity: Students' Understanding of Communicating Over Long Distances") [SEP] *Light and Sound* unit: ● Lesson 1.1 ○ **Lesson Brief**, Digital Resources, "Puppet Scene Design Goals chart" ○ **Activity 2,** Instructional Guide ● Lesson 2.4 ○ **Activity 1**, Instructional Guide, steps 2–7 ○ **Activity 2**, Instructional Guide ● Lesson 3.4 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ● Lesson 3.5, **Activity 2**, Instructional Guide ● Lesson 4.1, **Lesson Brief**, Digital Resources, "Sound Sources Design Goals chart" ● Lesson 4.4 ○ **Activity 2**, Instructional Guide, steps 5–6 ○ **Activity 3**, Instructional Guide ○ **Investigation Notebook**, page 26 ● Lesson 4.6 ○ **Activity 1**, Instructional Guide, step 8

		○ **Lesson Brief**, Digital Resources, “Assessment Guide,” Rubric 3
SC.1.6 Structure, Function, and Information Processing		
SC.1.6.2 Gather, analyze, and communicate evidence to show the relationship between structure and function in living things.	SC.1.6.2.A 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.	[SEP, CCC, DCI] *Animal and Plant Defenses* unit: ● Lesson 2.8 ○ **Activity 1**, Instructional Guide ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Investigation Notebook**, pages 8–9 [DCI, CCC] *Animal and Plant Defenses* unit: ● Lesson 1.3 ○ **Lesson Brief,** Lesson Overview ○ **Activity 1**, Instructional Guide and Teacher Support tab (“Rationale, Pedagogical Goals: Structure-Function and Explanation Language Frames”) ○ **Student book**, *Tortoise Parts* ○ **Activity: Observing Animal and Plant Structures**, Instructional Guide and Teacher Support tab (“Instructional Suggestion, Going Further: Other Plant Structures”) ○ **Activity: Observing Animal and Plant Structures**, Sea Turtle Breathing video ○ **Activity: Observing Animal and Plant Structures**, Elephants Drinking video ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, On-the-Fly Assessment, and Teacher Support tab (“Background, Crosscutting Concept: Structure and Function Across This Unit”) ○ **Student book**, *Spikes, Spines, and Shells* [DCI, CCC]

		Animal and Plant Defenses unit: ● Lesson 1.5 ○ **Activity: Gathering Evidence About Sea Turtle Structures**, Instructional Guide, Sea Turtle Breathing video, Sea Turtle Eating video, and Sea Turtle and Sharks video ○ **Activity 1**, Instructional Guide, steps 3–6 and Critical Juncture Assessment ○ **Activity 2**, Instructional Guide ● Lesson 2.7, **Activity 1**, Instructional Guide, steps 4–12, and Critical Juncture Assessment ● Lesson 3.3, **Activity 2**, Instructional Guide, steps 7–11, Possible Responses tab, and Critical Juncture Assessment [Animals capture and respond to different kinds of input] [DCI] *Animal and Plant Defenses* unit: ● Lesson 2.1, **Activity: Observing Animals Eating**, Instructional Guide, steps 8–13 ● Lesson 2.2, **Activity 4**, Instructional Guide, step 8 ● Lesson 2.6 ○ **Activity 1**, Instructional Guide, steps 7–8, 10 ○ **Student book,** *Spikes, Spines and Shells,* pages 6–15 ● Lesson 3.5 ○ **Activity: Videos of Offspring Signaling**, Instructional Guide, steps 5–12, Bird Signaling video and Wolf Signaling video ○ **Activity 1**, Instructional Guide ○ **Student book,** *Parents and Offspring* ○ **Activity 2**, Instructional Guide and Teacher Support tab (“Assessment, Assessment Opportunity: Students’ Understanding of Animal Responses to External Inputs”) [Plants also respond to some kinds of input] [DCI] *Animal and Plant Defenses* unit: ● Lesson 3.4, **Activity: Videos of Young Offspring**, Instructional Guide, steps 6, 10, Plant Offspring video, and Teacher Support tab (“Background, Science Note: Plants Grow Toward the Light” and “Instructional Suggestion, Going Further: Investigating Plants’ Responses to External Inputs”)

SC.1.6.2 Gather, analyze, and communicate evidence to show the relationship between structure and function in living things.	SC.1.6.2.B 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.	[SEP, DCI, CCC] *Animal and Plant Defenses* unit: ● Lesson 2.8 ○ **Activity 1**, Instructional Guide, step 10 ○ **Activity 2**, Instructional Guide, and Teacher Support tab ("Background, Science and Engineering Practices: Models and Prototypes," "Rationale, Science Practices: Using Evidence to Develop Models to Represent an Object," and "Background, Pedagogical Goals: Developing Models") ○ **Investigation Notebook**, pages 8–9 ○ **Activity 3**, Instructional Guide [SEP, DCI] *Light and Sound* unit: ● Lesson 3.4 ○ **Activity 2**, Instructional Guide ○ **Investigation Notebook**, pages 18–19 [SEP, DCI, CCC] *Animal and Plant Defenses* unit: ● Lesson 4.2, **Activity 2**, Instructional Guide and On-the-Fly Assessment [SEP, CCC] *Animal and Plant Defenses* unit: ● Lesson 4.4 ○ **Activity 1**, Instructional Guide, steps 6–7 ○ **Lesson Brief**, Digital Resources, "Assessment Guide," Rubric 3 [SEP] *Animal and Plant Defenses* unit: ● Lesson 4.1 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, and On-the-Fly Assessment ○ **Student book**, *Frog Models* [DCI] *Light and Sound* unit: ● Lesson 4.6

		○ **Activity 1**, Instructional Guide, step 8 ○ **Lesson Brief**, Digital Resources, "Assessment Guide," Rubric 3
SC.1.6.2 Gather, analyze, and communicate evidence to show the relationship between structure and function in living things.	SC.1.6.2.C Read texts and use media to determine patterns in a behavior of parents and offspring that help offspring survive.	[SEP, DCI] *Animal and Plant Defenses* unit: ● Lesson 3.2 ○ **Activity 1**, Instructional Guide ○ **Activity 3,** Instructional Guide and On-the-Fly Assessment ○ **Printable Resources**, Print Materials (8.5" x 11"), "Parent and Offspring Cards," pages 36–39 ○ **Student book,** *Parents and Offspring* [SEP, DCI, CCC] *Animal and Plant Defenses* unit: ● Lesson 3.3 ○ **Activity: Video of Parent and Offspring Defenses**, Instructional Guide, step 5, and Iguana and Hawk video ○ **Activity 2**, Instructional Guide, Possible Responses tab, and Critical Juncture Assessment [DCI] *Animal and Plant Defenses* unit: ● Lesson 3.2 ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ● **Printable Resources**, Print Materials (8.5" x 11"), Parent and Offspring Cards ● Lesson 3.4 ○ **Lesson Brief,** Lesson Overview ○ **Activity 1**, Instructional Guide, steps 3–10 ○ **Student book,** *Parents and Offspring* ○ **Activity 2**, Instructional Guide ○ **Activity: Videos of Young Offspring**, Instructional Guide, Young Fish Offspring video, Young Sea Turtles video, and Plant Offspring video ● Lesson 3.5, **Activity: Videos of Offspring Signals**, Instructional Guide, Bird Signaling video, and Wolf Signaling video [SEP, CCC]

		Spinning Earth unit: ● Lesson 5.3 ○ **Activity 1**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ○ **Student book,** *What Spins?*, pages 18–23 [CCC] *Light and Sound* unit: ● Lesson 4.2, **Activity 3**, Instructional Guide and On-the-Fly Assessment
SC.1.6.2 Gather, analyze, and communicate evidence to show the relationship between structure and function in living things.	SC.1.6.2.D Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.	[DCI] *Animal and Plant Defenses* unit: ● Lesson 3.1 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ● **Printable Resources**, Print Materials (8.5" x 11"), Parent and Offspring Cards, pages 36–39 ● **Activity 4**, Instructional Guide, steps 5–9 and Possible Responses tab ● Lesson 3.2 ○ **Activity 1**, Instructional Guide ○ **Student book,** *Parents and Offspring* ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ● **Printable Resources**, Print Materials (8.5" x 11"), Parent and Offspring Cards, pages 36–39 ● Lesson 3.3 ○ **Activity: Parent and Offspring Defenses video**, Instructional Guide, steps 5–6, 9–10, and Iguana and Hawk video ○ **Activity 1**, Instructional Guide ○ **Activity 2**, Instructional Guide, Possible Responses tab, and Critical Juncture Assessment [SEP, CCC] *Spinning Earth* unit: ● Lesson 5.3 ○ **Activity 1**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ○ **Student book,** *What Spins?*, pages 18–23 [CCC] *Light and Sound* unit: ● Lesson 4.2, **Activity 3**, Instructional Guide and On-the-Fly Assessment

SC.1.11 Space Systems: Patterns and Cycles		
SC.1.11.3 Gather, analyze, and communicate evidence of patterns and cycles of space systems.	SC.1.11.3.A Use observations of the sun, moon, and stars to describe patterns that can be predicted. Assessment of star patterns is limited to stars being seen at night and not during the day.	[SEP, DCI, CCC] *Spinning Earth* unit: ● Lesson 5.3 ● **Activity 1**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ○ **Student book,** *What Spins?*, pages 18–23 [Sun] [DCI, SEP] *Spinning Earth* unit: ● Lesson 3.3 ○ **Lesson Brief**, Digital Resources, "Sky Mural (Completed)" ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide ○ **Activity 5**, Instructional Guide ○ **Investigation Notebook**, pages 16–17 ● Lesson 3.4, **Activity 1**, Instructional Guide ● Lesson 4.1 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide ○ **Activity 5**, Instructional Guide ○ **Investigation Notebook**, pages 19–20 [DCI, SEP, CCC] *Spinning Earth* unit: ● Lesson 4.2 ○ **Activity 1** Instructional Guide ○ **Activity 4**, Instructional Guide ○ **Investigation Notebook**, page 21

		[DCI, CCC] *Spinning Earth* unit: ● Lesson 3.1, **Activity: Observing the Sunset**, Instructional Guide, and Sunset video [Moon] [DCI, CCC] *Spinning Earth* unit: ● Lesson 3.5 ○ **Activity 3**, Instructional Guide, steps 5–10 ○ **Student book**, *Patterns of Earth and Space*, pages 22–25 ● Lesson 3.1 ○ **Activity 3**, Instructional Guide, step 6, and Teacher Support tab ("Instructional Suggestion, Providing More Experience: Home Investigation") ○ **Lesson Brief**, Digital Resources, "Optional: Chapter 3 Home Investigation: Nighttime Sky Observations copymaster" [Stars] [DCI, CCC] *Spinning Earth* unit: ● **Student book**, *Patterns of Earth and Space*, pages 26–31 ● Lesson 2.2, **Activity 4**, Instructional Guide and On-the-Fly Assessment ● Lesson 3.6 ○ **Activity 1**, Instructional Guide, steps 4–10 ○ **Activity 2**, Instructional Guide and Critical Juncture Assessment ● Lesson 4.4 ○ **Activity 4**, Instructional Guide ○ **Activity 5**, Instructional Guide and Critical Juncture Assessment ● Lesson 3.1 ○ **Activity 3**, Instructional Guide, step 6 and Teacher Support tab ("Instructional Suggestion, Providing More Experience: Home Investigation") ○ **Lesson Brief**, Digital Resources, "Optional: Chapter 3 Home Investigation: Nighttime Sky Observations copymaster"

SC.1.11.3 Gather, analyze, and communicate evidence of patterns and cycles of space systems.	SC.1.11.3.B Make observations at different times of the year to relate the amount of daylight to the time of year. Assessment is limited to relative amounts of daylight, not quantifying the hours or time of daylight.	[SEP, DCI, CCC] *Spinning Earth* unit: ● Lesson 5.2 ○ **Activity 1**, Instructional Guide, steps 3–9 and On-the-Fly Assessment ○ **Activity 2**, Instructional Guide ○ **Student book**, *Patterns of Earth and Space*, pages 14–17 [DCI, CCC] *Spinning Earth* unit: ● Lesson 5.1 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, Possible Responses tab, and Teacher Support tab ("Assessment, Assessment Opportunity: Observing, Describing, and Predicting Seasonal Patterns of Sunrise and Sunset") ○ **Activity 4**, Instructional Guide ○ **Investigation Notebook**, page 22 ○ **Student book**, *A Walk Through the Seasons* ● Lesson 5.2, **Activity 3**, Instructional Guide, step 3 [SEP] *Spinning Earth* unit: ● Lesson 3.3 ○ **Lesson Brief**, Digital Resources, "Sky Mural (Completed)" ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide ○ **Activity 5**, Instructional Guide ○ **Investigation Notebook**, pages 16–17 ● Lesson 3.4, **Activity 1**, Instructional Guide ● Lesson 4.1 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide ○ **Activity 5**, Instructional Guide ○ **Investigation Notebook**, pages 19–20 [SEP, CCC] *Spinning Earth* unit: ● Lesson 4.2 ○ **Activity 1**, Instructional Guide ○ **Activity 4**, Instructional Guide

		○ **Investigation Notebook**, page 21 ● Lesson 5.3 ○ **Activity 1**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide," Rubric 2 ○ **Student book**, *What Spins?*, pages 18–23 [SEP] *Light and Sound* unit: ● Lesson 4.1 ○ **Activity 3**, Instructional Guide, steps 1–12 ○ **Investigation Notebook**, page 24 ○ **Lesson Brief**, Digital Resources, "Assessment Guide"
Grade 2		
Standard	**Indicator**	**Where Taught**
SC.2.3 Structure and Properties of Matter		
SC.2.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.	SC.2.3.1.A Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	[DCI] [Solids and liquids] *Properties of Materials* unit: ● Lesson 2.1 ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide, steps 1–4 ○ **Student book**, *Can You Change It Back?* ● Lesson 2.2 ○ **Activity 3**, Instructional Guide, Sorting Tool: 2.2 Before and After ○ **Activity 4,** Instructional Guide, steps 1–4, Possible Responses tab, and Critical Juncture Assessment [Properties of matter] *Properties of Materials* unit: ● Lesson 1.2 ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide, steps 4–7 ○ **Student book**, *What If Rain Boots Were Made of Paper?* ● Lesson 1.3, **Activity 1,** Instructional Guide ● Lesson 1.5 ○ **Activity 3,** Instructional Guide and On-the-Fly Assessment ○ **Investigation Notebook**, page 12

		○ Ch. 1, Lesson 1.9, **Activity 4,** Instructional Guide, steps 3–7, Possible Responses tab, and Critical Juncture Assessment ● Lesson 4.3, **Activity 2**, Instructional Guide and Teacher Support tab ("Background, Science Note: About Describing and Classifying Matter by its Observable Properties"), and Sorting Tool: 4.3 Ingredient Properties 1–2 [SEP] *Plant and Animal Relationships* unit: ● Lesson 4.2 ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ● Lesson 4.3 ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide and On-the-Fly Assessment ○ **Activity 4,** Instructional Guide and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Assessment Guide," Rubric 1 [CCC] *Changing Landforms* unit: ● Lesson 1.3, **Activity 2,** Instructional Guide and Possible Responses tab ● Lesson 1.4 ○ **Activity 2,** Teacher Support tab ("Rationale, Pedagogical Goals: Understanding the Nature of Science") ○ **Activity 3**, Instructional Guide, Possible Responses tab, and Teacher Support tab ("Background, Crosscutting Concept: What Is Meant by Patterns?" and "Rationale, Pedagogical Goals: Observing Patterns in Sand") ○ **Student book**, *Gary's Sand Journal* ● Lesson 1.5 ○ **Activity 1,** Instructional Guide, steps 4–7 ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Activity 3,** Instructional Guide, steps 1–5, On-the-Fly Assessment ○ **Investigation Notebook**, pages 20–23 ● Lesson 2.1, **Activity 3,** Instructional Guide, steps 2–9, Possible Responses tab, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Patterns in the Natural World") *Properties of Materials* unit:

		● Lesson 1.3, **Activity 3,** Instructional Guide, steps 13–14 and Teacher Support tab ("Background, Crosscutting Concept: What Is Meant by Patterns?" and "Background, Crosscutting Concept: Patterns Across This Unit") ● Lesson 2.2, **Activity 2,** Instructional Guide, steps 4–8
SC.2.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.	SC.2.3.1.B Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. Assessment of quantitative measurements is limited to length and weight.	[DCI] *Properties of Materials* unit: ● Lesson 1.2 ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide, steps 4–7 ○ **Student book,** *What If Rain Boots Were Made of Paper?* ● Lesson 1.3, **Activity 2,** Instructional Guide, steps 5–7 [SEP, DCI] *Properties of Materials* unit: ● Ch. 1, Lesson 1.6 ○ **Activity 2,** Instructional Guide and On-the-Fly Assessment ○ **Activity 3,** Instructional Guide and Teacher Support tab ("Rationale, Science Practices: Debriefing Test Results, Graphing Tool: 1.6 Sticky Test Results") ● Lesson 2.3, **Activity 1,** Instructional Guide, steps 5–9 and Graphing Tool: 2.3 Cornstarch Test Results [CCC] *Properties of Materials* unit: ● Lesson 2.3 ○ **Activity 3,** Instructional Guide and Teacher Support tab ("Background, Crosscutting Concept: Cause and Effect Across This Unit" and "Background, Science Note: About Cause and Effect") ○ **Activity 4,** Instructional Guide and Possible Responses tab ○ **Activity 5,** Instructional Guide and On-the-Fly Assessment [SEP, DCI] *Properties of Materials* unit: ● Lesson 3.3, **Activity 2,** Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and Graphing Tool: 3.3 Strength Test Results [CCC] *Properties of Materials* unit: ● Lesson 4.1

		○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide and On-the-Fly Assessment [DCI] *Properties of Materials* unit: ● Lesson 4.1, **Activity 2,** Instructional Guide, step 2 and On-the-Fly Assessment
SC.2.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.	SC.2.3.1.C Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	[SEP, DCI] *Properties of Materials* unit: ● Lesson 1.6 ○ **Activity 2,** Instructional Guide and On-the-Fly Assessment ○ **Activity 3,** Instructional Guide, Teacher Support tab ("Rationale, Science Practices: Debriefing Test Results"), and Graphing Tool: 1.6 Sticky Test Results [DCI] *Properties of Materials* unit: ● Lesson 1.9, **Activity 4**, Instructional Guide ● Lesson 2.2, **Activity 2**, Instructional Guide [DCI, SEP] *Properties of Materials* unit: ● Lesson 3.1 ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide ○ **Student book**, *Jess Makes Hair Gel* [DCI] *Properties of Materials* unit: ● Lesson 3.2 ○ **Activity 2,** Instructional Guide and Possible Responses tab ○ **Activity 3,** Instructional Guide [DCI, SEP] *Properties of Materials* unit: ● Lesson 3.3 ○ **Activity 1,** Instructional Guide, steps 3–7 ○ **Activity 2,** Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and Graphing Tool: 3.3 Strength Test Results

		[DCI] *Properties of Materials* unit: ● Lesson 3.5, **Activity 2,** Instructional Guide ● Lesson 4.1 ○ **Activity 1,** Instructional Guide, steps 3–7 and Possible Responses tab ○ **Activity 2,** Instructional Guide and On-the-Fly Assessment
SC.2.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.	SC.2.3.1.D 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.	[DCI, CCC] [Pieces make up objects] *Properties of Materials* unit: ● Lesson 2.1 ○ **Activity 4,** Instructional Guide, step 5 and Teacher Support tab ("Background, Science Note: Smaller Objects Can Be Combined to Make Bigger Objects," "Assessment, Assessment Opportunity: Student Understanding of Building Objects from Small Sets of Pieces," and "Instructional Suggestion, Going Further: Designing with Small Objects") ○ **Student book**, *Can You Change It Back?*, pages 22–23 ● Lesson 1.7, **Activity 3,** Teacher Support tab ("Background, Crosscutting Concept: Energy and Matter Across This Unit") ● Lesson 1.9, **Activity 1,** Teacher Support tab ("Instructional Suggestion, Providing More Experience: Using Manipulatives to Make Combinations of Five") ● Lesson 3.2, **Activity 4,** Teacher Support tab ("Instructional Suggestion, Providing More Experience: Model Making Different Mixtures with Color Blocks") ● Lesson 4.3, **Activity 4,** Teacher Support tab ("Instructional Suggestion, Providing More Experience: Model Making Different Mixtures with Color Blocks") [DCI] [Properties and purposes] *Properties of Materials* unit: ● Lesson 1.2 ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide, steps 4–7 ○ **Student book**, *What If Rain Boots Were Made of Paper?* ● Lesson 1.3, **Activity 2,** Instructional Guide, steps 5–7 ● Lesson 1.8, **Activity 4,** Instructional Guide, steps 6–8 and Possible Responses tab ● Lesson 4.1, **Activity 2,** Instructional Guide, step 2 and On-the-Fly Assessment

		[SEP] *Changing Landforms* unit: ● Lesson 1.5 ○ **Activity 1,** Instructional Guide ○ **Investigation Notebook,** pages 20–21 ○ **Activity 2,** Instructional Guide and Possible Responses tab ● Lesson 2.1, **Activity 3,** Instructional Guide and Possible Responses tab ● Lesson 2.2 ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide, steps 1–3 and On-the-Fly Assessment ● Lesson 2.5 ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide, steps 4–7, and On-the-Fly Assessment ● Lesson 2.6, **Activity 3,** Instructional Guide, steps 4–7, Possible Responses tab, and Critical Juncture Assessment
SC.2.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.	SC.2.3.1.E Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	[SEP] *Properties of Materials* unit: ● Lesson 1.8, **Activity 4,** Instructional Guide, steps 6–10, Possible Responses tab, and On-the-Fly Assessment [DCI] *Properties of Materials* unit*:* ● Lesson 2.1 ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide, steps 1–4 ○ **Student book,** *Can You Change It Back?* [DCI, SEP, CCC] *Properties of Materials* unit*:* ● Lesson 2.2 ○ **Activity 4,** Instructional Guide, steps 1–6, Possible Responses tab, Critical Juncture Assessment, and Teacher Support tab (“Instructional Suggestion, Providing More Experience: Home Investigation”) ○ **Lesson Brief,** Digital Resources, “Optional Chapter 2 Home Investigation: Heating and Cooling copymaster” [DCI] *Properties of Materials* unit: ● Lesson 2.2, **Activity 2,** Instructional Guide, steps 2–7, and Possible Responses tab [CCC]

		Properties of Materials unit*:* ● Lesson 2.3 ○ **Activity 3,** Instructional Guide and Teacher Support tab ("Background, Crosscutting Concept: Cause and Effect Across This Unit" and "Background, Science Note: About Cause and Effect") ○ **Activity 4,** Instructional Guide and Possible Responses tab ○ **Activity 5** Instructional Guide and On-the-Fly Assessment ○ **Student book,** *Handbook of Interesting Ingredients*, odd-numbered pages [SEP, DCI] *Properties of Materials* unit: ● Lesson 2.4, **Activity 4,** Instructional Guide, steps 1–4, Possible Responses tab, and On-the-Fly Assessment [SEP] *Properties of Materials* unit: ● Lesson 3.4, **Activity 3,** Instructional Guide, steps 11–12, Possible Responses tab, and On-the-Fly Assessment [SEP, CCC] *Properties of Materials* unit*:* ● Lesson 4.4 ○ **Activity 2,** Instructional Guide, steps 3–7 ○ **Lesson Brief,** Digital Resources, "Assessment Guide" [CCC] *Plant and Animal Relationships* unit: ● Lesson 1.6, **Activity 2,** Instructional Guide, step 8 and Teacher Support tab ("Background, Crosscutting Concept: Cause and Effect")
# SC.2.7 Interdependent Relationships in Ecosystems		
SC.2.7.2 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	SC.2.7.2.A Plan and conduct an investigation to determine if plants need sunlight and water to grow. Assessment is limited to testing one variable at a time.	[DCI] *Plant and Animal Relationships* unit*:* ● Lesson 1.6 ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide ○ **Investigation Notebook,** pages 15–19

		[CCC] *Plant and Animal Relationships* unit: ● Lesson 1.6, **Activity 2,** Instructional Guide, step 8 and Teacher Support tab ("Background, Crosscutting Concept: Cause and Effect") [DCI] *Plant and Animal Relationships* unit: ● Lesson 1.7 ○ **Activity 2,** Instructional Guide, Possible Responses tab, and Critical Juncture Assessment ○ **Activity 3,** Instructional Guide ● Lesson 2.2 ○ **Activity 2,** Instructional Guide, steps 4–12, and Possible Responses tab ○ **Student book**, *A Plant Is a System* [SEP] *Plant and Animal Relationships* unit: ● Lesson 4.2 ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ● Lesson 4.3 ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide and On-the-Fly Assessment ○ **Activity 4,** Instructional Guide and Possible Responses tab ○ **Lesson Brief,** Digital Resources, "Assessment Guide," Rubric 1 [CCC] *Properties of Materials* unit: ● Lesson 2.3 ○ **Activity 3,** Instructional Guide and Teacher Support tab ("Background, Crosscutting Concept: Cause and Effect Across This Unit" and "Background, Science Note: About Cause and Effect") ○ **Activity 4,** Instructional Guide and Possible Responses tab ○ **Activity 5,** Instructional Guide and On-the-Fly Assessment ○ **Student book,** *Handbook of Interesting Ingredients*, odd-numbered pages

SC.2.7.2 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	SC.2.7.2.B Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.	[DCI, SEP] [Seed dispersal] *Plant and Animal Relationships* unit: ● Lesson 3.1, **Activity 4,** Instructional Guide ● Lesson 3.2 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide ● Lesson 3.3 ○ **Activity 2,** Instructional Guide ○ **Activity 3,** Instructional Guide ○ **Activity 4,** Instructional Guide, steps 1–3 and Possible Responses tab ● Lesson 3.5, **Activity 1,** Instructional Guide [DCI] *Plant and Animal Relationships* unit: ● Lesson 3.1 ○ **Activity 3,** Instructional Guide, steps 6–9 ○ **Student book**, *Habitat Scientist*, page 11 ● Lesson 3.5 ○ **Activity 2,** Instructional Guide, step 7 ○ **Activity 3,** Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ○ **Student book**, *Handbook of Habitats*, pages 26–27, 38–39, 44–45 ● Lesson 3.6 ○ **Activity 2,** Instructional Guide and Possible Responses tab ○ **Activity 3,** Instructional Guide, steps 6–9, Possible Responses tab, and Critical Juncture Assessment [Pollination] *Plant and Animal Relationships* unit: ● Lesson 3.1 ○ **Activity 3,** Instructional Guide, steps 2, 5 ○ **Student book**, *Habitat Scientist*, pages 9–11 ● Lesson 3.5, **Activity 4,** Teacher Support tab (“Instructional Suggestion, Going Further: Observing Animal Pollinators”) [CCC] *Plant and Animal Relationships* unit:

		● Lesson 4.1, **Activity 2,** Instructional Guide and Teacher Support tab ("Assessment, Assessment Opportunity: Students' Understanding of Structure and Function") [CCC, SEP] *Plant and Animal Relationships* unit: ● Lesson 4.2, **Activity 1,** Instructional Guide, steps 3–6 and Teacher Support tab ("Instructional Suggestion, Going Further: Investigating Seed Structures in *Handbook of Habitats*") [DCI, SEP, CCC] *Properties of Materials* unit: ● Lesson 1.2 ○ **Activity 3,** Instructional Guide, Teacher Support tab ("Instructional Suggestion, Going Further: Connecting Properties of Materials and Structure and Function" and "Instructional Suggestion, Going Further: Designing and Sharing Ideas for Solutions") ○ **Student book**, *What If Rain Boots Were Made of Paper?* [DCI, SEP] *Properties of Materials* unit: ● Lesson 2.1, **Activity 4**, Instructional Guide, step 7 and Teacher Support tab ("Instructional Suggestion, Going Further: Designing with Small Objects") [DCI] *Properties of Materials* unit: ● Lesson 4.1, **Activity 2,** Instructional Guide and On-the-Fly Assessment [SEP] *Changing Landforms* unit: ● Lesson 2.1, **Activity 2,** Instructional Guide, steps 5–7, Possible Responses tab, and Teacher Support tab ("Background, Pedagogical Goals: Developing Models") ● Lesson 2.6 ○ **Activity 2,** Instructional Guide and Possible Responses tab ○ **Activity 3,** Critical Juncture Assessment ● Lesson 3.5 ○ **Activity 3,** Instructional Guide, steps 3–4 ○ **Lesson Brief**, Digital Resources, "Assessment Guide," Rubric 2

		● Lesson 4.5, **Activity 2,** Instructional Guide, steps 5–6, and Possible Responses tab
SC.2.7.2 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	SC.2.7.2.C Make observations of plants and animals to compare the diversity of life in different habitats. Assessment does not include specific animal and plant names in specific habitats.	[DCI] *Plant and Animal Relationships* unit: ● Lesson 1.4 ○ **Activity 4,** Instructional Guide and On-the-Fly Assessment ○ **Investigation Notebook**, page 10 ○ **Student book**, *Handbook of Habitats* ● Lesson 1.1 ○ **Activity 2,** Instructional Guide, steps 1, 4–6 ○ **Student book**, *Handbook of Habitats* ● Lesson 1.3 ○ **Activity 2,** Instructional Guide ○ **Investigation Notebook**, page 7 [SEP] *Plant and Animal Relationships* unit: ● Lesson 1.6 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide and On-the-Fly Assessment ○ **Investigation Notebook**, pages 15–19 [DCI] *Plant and Animal Relationships* unit: ● Lesson 3.1 ○ **Activity 3,** Instructional Guide, steps 1–5, Possible Responses tab, and On-the-Fly Assessment ○ **Student book**, *Habitat Scientist* [SEP] *Plant and Animal Relationships* unit: ● Lesson 4.2, **Activity 4,** Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ● Lesson 4.3

		○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ○ **Investigation Notebook**, pages 66–69 ○ **Lesson Brief**, Digital Resources, “Assessment Guide”
SC.2.13 Earth's Systems: Processes That Shape the Earth		
SC.2.13.3 Gather, analyze, and communicate evidence of the processes that shape the earth.	SC.2.13.3.A Use information from several sources to provide evidence that Earth events can occur quickly or slowly. Assessment does not include quantitative measurements of timescales.	[CCC] *Changing Landforms* unit: ● Lesson 1.3, **Activity 1,** Instructional Guide, steps 3–4 and Teacher Support tab (“Background, Crosscutting Concepts: What Is Meant by Stability and Change?” and “Background, Crosscutting Concepts: Stability and Change Across the Unit”) [SEP] *Changing Landforms* unit: ● Lesson 1.5 ○ **Activity 1,** Instructional Guide ○ **Investigation Notebook,** pages 20–21 ○ **Activity 2,** Instructional Guide and Possible Responses tab [DCI, CCC] *Changing Landforms* unit: ● Lesson 3.3, **Activity 1,** Instructional Guide and Possible Responses tab ● Lesson 3.4, **Activity 2,** Instructional Guide, Possible Responses tab, Critical Juncture Assessment, and Modeling Tool: 3.4 Changes Over Time [DCI, SEP] *Changing Landforms* unit: ● Lesson 3.5 ○ **Activity 1,** Instructional Guide and Possible Responses tab ○ **Activity 2,** Instructional Guide, steps 3–6 ○ **Lesson Brief,** Digital Resources, “Assessment Guide” [DCI, CCC] *Changing Landforms* unit: ● Lesson 4.1

		○ **Activity 3,** Instructional Guide and Possible Responses tab ○ **Student book,** *Handbook of Land and Water* ● Lesson 4.4, **Activity 2,** Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and Modeling Tool: 4.4 Loose Material or Rock [DCI, SEP] *Changing Landforms* unit: ● Lesson 4.4, **Activity 1,** Instructional Guide and Possible Responses tab ● Lesson 4.5 ○ **Activity 3,** Instructional Guide ○ **Lesson Brief,** Digital Resources, "Assessment Guide"
SC.2.13.3 Gather, analyze, and communicate evidence of the processes that shape the earth.	SC.2.13.3.B Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	[SEP, DCI] *Properties of Materials* unit: ● Lesson 1.9, **Activity 4**, Instructional Guide ● Lesson 2.2, **Activity 2**, Instructional Guide ● Lesson 3.5, **Activity 2,** Instructional Guide ● Lesson 4.1 ○ **Activity 1,** Instructional Guide, steps 3–7 and Possible Responses tab ○ **Activity 2,** Instructional Guide and On-the-Fly Assessment [CCC] *Changing Landforms* unit: ● Lesson 1.3, **Activity 1,** Instructional Guide, steps 3–4 and Teacher Support tab ("Background, Crosscutting Concepts: What Is Meant by Stability and Change?" and "Background, Crosscutting Concepts: Stability and Change Across the Unit") [DCI] *Changing Landforms* unit: ● Lesson 2.2 ○ **Activity 2,** Instructional Guide, steps 3–9 and Possible Responses tab ○ **Activity 3,** Instructional Guide, steps 1–3 and On-the-Fly Assessment ● Lesson 2.3 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Student book**, *What's Stronger? How Water Causes Erosion* ● Lesson 2.5, **Activity 3,** Instructional Guide, steps 2–7 and On-the-Fly Assessment

		[DCI, CCC] *Changing Landforms* unit: ● Lesson 2.5, **Student book**, *Handbook of Land and Water* [DCI] *Changing Landforms* unit: ● Lesson 2.6 ○ **Activity 2,** Instructional Guide and Possible Responses tab ○ **Activity 3,** Instructional Guide, Possible Responses tab, and Critical Juncture Assessment [CCC, DCI] *Changing Landforms* unit: ● Lesson 3.4, **Activity 2,** Instructional Guide, Possible Responses tab, Critical Juncture Assessment, and Modeling Tool: 3.4 Changes Over Time [DCI] *Changing Landforms* unit: ● Lesson 4.2 ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Activity 3**, Instructional Guide [CCC, DCI] *Changing Landforms* unit: ● Lesson 3.4, **Activity 2,** Instructional Guide, Possible Responses tab, Critical Juncture Assessment and Modeling Tool: 4.4 Loose Material or Rock
SC.2.13.3 Gather, analyze, and communicate evidence of the processes that shape the earth.	SC.2.13.3.C Develop a model to represent the shapes and kinds of land and bodies of water in an area. Assessment does not include quantitative scaling in models.	[CCC] *Changing Landforms* unit: ● Lesson 1.3, **Activity 2,** Instructional Guide and Possible Responses tab ● Lesson 1.4 ○ **Activity 2,** Teacher Support tab (“Rationale, Pedagogical Goals: Understanding the Nature of Science”) ○ **Activity 3**, Instructional Guide and Possible Responses tab ○ **Student book**, *Gary’s Sand Journal* ● Lesson 1.5 ○ **Activity 1,** Instructional Guide, steps 4–7 ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Activity 3,** Instructional Guide, steps 1–5, and On-the-Fly Assessment

		○ **Investigation Notebook**, pages 20–23 [SEP] *Changing Landforms* unit: ● Lesson 2.1, **Activity 2,** Instructional Guide, steps 5–7, Possible Responses tab, and Teacher Support tab (“Background, Pedagogical Goals: Developing Models”) [CCC] *Changing Landforms* unit: ● Lesson 2.1, **Activity 3,** Instructional Guide, steps 2–9, Possible Responses tab, and Teacher Support tab (“Assessment, Assessment Opportunity: Student Understanding of Patterns in the Natural World”) [SEP] *Changing Landforms* unit: ● Ch. 2, Lesson 2.4 ○ **Activity 1,** Instructional Guide and Possible Responses tab ○ **Activity 2**, Instructional Guide and On-the-Fly Assessment ● Ch. 2, Lesson 2.6 ○ **Activity 2,** Instructional Guide and Possible Responses tab ○ **Activity 3**, Critical Juncture Assessment [DCI] *Changing Landforms* unit: ● Lesson 3.4, **Activity 1**, Instructional Guide, steps 4–13 ● **Printable Resources**, Print Materials (8.5” x 11”), Island Map Cards, pages 18–20 ● Lesson 3.1 ○ **Activity 2,** Instructional Guide ○ **Student book**, *Handbook of Land and Water* ○ **Activity 3,** Instructional Guide [DCI, SEP] *Changing Landforms* unit: ● Lesson 3.1, **Activity 4,** Instructional Guide, steps 3–5, Possible Responses tab, Teacher Support tab (“Assessment, Assessment Opportunity: Student Understanding of Uses for Map”), Modeling Tool: 3.1 Beach Map, 3.1 Mountain Map, and 3.1 Island Map

		● Lesson 3.2 ○ **Activity 1,** Instructional Guide and Possible Responses tab ○ **Activity 2**, Instructional Guide, steps 10–11 and Possible Responses [SEP] *Changing Landforms* unit: ● Lesson 3.5 ○ **Activity 3,** Instructional Guide, steps 3–4 ○ **Lesson Brief**, Digital Resources, "Assessment Guide," Rubric 2 ● Lesson 4.5, **Activity 2,** Instructional Guide, steps 5–6 and Possible Responses tab
SC.2.13.3 Gather, analyze, and communicate evidence of the processes that shape the earth.	SC.2.13.3.D Obtain information to identify where water is found on Earth and that it can be solid or liquid.	[CCC] *Changing Landforms* unit: ● Lesson 1.3, **Activity 2,** Instructional Guide, and Possible Responses tab ● Lesson 1.4 ○ **Activity 2,** Teacher Support tab ("Rationale, Pedagogical Goals: Understanding the Nature of Science") ○ **Activity 3,** Instructional Guide, Possible Responses tab, Teacher Support tab ("Background, Crosscutting Concept: What Is Meant by Patterns?" and "Rationale, Pedagogical Goals: Observing Patterns in Sand") ○ **Student book**, *Gary's Sand Journal* ● Lesson 1.5 ○ **Activity 1,** Instructional Guide, steps 4–7 ○ **Activity 2,** Instructional Guide and Possible Responses tab ○ **Activity 3,** Instructional Guide, steps 1–5, and On-the-Fly Assessment ○ **Investigation Notebook**, pages 20–23 ● Lesson 2.1, **Activity 3,** Instructional Guide, steps 2–9, Possible Responses tab, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Patterns in the Natural World") [DCI, SEP] *Changing Landforms* unit: ● Lesson 3.3 ○ **Activity 1,** Instructional Guide, Possible Responses tab and Teacher Support tab ("Background, Literacy Note: About Text Features" and "Instructional Suggestion, Going Further: Reading About Changes to Bodies of Water") ○ **Student book**, *Handbook of Land and Water* ● Lesson 2.3

		○ **Activity 1,** Instructional Guide, steps 4–8 and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Forms and Bodies of Water") ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Student book**, *What's Stronger? How Water Causes Erosion* [DCI] *Changing Landforms* unit: ● Lesson 2.4, **Activity 1,** Instructional Guide, steps 5–6 and Possible Responses tab [SEP] *Plant and Animal Relationships* unit: ● Lesson 2.4, **Activity 1,** Instructional Guide, Possible Responses tab, and Modeling Tool: 2.4 Plant Growth, City Park ● Lesson 3.1 ○ **Activity 3,** Instructional Guide, steps 1–8, Possible Responses tab, and On-the-Fly Assessment ○ **Student book**, *Habitat Scientist*
Grade 3		
Standard	**Indicator**	**Where Taught**
SC.3.1 Forces and Interactions: Motion and Stability		
SC.3.1.1 Gather, analyze, and communicate evidence of forces and their interactions.	SC.3.1.1.A Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. 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.	[SEP, DCI] *Balancing Forces* unit: ● Lesson 5.1 ○ **Activity 3**, Instructional Guide ○ **Investigation Notebook,** pages 57–59 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 5.3, **Activity: Introducing Electromagnets**, Instructional Guide, and Teacher Support tab ("Instructional Suggestion, Providing More Experience: Investigate the Strength of Electromagnets") [DCI] *Balancing Forces* unit: ● Lesson 5.5 ○ **Activity 1**, Instructional Guide, steps 4–6

		○ **Lesson Brief**, Digital Resources, “Assessment Guide” ● Lesson 3.4 ○ **Activity 1**, Instructional Guide, steps 2–8, Possible Responses tab, On-the-Fly Assessment, and Modeling Tool: 3.4 Force Types A-G ● Lesson 4.2, **Activity 2**, Instructional Guide, and Teacher Support tab (“Background, Science Note: About Balanced Forces”) ● **Student book**, *Handbook of Forces*, pages 18–23 ● Lesson 5.2 ○ **Activity 1**, Instructional Guide and On-the-Fly Assessment ○ **Activity 2**, Instructional Guide ○ **Student book**, *Hoverboard* ● Lesson 1.3 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, steps 4–7 ○ **Student book**, *Forces All Around* [CCC] *Balancing Forces* unit: ● Lesson 3.3 ○ **Activity 1**, Instructional Guide, step 11 and Teacher Support tab (“Background, Crosscutting Concepts: What is Meant by Cause and Effect?,” and “Background, Crosscutting Concepts: Cause and Effect Across the Unit”) ● Lesson 1.4 ○ **Activity 4**, Instructional Guide and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, “Assessment Guide” ● Lesson 3.4 ○ **Activity 3**, Instructional Guide, steps 2–5, and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, “Assessment Guide” ● Lesson 5.5 ○ **Activity 1**, Instructional Guide, steps 2–6 ○ **Lesson Brief**, Digital Resources, “Assessment Guide” [SEP] *Balancing Forces* unit: ● Lesson 2.2, **Activity 1**, Instructional Guide, steps 3–10 and Possible Responses tab [DCI] *Balancing Forces* unit:

		● Lesson 1.3, **Activity 3**, Instructional Guide, step 10 ● Lesson 1.4, **Activity 1**, Teacher Support tab ("Instructional Suggestion, Going Further: Investigating How Forces Can Cause Changes in Speed and Direction") ● Lesson 2.4 ○ **Activity 1**, Instructional Guide, step 8 ○ **Activity 2**, Instructional Guide ○ **Student book**, *What My Sister Taught Me About Magnets*, pages 6–8 ● Lesson 4.4 ○ **Activity 1**, Instructional Guide, steps 5–9, Possible Responses tab, On-the-Fly Assessment, and Modeling Tool: 4.4 Floating Paper Clip ● Lesson 5.1 ○ **Activity 2**, Instructional Guide, steps 2–6 ○ **Investigation Notebook**, page 57
SC.3.1.1 Gather, analyze, and communicate evidence of forces and their interactions.	SC.3.1.1.B Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. Assessment does not include technical terms such as period and frequency.	[DCI] *Balancing Forces* unit: ● Lesson 5.3 ○ **Activity 2**, Instructional Guide, Possible Responses tab and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Patterns of Motion") ○ **Investigation Notebook,** page 67 [SEP] *Balancing Forces* unit: ● Lesson 5.1 ○ **Activity 3**, Instructional Guide ○ **Investigation Notebook,** pages 57–59 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [CCC] *Weather and Climate* unit: ● Lesson 3.5 ○ **Activity 3**, Instructional Guide, steps 1–3, Possible Responses tab, and Critical Juncture Assessment ○ **Investigation Notebook,** page 50 [CCC] *Inheritance and Traits* unit: ● Lesson 1.3, **Activity 2**, Instructional Guide, Possible Responses tab, Teacher Support tab ("Instructional Suggestion, Providing More Support: Patterns") ● **Printable Resources**, Print Materials (8.5" x 11"), Bird Cards, pages 52–54

SC.3.1.1 Gather, analyze, and communicate evidence of forces and their interactions.	SC.3.1.1.C Ask questions to determine cause and effect relationships of electrical or magnetic interactions between two objects not in contact with each other. Assessment is limited to forces produced by objects that can be manipulated by students, and electrical interactions, are limited to static electricity.	[DCI] *Balancing Forces* unit: ● Lesson 5.1 ○ **Activity 3**, Instructional Guide ○ **Investigation Notebook,** pages 57–59 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 2.4 ○ **Activity 2**, Instructional Guide ○ **Activity 3,** Instructional Guide, step 3 ○ **Student book**, *What My Sister Taught Me About Magnets* ● Lesson 5.3 ○ **Activity 1**, Instructional Guide, steps 5–8, and Teacher Support tab ("Instructional Suggestion, Going Further: Exploring Electric Forces") ● Lesson 2.3 ○ **Activity 1**, Instructional Guide ○ **Activity 4**, Instructional Guide, steps 2–4, Possible Responses tab, and On-the-Fly Assessment ● Lesson 2.1 ○ **Activity 1**, Instructional Guide, steps 5–8 ○ **Activity 2**, Instructional Guide, steps 3–9, Possible Responses tab, and On-the Fly Assessment ● Lesson 5.3 ○ **Activity: Introducing Electromagnets**, Instructional Guide, and Teacher Support tab ("Instructional Suggestion, Providing More Experience: Investigate the Strength of Electromagnets ○ **Student book**, *Handbook of Forces*, pages 16–17 [SEP] *Balancing Forces* unit: ● Lesson 3.1, **Activity 3**, Instructional Guide, steps 3–5 and Teacher Support tab ("Background, Science Practices and Crosscutting Concepts: Asking Questions Based on Patterns") [SEP]

		Inheritance and Traits unit: ● Lesson 2.1 ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ● **Printable Resources**, Print Materials (8.5" x 11"), Fruit Fly Family Data Cards, pages 10–12 ● Lesson 3.1 ○ **Activity 2**, Instructional Guide, steps 4–10, Possible Responses tab, and On-the-Fly Assessment ● **Printable Resources**, Print Materials (8.5" x 11"), Flamingo Family Data Cards, pages 19–21 [CCC] *Balancing Forces* unit: ● Lesson 3.3, **Activity 1**, Instructional Guide, step 11, Teacher Support tab ("Background, Crosscutting Concepts: What is Meant by Cause and Effect?" and "Background, Crosscutting Concepts: Cause and Effect Across the Unit") ● Lesson 1.4 ○ **Activity 4**, Instructional Guide and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 3.4 ○ **Activity 3**, Instructional Guide, steps 2–5 and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 5.5 ○ **Activity 1**, Instructional Guide, steps 2–6 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [CCC] *Inheritance and Traits* unit: ● Lesson 3.4, **Activity 1**, Instructional Guide and Possible Responses tab
SC.3.1.1 Gather, analyze, and communicate evidence of forces and their interactions.	SC.3.1.1.D Define a simple design problem that can be solved by applying scientific ideas about magnets.	[SEP] *Balancing Forces* unit: ● Lesson 5.5 ○ **Activity 3**, Instructional Guide, steps 2–6 ○ **Investigation Notebook,** page 73 [DCI] *Balancing Forces* unit: ● Lesson 5.1 ○ **Activity 3**, Instructional Guide

		○ **Investigation Notebook,** pages 57–59 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 2.4 ○ **Activity 2**, Instructional Guide ○ **Activity 3,** Instructional Guide, step 3 ○ **Student book,** *What My Sister Taught Me About Magnets* ● Lesson 2.3 ○ **Activity 1**, Instructional Guide ○ **Activity 4**, Instructional Guide, steps 2–3, Possible Responses tab, and On-the-Fly Assessment ● Lesson 5.3 ○ **Activity: Introducing Electromagnets**, Instructional Guide, and Teacher Support tab ("Instructional Suggestion, Providing More Experience: Investigate the Strength of Electromagnets") ○ **Student book**, *Handbook of Forces*, pages 16–17 ○ **Activity 1**, Instructional Guide, steps 5–8, and Teacher Support tab ("Instructional Suggestion, Going Further: Exploring Electric Forces") *Environments and Survival:* ● Lesson 2.7 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ○ **Investigation Notebook,** pages 37–38
# SC.3.7 Interdependent Relationships in Ecosystems		
SC.3.7.2 Gather and analyze data to communicate an understanding of the interdependent relations in ecosystems.	SC.3.7.2.A Construct an argument that some animals form groups that help members survive.	[DCI] *Inheritance and Traits* unit: ● Lesson 1.1, **Activity 1**, Instructional Guide, step 3, and Teacher Support tab ("Instructional Suggestion, Going Further: Social Interactions and Group Behaviors in Animals") ● Lesson 3.2 ○ **Activity 3**, Instructional Guide, steps 8–11, and Teacher Support tab ("Instructional Suggestion, Going Further: Social Interactions and Group Behaviors in Animals" and "Assessment, Assessment Opportunity: Student Understanding of Animal Social Interactions, and Group Behavior") ○ **Student book,** *How the Sparrow Learned Its Song*, pages 14–15 ● Lesson 3.1, **Activity 1**, Instructional Guide, step 2

		[SEP] *Weather and Climate* unit: ● Lesson 1.6, **Activity 3**, Instructional Guide, steps 5–11 ● Lesson 2.5 ○ **Activity 3**, Instructional Guide, steps 5–8 ○ **Lesson Brief**, Digital Resources, “Assessment Guide” ● Ch. 3, Lesson 3.7 ○ **Activity 3**, Instructional Guide, steps 3–7 ○ **Lesson Brief**, Digital Resources, “Assessment Guide” ● Ch. 4, Lesson 4.4 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, “Assessment Guide” [CCC] *Balancing Forces* unit: ● Lesson 3.3 **Activity 1**, Instructional Guide, step 11, and Teacher Support tab (“Background, Crosscutting Concepts: What is Meant by Cause and Effect?” and “Background, Crosscutting Concepts: Cause and Effect Across the Unit”) ● Lesson 1.4 ○ **Activity 4**, Instructional Guide, Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, “Assessment Guide” ● Lesson 3.4 ○ **Activity 3**, Instructional Guide, steps 2–5 and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, “Assessment Guide” ● Lesson 5.5 ○ **Activity 1**, Instructional Guide, steps 2–6 ○ **Lesson Brief**, Digital Resources, “Assessment Guide” [CCC] *Inheritance and Traits* unit: ● Lesson 3.4 ○ **Activity 1**, Instructional Guide and Possible Responses tab ○ **Activity 3**, Instructional Guide, On-the-Fly Assessment

SC.3.7.2 Gather and analyze data to communicate an understanding of the interdependent relations in ecosystems.	SC.3.7.2.B Analyze and interpret data from fossils to provide evidence of the organisms and environments in which they lived long ago. Assessment does not include identification of specific fossils or present plants and animals. Assessment is limited to major fossil types and relative ages.	[DCI] *Environments and Survival* unit: ● Lesson 2.3, **Activity 1**, Instructional Guide and Possible Responses tab ● Lesson 2.2 ○ **Activity 2**, Instructional Guide ○ **Student book**, *Mystery Mouths,* pages 6, 14, 18 ○ **Activity 3**, Instructional Guide, steps 5, 9, and Teacher Support tab ("Assessment, Assessment Opportunity: Assessing Student Understanding of Fossils and Extinction" and "Instructional Suggestion, Going Further: Using Fossils as Evidence for Past Environments") ○ **Lesson Brief**, Digital Resources, "Extension: Fossil Skulls: Clues into Past Environments" ○ **Student book**, *Biomimicry Handbook*, pages 34–35 [SEP] *Inheritance and Traits* unit: ● Lesson 2.5, **Activity 4**, Instructional Guide and On-the-Fly Assessment ● **Printable Resources**, Print Materials (8.5" x 11"), Wolf Family, Bison Valley Pack, and Elk Mountain Pack Data Cards, pages 24–29, 32–34 [CCC] *Environments and Survival* unit: ● Lesson 3.3, **Activity 1**, Instructional Guide, steps 7–12 [CCC] *Weather and Climate* unit: ● Lesson 3.7 ○ **Activity 3**, Instructional Guide, steps 3–7 ○ **Lesson Brief**, Digital Resources, "End-of-Unit Writing: Arguing About Future Island Weather Version A copymaster" and "Assessment Guide" [SEP] *Weather and Climate* unit*:* ● Lesson 3.2 ○ **Activity 1**, Instructional Guide, steps 4–7, and On-the-Fly Assessment ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Anchorage, Queenstown, and Saint Petersburg Graphs copymaster"

SC.3.7.2 Gather and analyze data to communicate an understanding of the interdependent relations in ecosystems.	SC.3.7.2.C 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.	[DCI] *Environments and Survival* unit: ● Lesson 1.2 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, steps 7–11, Possible Responses tab, and On-the-Fly Assessment ○ **Investigation Notebook,** pages 4–5 ● **Printable Resources**, Print Materials (8.5" x 11"), Needs for Survival Environment Cards, Needs for Survival Organism Cards, pages 12–17 ● Lesson 1.4 ○ **Activity 3**, Instructional Guide and Possible Responses tab ○ **Activity 4**, Instructional Guide, Possible Responses tab, and Critical Juncture Assessment ● Lesson 2.5, **Activity 1**, Instructional Guide, steps 3–11, Possible Responses tab, and On-the-Fly Assessment, and Modeling Tool, 2.5 Traits and Survival A-B [SEP] *Weather and Climate* unit: ● Lesson 1.6, **Activity 3**, Instructional Guide, steps 5–11 ● Lesson 2.5 ○ **Activity 3**, Instructional Guide, steps 5–8 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 3.7 ○ **Activity 3**, Instructional Guide, steps 3–7 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 4.4 ○ **Activity 2,** Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [DCI] *Environments and Survival* unit: ● Lesson 2.1 ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide [CCC] *Balancing Forces* unit: ● Lesson 3.3, **Activity 1**, Instructional Guide, step 11, and Teacher Support tab ("Background, Crosscutting Concepts: What is Meant by Cause and Effect?" and "Background, Crosscutting Concepts: Cause and Effect Across the Unit")

		● Lesson 1.4 ○ **Activity 4**, Instructional Guide and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 3.4 ○ **Activity 3**, Instructional Guide, steps 2–5, Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 5.5 ○ **Activity 1**, Instructional Guide, steps 2–6 ○ **Lesson Brief**, Digital Resources, "Assessment Guide"
SC.3.7.2 Gather and analyze data to communicate an understanding of the interdependent relations in ecosystems.	SC.3.7.2.D 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. Assessment is limited to a single environmental change. Assessment does not include the greenhouse effect or climate change.	[DCI] *Environments and Survival* unit: ● Lesson 3.2 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Student book,** *Environment News* ● Lesson 3.1 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, steps 1–3 ● Lesson 3.4 ○ **Activity 3**, Instructional Guide, steps 1, 4–5 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 3.3 ○ **Activity 1,** Instructional Guide, steps 3–7 ○ **Student book**, *Biomimicry Handbook*, pages 10–11 ● Lesson 3.2 ○ **Activity 2,** Instructional Guide ○ **Student book,** *Environment News*, pages 6–9 [SEP] *Environments and Survival* unit: ● Lesson 4.5 ○ **Activity 1**, Instructional Guide, steps 6–9, and Possible Responses tab ○ **Activity 2**, Instructional Guide [SEP] *Weather and Climate* unit*:* ● Lesson 4.4 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide"

		[DCI] *Environments and Survival* unit: ● Lesson 3.3 ○ **Activity 2**, Instructional Guide, Possible Responses tab, Critical Juncture Assessment, and Modeling Tool: 3.3 Environment Change [CCC] *Environments and Survival* unit: ● Lesson 1.2 ○ **Activity 2,** Instructional Guide, steps 8–11 ○ **Activity 3**, Instructional Guide, steps 8–12, Possible Responses tab, On-the-Fly Assessment, and Teacher Support tab ("Background, Crosscutting Concept: What Is Meant by Systems and System Models?" and "Background, Crosscutting Concept: Systems and System Models Across This Unit") ● **Printable Resources**, Print Materials (8.5" x 11"), Needs for Survival Environment and Needs for Survival Organism Cards, pages 12–17 ● Lesson 1.2, **Investigation Notebook,** pages 4–5 ● Lesson 3.1 ○ **Activity 2**, Instructional Guide, steps 2–3, 5 ○ **Activity 3**, Instructional Guide, step 8, and Teacher Support tab ("Background, Crosscutting Concept: Systems and System Models Across Chapter 3") ● Lesson 2.1, **Activity 3**, Instructional Guide, step 1
SC.3.7.2 Gather and analyze data to communicate an understanding of the interdependent relations in ecosystems.	SC.3.7.2.E 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.	[SEP] *Environments and Survival* unit: ● Ch. 4, Chapter Overview ● Lesson 4.5 ○ **Activity 1,** Instructional Guide, steps 6–9 ○ **Activity 2,** Instructional Guide [SEP, DCI] *Environments and Survival* unit: ● Lesson 4.2 ○ **Activity 1**, Instructional Guide, steps 4–5 ○ **Investigation Notebook,** pages 62–63 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ● Lesson 4.3 ○ **Activity 1**, Instructional Guide, steps 3–8

		○ **Activity 2**, Instructional Guide, ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ○ **Investigation Notebook,** pages 66–68 ● Lesson 4.4 ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide and RoboGrazer simulation ○ **Investigation Notebook,** page 70 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [SEP, DCI] *Weather and Climate* unit: ● Lesson 4.3 ○ **Activity 1**, Instructional Guide, steps 3–6 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, steps 3–6 [DCI] *Environments and Survival* unit: ● Lesson 4.1 ○ **Activity 2**, Instructional Guide, steps 3–6 ○ **Student book**, *Cockroach Robots*, pages 12–14
# SC.3.9 Inheritance and Variation: Life Cycles and Traits		
SC.3.9.3 Gather and analyze data to communicate an understanding of inheritance and variation of traits though life cycles and environmental influences.	SC.3.9.3.A Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.	[DCI] *Inheritance and Traits* unit: ● Lesson 1.1 ○ **Activity 4**, Instructional Guide ○ **Student book**, *Handbook of Traits* [DCI] *Inheritance and Traits* unit: ● Lesson 2.1, **Activity 2**, Instructional Guide, steps 3–4 [DCI] *Inheritance and Traits* unit: ● Lesson 2.2, **Activity 2**, Instructional Guide, steps 9–10 and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Reproduction and Life Cycles")

		[SEP] *Balancing Forces* unit: ● Lesson 2.5, **Activity 1**, Instructional Guide, steps 6–10, and Teacher Support tab ("Background, Pedagogical Goals: Developing Models") ● Lesson 3.4, **Activity 2**, Instructional Guide, steps 9–13, and On-the-Fly Assessment ● Lesson 4.4, **Activity 2**, Instructional Guide ● Lesson 5.4, **Activity 1**, Instructional Guide [CCC] *Weather and Climate* unit: ● Lesson 3.5, **Activity 3**, Instructional Guide, steps 1–3, Possible Responses tab, and Critical Juncture Assessment ● Lesson 3.3, **Activity 2**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ● Lesson 3.2, **Activity 3**, Instructional Guide, Possible Responses tab and Modeling Tool: 3.2 Patterns Across Years
SC.3.9.3 Gather and analyze data to communicate an understanding of inheritance and variation of traits though life cycles and environmental influences.	SC.3.9.3.B 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. Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.	[SEP, DCI] *Inheritance and Traits* unit: ● Lesson 2.5, **Activity 4**, Instructional Guide and On-the-Fly Assessment ● **Printable Resources**, Print Materials (8.5" x 11"), Wolf Family, Bison Valley Pack, and Elk Mountain Pack Data Cards, pages 24–29, 32–34 [DCI] *Inheritance and Traits* unit: ● Lesson 2.6 ○ **Activity 1**, Instructional Guide, steps 5–11 ○ **Activity 2**, Instructional Guide, steps 2–4, and Possible Responses tab ○ **Activity 3**, Instructional Guide, steps 7–8, and Critical Juncture Assessment ● Lesson 2.3 ○ **Activity 2**, Instructional Guide and On-the-Fly Assessment ○ **Student book**, *The Code* ● Lesson 2.4 ○ **Activity 1**, Instructional Guide, steps 5–8 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide and Possible Responses tab ● Lesson 1.2 ○ **Activity 2**, Instructional Guide ○ **Student book**, *Blue Whales and Buttercups*

		[SEP] *Weather and Climate* unit: ● Lesson 3.2 ○ **Activity 1**, Instructional Guide, steps 4–7, and On-the-Fly Assessment ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, “Anchorage, Queenstown, and Saint Petersburg Graphs copymaster” [CCC, DCI] *Inheritance and Traits* unit: ● Lesson 1.5 ○ **Activity 1,** Instructional Guide, steps 4–15, and On-the-Fly Assessment ○ **Investigation Notebook,** page 12 ● **Printable Resources**, Print Materials (8.5” x 11”), Elk Mountain Pack Data Cards, pages 32–34 ● Lesson 1.3 ○ **Activity 2**, Instructional Guide, Possible Responses tab, and Teacher Support tab (“ Instructional Suggestion, Providing More Support: Patterns”) ● **Printable Resources**, Print Materials (8.5” x 11”), Bird Cards, pages 52–54
SC.3.9.3 Gather and analyze data to communicate an understanding of inheritance and variation of traits though life cycles and environmental influences.	SC.3.9.3.C Use evidence to support the explanation that traits can be influenced by the environment.	[SEP, DCI] *Inheritance and Traits* unit: ● Lesson 2.6 ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Activity 3**, Instructional Guide, steps 7–8 ○ **Lesson Brief**, Digital Resources, “Assessment Guide” ● Lesson 3.5, **Activity 2**, Instructional Guide, steps 2–8, Possible Responses tab, and Critical Juncture Assessment ● Lesson 3.6 ○ **Activity 3**, Instructional Guide ○ **Lesson Brief**, Digital Resources, “Assessment Guide” [DCI] *Inheritance and Traits* unit: ● Lesson 3.2 ○ **Activity 2**, Instructional Guide and On-the-Fly Assessment ○ **Activity 3**, Instructional Guide, steps 1–7 ○ **Student book,** *How the Sparrow Learned Its Song*

		[DCI, CCC] *Inheritance and Traits* unit: ● Lesson 3.4 ○ **Activity 1**, Instructional Guide and Possible Responses tab ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment [DCI] *Inheritance and Traits* unit: ● Lesson 3.3, **Activity 2**, Instructional Guide [SEP] *Environments and Survival* unit: ● Lesson 3.4 ○ **Activity 1**, Instructional Guide, steps 1, 3 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide [CCC] *Balancing Forces* unit: ● Lesson 3.3, **Activity 1,** Instructional Guide, step 11, Teacher Support tab ("Background, Crosscutting Concepts: What is Meant by Cause and Effect?" and "Background, Crosscutting Concepts: Cause and Effect Across the Unit")
SC.3.9.3 Gather and analyze data to communicate an understanding of inheritance and variation of traits though life cycles and environmental influences.	SC.3.9.3.D 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.	[DCI] *Environments and Survival* unit: ● Lesson 2.6, **Activity 3**, Instructional Guide and Critical Juncture Assessment ● Lesson 2.4 ● **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Student book**, *Biomimicry Handbook*, pages 7–9, 18 ● Lesson 2.5, **Activity 1**, Instructional Guide, steps 3–11, Possible Responses tab, On-the-Fly Assessment, and Modeling Tool: 2.5 Traits and Survival A-B ● Lesson 2.1 ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide ● Lesson 3.2 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Teacher Support tab ("Instructional Suggestion, Going Further: Bird Adaptive Traits for Finding Mates") ○ **Student book**, *Environment News*

		[SEP] *Environments and Survival* unit: ● Lesson 3.4, **Activity 1**, Instructional Guide, steps 1, 3 [SEP] *Inheritance and Traits* unit: ● Lesson 2.6 ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Activity 3**, Instructional Guide, steps 7–8 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 3.5, **Activity 2**, Instructional Guide, steps 2–8, Possible Responses tab ● Lesson 3.6 ○ **Activity 3**, Instructional Guide ○ **Lesson Brief**, Digital Resources, Assessment Guide [CCC] *Balancing Forces* unit: ● Lesson 3.3, **Activity 1**, Instructional Guide, step 11, and Teacher Support tab ("Background, Crosscutting Concepts: What is Meant by Cause and Effect?" and "Background, Crosscutting Concepts: Cause and Effect Across the Unit") [CCC] *Inheritance and Traits* unit: ● Lesson 3.4, **Activity 3**, Instructional Guide and On-the-Fly Assessment [SEP] *Weather and Climate* unit: ● Lesson 1.6, **Activity 3**, Instructional Guide, steps 5–11 ● Lesson 2.5 ○ **Activity 3**, Instructional Guide, steps 5–8 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 3.7 ○ **Activity 3**, Instructional Guide, steps 3–7 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 4.4 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide"

SC.3.12 Weather and Climate		
SC.3.12.4 Gather and analyze data to communicate an understanding of weather and climate.	SC.3.12.4.A Represent data in table, pictograph, and bar graph displays to describe typical weather conditions expected during a particular season. Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.	[DCI, SEP, CCC] *Weather and Climate* unit: ● Lesson 3.3, **Activity 2**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment [DCI, SEP] *Weather and Climate* unit: ● Lesson 3.2 ○ **Activity 1**, Instructional Guide, steps 2–7, Possible Responses tab, and On-the-Fly Assessment ○ **Activity 2**, Instructional Guide ○ **Lesson Brief,** Digital Resources, "Anchorage, Queenstown, and Saint Petersburg Graphs copymaster" ○ **Activity 3**, Instructional Guide [CCC] *Weather and Climate* unit: ● Lesson 3.5 ○ **Activity 3**, Instructional Guide, steps 1–3, Possible Responses tab, and Critical Juncture Assessment ○ **Investigation Notebook,** page 50 [SEP] *Weather and Climate* unit: ● Lesson 2.1 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide and Possible Responses tab ● Lesson 2.4 ○ **Activity 3**, Instructional Guide

		○ **Lesson Brief**, Digital Resources, "Local Weather for the Past 30 Days chart" [DCI] *Weather and Climate* unit: ● Lesson 4.2 ○ **Activity 2**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ○ **Student book,** *Dangerous Weather Ahead* ● Lesson 3.7 ○ **Activity 3**, Instructional Guide, steps 3–7 ○ **Lesson Brief,** Digital Resources, "End-of-Unit Writing: Arguing About Future Island Weather Version A copymaster" and "Assessment Guide" ● Lesson 1.4 ○ **Activity 2**, Instructional Guide ○ **Student book**, *Sky Notebook* ● Lesson 3.6, **Activity 1**, Instructional Guide, steps 3–5, and On-the-Fly Assessment
SC.3.12.4 Gather and analyze data to communicate an understanding of weather and climate.	SC.3.12.4.B Obtain and combine information to describe climates in different regions of the world.	[DCI] *Weather and Climate* unit: ● Lesson 3.2 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Anchorage, Queenstown, and Saint Petersburg Graphs copymaster" ● Lesson 3.3, **Activity 1**, Instructional Guide [DCI, CCC] *Weather and Climate* unit: ● Lesson 3.5 ○ **Activity 3**, Instructional Guide, steps 1–3, Possible Responses tab, and Critical Juncture Assessment ○ **Investigation Notebook,** page 50 [DCI, SEP] *Weather and Climate* unit: ● Lesson 3.5 ○ **Activity 1**, Instructional Guide, steps 3–10, and Possible Responses tab ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Investigation Notebook,** pages 48–49

		○ **Student book,** *World Weather Handbook* [SEP] *Inheritance and Traits* unit: ● Lesson 2.6 ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Activity 3**, Instructional Guide, steps 7–8 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 3.5, **Activity 2**, Instructional Guide, steps 2–8, and Possible Responses tab ● Lesson 3.6 ○ **Activity 3**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [DCI] *Weather and Climate* unit: ● Lesson 3.3 ○ **Activity 3**, Instructional Guide ○ **Student book**, *World Weather Handbook*, pages 10, 38–39 ● Lesson 3.6, **Activity 1**, Instructional Guide, steps 3–5, On-the-Fly Assessment
SC.3.12.4 Gather and analyze data to communicate an understanding of weather and climate.	SC.3.12.4.C Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.	[DCI, SEP] *Weather and Climate* unit: ● Lesson 4.4 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [DCI] *Weather and Climate* unit: ● Lesson 4.2 ○ **Activity 2**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ○ **Student book**, *Dangerous Weather Ahead* [DCI] *Weather and Climate* unit: ● Lesson 4.3 ○ **Activity 1**, Instructional Guide, steps 1–3 ○ **Activity 3**, Instructional Guide, steps 8–9 ● Lesson 4.1, **Activity 2**, Instructional Guide, steps 3-8, Possible Responses tab, and Modeling Tool: 4.1 Natural Hazard Patterns

		[SEP] *Environments and Survival* unit: ● Lesson 4.5 ○ **Activity 1**, Instructional Guide, steps 6–9 ○ **Activity 2**, Instructional Guide [CCC] *Balancing Forces* unit: ● Lesson 3.3, **Activity 1** Instructional Guide, step 11, Teacher Support tab ("Background, Crosscutting Concepts: What is Meant by Cause and Effect?" and "Background, Crosscutting Concepts: Cause and Effect Across the Unit") ● Lesson 1.4 ○ **Activity 4**, Instructional Guide and Critical Juncture Assessment ○ **Lesson Brief,** Digital Resources, "Assessment Guide" ● Lesson 3.4 ○ **Activity 3**, Instructional Guide, steps 2–5, and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 5.5 ○ **Activity 1**, Instructional Guide, steps 2–6 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [CCC] *Inheritance and Traits* unit: ● Lesson 3.4, **Activity 1**, Instructional Guide and Possible Responses tab

Grade 4		
Standard	**Indicator**	**Where Taught**
SC.4.2 Waves: Waves and Information		

SC.4.2.1 Gather, analyze, and communicate evidence of waves and the information they transfer.	SC.4.2.1.A Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. Assessment does not include interference effects, electromagnetic waves, non-periodic waves, or quantitative models of amplitude and wavelength.	[SEP] *Waves, Energy, and Information* unit: ● Lesson 2.5, **Activity 1**, Instructional Guide, and Teacher Support tab ("Background, Pedagogical Goals: Developing Models") ● Lesson 1.5, **Activity 3**, Instructional Guide, Possible Responses tab, and Critical Juncture Assessment ● Lesson 2.2, **Activity 3**, Instructional Guide, On-the-Fly Assessment, and Possible Responses tab ● Lesson 2.4, **Activity 2**, Instructional Guide and Possible Responses tab ● Lesson 3.3, **Activity 4**, Instructional Guide, steps 1–6, and On-the-Fly Assessment ● Lesson 3.7, **Activity 1**, Instructional Guide, steps 3–7, and Possible Responses tab [DCI] *Waves, Energy, and Information* unit: ● Lesson 3.1 ○ **Activity 2**, Instructional Guide, steps 4–8, and On-the-Fly Assessment ○ **Activity 3**, Instructional Guide and Sound Waves simulation ● Lesson 3.2, **Activity 3**, Instructional Guide and On-the-Fly Assessment, and Sound Waves simulation ● **Student book**, *Patterns in Communication,* pages 6–7 ● Lesson 1.4 ○ **Activity 1**, Instructional Guide, steps 1, 4 ○ **Student book**, *Warning: Tsunami!* ○ **Activity 2,** Instructional Guide, On-the-Fly Assessment, and Teacher Support tab ("Instructional Suggestion, Providing More Experience: Waves in Water") [CCC] *Waves, Energy, and Information* unit: ● Lesson 3.6, **Activity 1**, Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and Sound Waves simulation ● Lesson 3.5 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ○ **Student book**, *The Scientist Who Cracked the Dolphin Code* [CCC] *Earth's Features* unit: ● Lesson 4.4

		○ **Activity 2**, Instructional Guide ○ **Investigation Notebook**, page 78 ○ **Lesson Brief**, Digital Resources, “4.4 Erosion Model” ○ **Activity 3**, Instructional Guide and Modeling Tool: 4.4 Erosion: Speed Model, 4.4 Erosion: Time Model ● Lesson 4.5 ○ **Activity 1**, Instructional Guide, step 3 ○ **Activity 2**, Instructional Guide

SC.4.2.1 Gather, analyze, and communicate evidence of waves and the information they transfer.	SC.4.2.1.B Generate and compare multiple solutions that use patterns to transfer information.	[DCI] *Waves, Energy, and Information* unit: ● Lesson 4.3, ○ **Activity 2**, Instructional Guide, steps 2–5, On-the-Fly Assessment, and Code Communicator Tool ○ **Activity 3**, Instructional Guide ● Lesson 4.4 ○ **Activity 1**, Instructional Guide and Code Communicator Tool ○ **Activity 3**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 4.1 ○ **Activity 3**, Instructional Guide ○ **Student book**, *Patterns in Communication*, page 42 [DCI, SEP] *Energy Conversions* unit: ● Lesson 3.4 ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ○ **Investigation Notebook**, page 53 ● Lesson 3.5 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, ○ **Investigation Notebook**, page 55 [SEP] *Energy Conversions* unit: ● Lesson 4.3 ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ○ **Investigation Notebook**, pages 77–79 [CCC] *Energy Conversions* unit: ● Lesson 3.2, **Activity 2**, Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and Sorting Tool: 3.2 Energy Converters [CCC] *Waves, Energy, and Information* unit:

		● Lesson 3.3, **Activity 3**, Instructional Guide**,** Possible Responses tab, and Sorting Tool: 3.3 Volume and 3.3 Pitch ● Lesson 3.6, **Activity 1**, Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and Sound Waves simulation

SC.4.4 Energy: Conservation and Transfer

SC.4.4.2 Gather, analyze and communicate evidence of energy conservation and transfer.	SC.4.4.2.A Use evidence to construct an explanation relating the speed of an object to the energy of that object. Assessment does not include quantitative measures of changes in the speed of an object or on any precise or quantitative definition of energy.	[DCI] *Energy Conversions* unit: ● Lesson 3.4 ○ **Activity 2**, Instructional Guide, steps 1–3, and Teacher Support tab ("Instructional Suggestion, Going Further: Revisiting the *Energy Conversions* simulation" and "Assessment, Assessment Opportunity: Assessing Student Understanding of Speed in Relation to Energy") ○ **Activity 3**, Instructional Guide, step 1 ○ **Student book**, *It's All Energy*, page 9 *Waves, Energy and Information* unit: ● Chapter 2, Lesson 2.4, **Activity 3,** Teacher Support tab ("Instructional Suggestion, Going Further: Using Balls to Represent Collisions") [CCC] *Energy Conversions* unit: ● Lesson 4.2 ○ **Activity 2**, Instructional Guide and On-the-Fly Assessment ○ **Student book**, *It's All Energy*, pages 42–45 [SEP] *Vision and Light* unit: ● Lesson 2.5 ○ **Activity 3**, Instructional Guide and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 3.5 ○ **Activity 4**, Instructional Guide and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 4.6 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [SEP] *Earth's Features* unit: ● Lesson 1.6, **Activity 3**, Instructional Guide ● Lesson 2.6 ○ **Activity 3**, Instructional Guide, steps 1–6, and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Ch. 3, Lesson 3.5

		○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, “Assessment Guide” ● Ch. 4, Lesson 4.5 ○ **Activity 3**, Instructional Guide ○ **Lesson Brief**, Digital Resources, “Assessment Guide”

SC.4.4.2 Gather, analyze and communicate evidence of energy conservation and transfer.	SC.4.4.2.B Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electrical currents. Assessment does not include quantitative measurements of energy.	[DCI, CCC] *Energy Conversions* unit: ● Lesson 4.2 ○ **Activity 2**, Instructional Guide, On-the-Fly Assessment, and Teacher Support tab ("Instructional Suggestion, Going Further: Exploring Energy Transfer") ○ **Student book**, *It's All Energy*, pages 6–7, 12, 17–18, 20, 42–45 [DCI] *Waves, Energy, and Information* unit: ● Lesson 1.4, **Activity 2**, Instructional Guide and On-the-Fly Assessment ● Lesson 2.4 ○ **Activity 3**, Instructional Guide and Teacher Support tab ("Instructional Suggestion, Going Further: Using Balls to Represent Collisions") ○ **Activity 4**, Instructional Guide ● Lesson 2.6, **Activity 3**, Instructional Guide, Possible Responses tab, and Critical Juncture Assessment [DCI] *Energy Conversions* unit: ● Lesson 1.5, **Activity 3**, Instructional Guide, steps 6–12, and On-the-Fly Assessment [SEP] *Vision and Light* unit: ● Lesson 5.1, **Lesson Brief**, Digital Resources, "Smell Investigation copymaster, Hearing Investigation copymaster," and "Touch Investigation copymaster" ● Lesson 5.2 ○ **Activity 2**, Instructional Guide, steps 5–7 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [SEP] *Energy Conversions* unit: ● Lesson 2.4, **Activity 2**, Instructional Guide, Possible Responses tab, and simulation

SC.4.4.2 Gather, analyze and communicate evidence of energy conservation and transfer.	SC.4.4.2.C Ask questions and predict outcomes about the changes in energy that occur when objects collide. Assessment does not include quantitative measurements of energy.	[DCI] *Waves, Energy, and Information* unit: ● Lesson 2.6 ○ **Activity 1**, Instructional Guide, steps 3–10, and Sound Waves simulation ○ **Activity 3**, Instructional Guide, Possible Responses tab, and Critical Juncture Assessment ● Lesson 1.4, **Activity 2**, Instructional Guide and On-the-Fly Assessment [DCI, CCC] *Waves, Energy, and Information* unit: ● Lesson 2.4 ○ **Activity 3**, Instructional Guide and Teacher Support tab ("Instructional Suggestion, Going Further: Using Balls to Represent Collisions") ○ **Activity 4**, Instructional Guide, and Teacher Support tab ("Instructional Suggestion, Science Note: Energy Transfer through Contact Forces") [DCI, CCC] *Energy Conversions* unit: ● Lesson 4.2 ○ **Activity 2**, Instructional Guide and On-the-Fly Assessment ○ **Student book**, *It's All Energy*, pages 6–7, 42–45 [DCI] *Energy Conversions* unit: ● Lesson 1.5, **Activity 3**, Instructional Guide, steps 6–12 and On-the-Fly Assessment [SEP] *Vision and Light* unit: ● Lesson 5.1 ○ **Activity 4**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Smell Investigation copymaster," "Hearing Investigation copymaster," and "Touch Investigation copymaster" ● Lesson 3.2 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment

SC.4.4.2 Gather, analyze and communicate evidence of energy conservation and transfer.	SC.4.4.2.D Apply scientific ideas to design, test, and refine a device that converts energy from one form to another. 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.	[SEP] *Energy Conversions* unit: ● Lesson 3.4 ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ○ **Investigation Notebook**, page 53 ● Lesson 3.6 ○ **Activity 4**, Instructional Guide, steps 4–6 ○ **Lesson Brief**, Digital Resources, “Assessment Guide” [DCI] *Energy Conversions* unit: ● Lesson 2.1 ○ **Activity 2**, Instructional Guide, steps 8–12, On-the-Fly Assessment, and simulation ○ **Activity 3**, Instructional Guide, steps 3–8 ● Lesson 4.5, **Activity 1**, Instructional Guide, steps 3–6, Possible Responses tab, and On-the-Fly Assessment ● Lesson 4.3, **Activity 3**, Instructional Guide, and Teacher Support tab (“Background, Engineering Note: Criteria vs. Constraints in the Design Process”) ● Lesson 4.5, **Activity 2**, Instructional Guide, steps 5–9 [DCI, CCC] *Energy Conversions* unit: ● Lesson 4.2, **Activity 2**, Instructional Guide and On-the-Fly Assessment [DCI] *Energy Conversions* unit: ● Lesson 3.1 ○ **Activity 4**, Instructional Guide, steps 1–3, and Teacher Support tab (“Background, Science Note: About the Expression “Produce Energy”) ○ **Student book**, *It’s All Energy*, pages 28, 36, 38, 40

SC.4.4.2 Gather, analyze and communicate evidence of energy conservation and transfer.	SC.4.4.2.E 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.	[SEP] *Vision and Light* unit: ● Lesson 5.1 ○ **Activity 4**, Instructional Guide and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Smell Investigation copymaster," "Hearing Investigation copymaster," and "Touch Investigation copymaster" ● Lesson 5.2 ○ **Activity 1**, Instructional Guide ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [DCI] *Energy Conversions* unit: ● Lesson 3.3 ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide ○ **Student book**, *Sunlight and Showers* ● Lesson 3.4 ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ○ **Investigation Notebook**, page 53 ● Lesson 3.5 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Investigation Notebook**, page 55 ● Lesson 4.4, **Activity 3**, Instructional Guide, steps 1–8, Possible Responses tab, and simulation

SC.4.4.2 Gather, analyze and communicate evidence of energy conservation and transfer.	SC.4.4.2.F Obtain and combine information to describe that energy and fuels are derived from natural resources and that their uses affect the environment.	[DCI] *Energy Conversions* unit: ● Lesson 3.1 ○ **Activity 4**, Instructional Guide ○ **Student book**, *It's All Energy*, pages 26–41 ● Lesson 3.3, **Activity 1**, Instructional Guide and Critical Juncture Assessment ● Lesson 4.5, **Activity 2**, Instructional Guide [SEP] *Energy Conversions* unit: ● Lesson 2.2, **Activity 4**, Instructional Guide and On-the-Fly Assessment [CCC] *Vision and Light* unit: ● Lesson 2.1, **Activity 4**, Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and simulation
SC.4.6 Structure, Function, and Information Processing		
SC.4.6.3 Gather and analyze data to communicate an understanding of structure, function and information processing of living things.	SC.4.6.3.A Develop a model to describe that light reflecting from objects and entering the eyes allows objects to be seen. Assessment does not include knowledge of specific colors reflected and seen, the cellular mechanisms of vision, or how the retina works.	[DCI] *Vision and Light* unit: ● Lesson 2.3 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, steps 1–5 ○ **Student book**, *I See What You Mean* ● Lesson 2.5, **Activity 3**, Instructional Guide, steps 2–5 and Critical Juncture Assessment [CCC] *Vision and Light* unit: ● Lesson 2.1, **Activity 4**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment [SEP] *Waves, Energy, and Information* unit: ● Lesson 2.5, **Activity 1**, Instructional Guide, and Teacher Support tab ("Background, Pedagogical Goals: Developing Models")

SC.4.6.3 Gather and analyze data to communicate an understanding of structure, function and information processing of living things.	SC.4.6.3.B Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. Assessment is limited to macroscopic structures within plant and animal systems.	[DCI] *Vision and Light* unit: ● Lesson 4.1 ○ **Activity 2,** Instructional Guide, steps 3–8 ○ **Activity 3,** Instructional Guide, steps 1–2 ○ **Student book**, *Seeing Like a Shrimp and Smelling Like a Snake* ● Lesson 3.3, **Activity 2,** Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and simulation ● Lesson 1.4 ○ **Activity: Observing Animals and Plants,** Instructional Guide, steps 2–12 and Teacher Support tab ("Instructional Suggestion, Going Further: Observing Plant Structures and Discussing Function" and "Background, Science Note: Plants' Internal Structures") ○ **Activity 1,** Instructional Guide, Possible Responses tab, and Critical Juncture Assessment ● Lesson 3.1, **Activity 1,** Instructional Guide, steps 4–8, Possible Responses tab, and simulation [SEP] *Earth's Features* unit: ● Lesson 1.6 ○ **Activity 2,** Instructional Guide, steps 7–12 ○ **Activity 3,** Instructional Guide ● Lesson 2.6 ○ **Activity 2,** Instructional Guide, steps 3–7 ○ **Activity 3,** Instructional Guide, steps 1–6 and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, "Assessment Guide," Rubric 1 ● Lesson 3.5, ○ **Activity 1,** Instructional Guide ○ **Activity 2,** Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide," Rubric 1 ● Lesson 4.5 ○ **Activity 2,** Instructional Guide, steps 3–9 ○ **Activity 3,** Instructional Guide ○ **Lesson Brief,** Digital Resources, "Assessment Guide," Rubric 1 ● Lesson 3.2, **Activity 2,** Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ● Lesson 3.3 ○ **Activity 2,** Instructional Guide ○ **Student book**, *Arguing to Solve a Mystery*

		[CCC] *Energy Conversions* unit: • Lesson 1.2 ○ **Activity 4,** Instructional Guide and On-the-Fly Assessment ○ **Student book**, *Systems* • Lesson 1.3, **Activity 3,** Instructional Guide, steps 7–11 and On-the-Fly Assessment [CCC] *Energy Conversions* unit: ● Lesson 2.1, **Activity 3,** Instructional Guide, steps 2–8 ● Lesson 3.1, **Activity 4,** Instructional Guide, steps 4–6 ● Lesson 3.2, **Activity 3,** Instructional Guide, steps 4–7 ● Lesson 4.2, **Activity 2,** Instructional Guide, steps 8–11 [DCI] *Vision and Light* unit: ● Lesson 3.5 ○ **Activity 4,** Instructional Guide, Possible Responses tab, and Critical Juncture Assessment ○ **Student book**, *Handbook of Animal Eyes* ● Lesson 3.1, **Activity 2,** Instructional Guide ● Lesson 3.3, **Activity 3,** Instructional Guide, steps 1–3 ● Lesson 4.2, **Activity 3,** Instructional Guide

SC.4.6.3 Gather and analyze data to communicate an understanding of structure, function and information processing of living things.	SC.4.6.3.C 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. Assessment does not include the mechanisms by which the brain stores and recalls information or the mechanisms of how sensory receptors function.	[SEP, DCI] *Vision and Light* unit: ● Lesson 2.1, **Activity 4**, Instructional Guide, steps 3–7, Possible Responses tab, and simulation ● Lesson 3.1, **Activity 1**, Instructional Guide, steps 4–8, and simulation ● Lesson 3.3, **Activity 2**, Instructional Guide steps 1–7, Possible Responses tab, On-the-Fly Assessment, and simulation [DCI] *Vision and Light* unit: ● Lesson 3.4, **Activity 1**, Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and Sorting Tool: 3.4 Catching a Cricket ● Lesson 3.2 ○ **Activity 1**, Instructional Guide, steps 3–6 ○ **Activity 2**, Instructional Guide ○ **Student book**, *Crow Scientist*, pages 8–9, 14 [CCC] *Energy Conversions* unit: ● Lesson 1.3 ○ **Activity 3**, Instructional Guide, steps 7–11 and On-the-Fly Assessment ○ **Student book,** *Systems* ● Lesson 1.2 ○ **Activity 4**, Instructional Guide and On-the-Fly Assessment ○ **Student book**, *Systems* ● Lesson 2.1, **Activity 3**, Instructional Guide, steps 2–8 ● Lesson 3.1, **Activity 4**, Instructional Guide, steps 4–6 ● Lesson 3.2, **Activity 3**, Instructional Guide, steps 4–7 ● Lesson 4.2, **Activity 2**, Instructional Guide, steps 8–11 [SEP] *Waves, Energy, and Information* unit: ● Lesson 3.3, **Activity 4**, Instructional Guide, steps 1–6 and On-the-Fly Assessment ● Lesson 2.5, **Activity 1**, Instructional Guide
SC.4.13 Earth's Systems: Processes That Shape the Earth		

SC.4.13.4 Gather and analyze data to communicate an understanding of Earth's systems and processes that shape the Earth.	SC.4.13.4.A Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. Assessment does not include specific knowledge of the mechanism of rock formation or memorization of specific rock formations and layers. Assessment is limited to relative time.	[DCI] *Earth's Features* unit: ● **Unit Guide**, Unit Overview ● Lesson 1.6, **Activity 3**, Instructional Guide, steps 4–6 ● Lesson 2.6 ○ **Activity 3**, Instructional Guide, steps 3–6, and Critical Juncture Assessment ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 3.5 ○ **Activity 2**, Instructional Guide, steps 4–7 ○ **Lesson Brief,** Digital Resources, "Assessment Guide" ● Lesson 3.4 ○ **Activity 2**, Instructional Guide and Critical Juncture Assessment ○ **Investigation Notebook**, pages 60–61 ● Lesson 3.2 ○ **Activity 2**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ○ **Student book,** *Fossil Hunter's Handbook*, pages 41, 43 ● Lesson 3.3 ○ **Activity 2**, Instructional Guide ○ **Student book**, *Arguing to Solve a Mystery* ● Lesson 4.5, **Activity 4**, Instructional Guide, step 3 [SEP, CCC] *Waves, Energy, and Information* unit: Lesson 4.4 ○ **Activity 3**, Instructional Guide ○ **Lesson Brief,** Digital Resources, "Assessment Guide" and "End-of-Unit Writing: Explaining Patterns in Communication copymaster" [SEP] *Waves, Energy, and Information* unit: ● Lesson 3.6 ○ **Activity 3**, Instructional Guide and Possible Responses tab ○ **Investigation Notebook**, page 72 [SEP] *Vision and Light* unit: ● Lesson 3.5, **Activity 3**, Instructional Guide, steps 4-5

SC.4.13.4 Gather and analyze data to communicate an understanding of Earth's systems and processes that shape the Earth.	SC.4.13.4.B Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. Assessment is limited to a single form of weathering or erosion	[DCI] *Earth's Features* unit: ● Lesson 4.1 ○ **Activity 3**, Instructional Guide ○ **Student book,** *Rocky Wonders* ● Lesson 2.2, **Activity 3**, Instructional Guide, steps 1–9, Possible Responses tab, Teacher Support tab ("Instructional Suggestion, Going Further: How Organisms Affect their Environments," "Assessment, Assessment Opportunity: Assessing Student Understanding That Living Things Affect Environments," and "Background, Science Note: About Calcium Carbonate and Limestone,") and simulation, Mode 2 ● Lesson 4.5 ○ **Activity 3**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [SEP, DCI] *Earth's Features* unit: ● Ch. 4, Chapter Overview ● Lesson 4.2 ○ **Activity 3**, Instructional Guide and simulation ○ **Investigation Notebook**, page 73 ● Lesson 4.3 ○ **Activity 3**, Instructional Guide, steps 3–11 ○ **Investigation Notebook**, page 76 ● Lesson 4.4 ○ **Activity 1**, Instructional Guide, step 7, and Teacher Support tab ("Instructional Suggestion, Going Further: Erosion by Gravity") ○ **Activity 2**, Instructional Guide ○ **Investigation Notebook**, page 78 [SEP] *Vision and Light* unit: ● Lesson 5.1, **Lesson Brief**, Digital Resources, "Smell Investigation copymaster," "Hearing Investigation copymaster," and "Touch Investigation copymaster" ● Lesson 5.2 ○ **Activity 2**, Instructional Guide, steps 5–7 ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [CCC, SEP]

		Vision and Light unit: ● Lesson 3.2 ○ **Activity 4**, Instructional Guide and On-the-Fly Assessment ○ **Student book**, *Crow Scientist* [CCC] *Vision and Light* unit: ● Lesson 2.1, **Activity 4**, Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and simulation ● Lesson 4.6 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, “Assessment Guide”

SC.4.13.4 Gather and analyze data to communicate an understanding of Earth's systems and processes that shape the Earth.	SC.4.13.4.C Analyze and interpret data from maps to describe patterns of Earth's features.	[DCI] *Earth's Features* unit: ● Lesson 4.5 ○ **Lesson Brief**, Digital Resources, "Patterns on a World Map copymaster" and "Dynamic Planet Map" ○ **Activity 4**, Instructional Guide, Possible Responses tab, and Teacher Support tab ("Assessment, Assessment Opportunity: Assessing Student Understanding of Patterns in Earth's Features") [SEP] *Earth's Features* unit: ● **Printable Resources**, Print Materials (8.5" x 11"), Evidence Cards in Earth's Features, pages 13–22 ● Lesson 4.2 ○ **Activity 3**, Instructional Guide, and simulation ○ **Investigation Notebook**, page 73 ● Lesson 4.3, **Activity 4**, Instructional Guide ● Lesson 1.6, **Activity 2**, Instructional Guide, steps 7–12 ● Lesson 2.6, **Activity 2**, Instructional Guide ● Lesson 3.5, **Activity 1**, Instructional Guide ● Lesson 4.5, **Activity 2**, Instructional Guide [CCC] *Waves, Energy, and Information* unit: ● Lesson 4.4 ○ **Activity 3**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "End-of-Unit Writing: Explaining Patterns in Communication copymaster" and "Assessment Guide" [SEP] *Vision and Light* unit: ● Lesson 5.1, **Lesson Brief**, Digital Resources, "Smell Investigation copymaster," "Hearing Investigation copymaster," and "Touch Investigation copymaster" ● Lesson 5.2 ○ **Activity 2**, Instructional Guide, steps 5–7 ○ **Activity 3**, Instructional Guide ○ **Investigation Notebook,** pages 94–95 ○ **Activity 4**, Instructional Guide, steps 1–2 ○ **Lesson Brief**, Digital Resources, "Assessment Guide"

SC.4.13.4 Gather and analyze data to communicate an understanding of Earth's systems and processes that shape the Earth.	SC.4.13.4.D Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans. Assessment is limited to earthquakes, floods, tsunamis, and volcanic eruptions.	[DCI] *Waves, Energy, and Information* unit: ● Lesson 1.3 ○ **Activity 2**, Instructional Guide ○ **Student book,** *Warning: Tsunami!* ● Lesson 1.3, **Activity 3**, Instructional Guide, step 7, and Teacher Support tab ("Instructional Suggestion, Going Further: Discussing Earthquake Waves and Warning Systems", and "Assessment, Assessment Opportunity: Assessing Student Understanding of Responses to Natural Hazards") [DCI] *Earth's Features* unit: ● Lesson 4.3 ○ **Activity 3**, Instructional Guide, steps 1–2, 8 ○ **Student book**, *Rocky Wonders*, pages 8, 12, 17, 21 [DCI, SEP] *Energy Conversions* unit: ● Lesson 3.4 ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ○ **Investigation Notebook**, page 53 [SEP] *Energy Conversions* unit: ● Lesson 3.5 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide ○ **Investigation Notebook**, page 55 ● Lesson 4.3 ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ○ **Investigation Notebook**, pages 77–79 [DCI] *Energy Conversions* unit: ● Lesson 3.3 ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide ○ **Student book,** *Sunlight and Showers*

		[CCC] *Vision and Light* unit: ● Lesson 2.1, **Activity 4**, Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and simulation ● Lesson 4.6 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, “Assessment Guide”

Grade 5		
Standard	**Indicator**	**Where Taught**
SC.5.3 Structure and Properties of Matter		

SC.5.3.1 Gather, analyze, and communicate evidence of structure and properties of matter.	SC.5.3.1.A Develop a model to describe that matter is made of particles too small to be seen. Assessment does not include the atomic-scale mechanism of evaporation and condensation or defining the unseen particles.	[SEP, DCI] *Modeling Matter* unit: ● Lesson 1.6 ○ **Activity 2**, Instructional Guide, On-the-Fly Assessment, and Teacher Support tab ("Background, Pedagogical Goals: Developing Models") ○ **Investigation Notebook**, page 14 [DCI, CCC] *Modeling Matter* unit: ● Lesson 1.3 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, and On-the-Fly Assessment ○ **Student book**, *Made of Matter* [DCI, SEP] *Modeling Matter* unit: ● Lesson 2.2, **Activity 4**, Instructional Guide, Possible Responses tab, and simulation [DCI] *Ecosystem Restoration* unit: ● Lesson 2.1, **Activity 4**, Instructional Guide [DCI] *The Earth System* unit: ● Lesson 2.2, **Activity 2**, Instructional Guide, step 1 and Teacher Support tab ("Instructional Suggestion, Providing More Experience: Gathering Evidence that Air is Something") [CCC, DCI] *Modeling Matter* unit: ● Lesson 1.5 ○ **Activity 4**, Instructional Guide, step 6, and Teacher Support tab ("Instructional Suggestion, Student Thinking: Scale, Proportion, and Quantity in This Unit") ○ **Lesson Brief**, Digital Resources, "Properties of Matter Chart: Completed" [DCI] *Modeling Matter* unit:

		● Lesson 2.3 ○ **Activity 2**, Instructional Guide, ○ **Student book**, *Solving Dissolving*, pages 5–8, 12–13 ● Lesson 1.8 ○ **Activity 1**, Instructional Guide ○ **Student book**, *Break It Down: How Scientists Separate Mixtures*, pages 5–6, 11, 18–19, 23 ● Lesson 3.7 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, “Assessment Guide” ● Lesson 1.3, **Activity 1**, Teacher Support tab (“Rationale, Pedagogical Goals: Particles vs. Molecules”)

SC.5.3.1 Gather, analyze, and communicate evidence of structure and properties of matter.	SC.5.3.1.B 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. Assessment does not include distinguishing mass and weight.	[DCI] *The Earth System* unit: ● Lesson 2.5 ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide, Possible Responses tab, and Teacher Support tab ("Assessment, Assessment Opportunity: Assessing Student Understanding of Conservation of Matter") ○ **Student book,** *Drinking Cleopatra's Tears* ● Lesson 5.3, **Activity 3**, Instructional Guide, Possible Responses tab, Teacher Support ("Instructional Suggestion, What One Teacher Did: Support Discussion with Images from the Sim"), On-the-Fly Assessment, and Modeling Tool: 5.3 Baking Soda and Vinegar and 5.3 Hot Yellow Gas [DCI] *Modeling Matter* unit: ● Lesson 2.4 ○ **Activity 2,** Instructional Guide, step 9 ○ **Student book,** *Food Scientist's Handbook***,** pages 34, 36–37, 39–44 ● Lesson 1.3, **Activity 1**, Teacher Support tab ("Rationale, Pedagogical Goals: Particles vs. Molecules") [SEP, CCC] *Ecosystem Restoration* unit: ● Lesson 2.1 ○ **Activity 2**, Instructional Guide, Possible Responses tab, and Teacher Support tab ("Instructional Suggestion, Going Further: Graphing Plant Heights" and "Assessment, Assessment Opportunity: Assessing Student Understanding of the Uses of Measurement") ○ **Investigation Notebook,** pages 32–33 [SEP, CCC] *The Earth System* unit: ● Lesson 3.2 ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Activity 3**, Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and Modeling Tool: 3.2 Condensation Data [CCC] *The Earth System* unit: ● Lesson 1.1

		○ **Activity 4**, Instructional Guide, steps 6–15, and Teacher Support tab ("Instructional Suggestion, Student Thinking: Scale, Proportion, and Quantity") ○ **Student book** *Water Encyclopedia*, pages 30–31 [CCC] *Modeling Matter* unit: ● Lesson 1.3 ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ○ **Student book,** *Made of Matter*

SC.5.3.1 Gather, analyze, and communicate evidence of structure and properties of matter.	SC.5.3.1.C Make observations and measurements to identify materials based on their properties. Assessment does not include density or distinguishing mass and weight.	[DCI, SEP] *Modeling Matter* unit: ● Lesson 1.2 ○ **Activity 2**, Instructional Guide and On-the-Fly Assessment ○ **Activity 3**, Instructional Guide [DCI] *Modeling Matter* unit: ● Lesson 1.8 ○ **Activity 1**, Instructional Guide ○ **Student book,** *Break It Down: How Scientists Separate Mixtures*, pages 17–21 ● Lesson 1.3, **Activity 1**, Teacher Support tab ("Rationale, Pedagogical Goals: Particles vs. Molecules") [DCI, SEP] *The Earth System* unit: ● Lesson 5.1 ○ **Activity 2**, Instructional Guide, steps 4–7 ○ **Activity 3**, Instructional Guide and Possible Responses tab ○ **Activity 4**, Instructional Guide ● Lesson 5.2 ○ **Activity 1**, Instructional Guide, steps 2–6 ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Activity 3**, Instructional Guide and Possible Responses tab ○ **Student book,** *Chemical Reactions Everywhere* [SEP, CCC] *Ecosystem Restoration* unit: ● Lesson 2.1 ○ **Activity 2**, Instructional Guide, Possible Responses tab, and Teacher Support tab ("Assessment Opportunity: Assessing Student Understanding of the Uses of Measurement ") ○ **Investigation Notebook,** pages 32–33 [SEP] *Patterns of Earth and Sky* unit: ● Lesson 4.2, **Activity 3**, Instructional Guide, steps 1–4 ● Lesson 4.3 ○ **Activity 1**, Instructional Guide, simulation

		○ **Activity 3**, Instructional Guide, step 4 ○ **Investigation Notebook,** pages 68–69, 76 ○ **Lesson Brief**, Digital Resources, “Assessment Guide” [CCC] *The Earth System* unit: ● Lesson 1.1 ○ **Activity 4**, Instructional Guide, steps 6–15 and Teacher Support tab (“Instructional Suggestion, Student Thinking: Scale, Proportion, and Quantity”) ○ **Student book,** *Water Encyclopedia*, pages 30–31 [CCC] *Modeling Matter* unit: ● Lesson 1.3 ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ○ **Student book,** *Made of Matter*

SC.5.3.1 Gather, analyze, and communicate evidence of structure and properties of matter.	SC.5.3.1.D Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	[DCI, SEP, CCC] *The Earth System*: ● Lesson 5.4 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, and Teacher Support tab ("Assessment, Assessment Opportunity: Assessing Student Understanding of Cause and Effect in Explaining Change") ○ **Investigation Notebook,** pages 106–107 [DCI] *The Earth System* unit: ● Lesson 5.2 ○ **Activity 1**, Instructional Guide ○ **Activity 2**, Instructional Guide ○ **Activity 4**, Instructional Guide ○ **Student book,** *Chemical Reactions Everywhere* ● Lesson 5.5 ○ **Activity 3**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" ● Lesson 5.3 ○ **Activity 1**, Instructional Guide, Possible Responses tab, and Teacher Support tab ("Instructional Suggestion, Providing More Experience: Connecting to Other Models") ○ **Investigation Notebook,** pages 101–102 ● Lesson 2.3, **Activity 1**, Teacher Support tab ("Rationale, Pedagogical Goals: Particles vs. Molecules ") [SEP] *Patterns of Earth and Sky* unit: ● Lesson 2.2, **Activity 4**, Instructional Guide, steps 2–3 and On-the-Fly Assessment [SEP, DCI] *Modeling Matter* unit: ● Lesson 3.4 ○ **Lesson Brief,** Overview ○ **Activity 2**, Instructional Guide and Possible Responses tab ○ **Activity 4**, Instructional Guide, step 3 [CCC]

		Patterns of Earth and Sky unit: ● Lesson 2.1, **Activity 2**, Instructional Guide, Teacher Support tab ("Background, Crosscutting Concept: What Is Meant by Cause and Effect" and "Background, Crosscutting Concept: Cause and Effect Across Chapter 2")

SC.5.8 Matter and Energy in Organisms and Ecosystems

SC.5.8.2 Gather and analyze data to communicate understanding of matter and energy in organisms and ecosystems.	SC.5.8.2.A Use models to describe that energy in animals' food (used for body repair, growth, and motion and to maintain body warmth) was once energy from the sun.	[Energy in an ecosystem comes from the sun] [DCI, CCC] *Ecosystem Restoration* unit: ● Lesson 2.4 ○ **Activity 2**, Instructional Guide, Possible Responses tab, and simulation ○ **Investigation Notebook,** page 42 ● Lesson 2.2 ○ **Activity 1**, Teacher Support tab ("Background, Crosscutting Concept: Energy and Matter Across Chapter 2" and "Instructional Suggestion, Crosscutting Concepts: Making Connections Across Science Topics") ○ **Activity 2**, Instructional Guide ○ **Student book,** *Energy Makes It All Go* [DCI] *Ecosystem Restoration* unit: ● Lesson 2.7, **Activity 3**, Instructional Guide, steps 5–6, Possible Responses tab, and Critical Juncture Assessment [DCI, SEP, CCC] *Ecosystem Restoration* unit: ● Lesson 2.5 ○ **Activity 1**, Instructional Guide ○ **Activity 2**, Instructional Guide, steps 1–5 and On-the-Fly Assessment ● **Printable Resources**, Print Materials (8.5" x 11"), Organism Name Cards: Set 2, pages 29–34 [DCI, SEP] *Ecosystem Restoration* unit: ● Lesson 2.3 ○ **Activity 3**, Instructional Guide, Possible Responses tab, Teacher Support tab ("Instructional Suggestion, Going Further: Chemical Reactions"), and Modeling Tool: 2.3 Plant Needs Model ○ **Investigation Notebook,** page 34 [Animals use food for body repair, growth, motion, and warmth] [DCI] *Ecosystem Restoration* unit: ● Lesson 1.3 ○ **Activity 4**, Instructional Guide and Possible Responses tab ○ **Student book,** *Matter Makes It All Up*, pages 5–11

		● Lesson 1.6, **Activity 3**, Instructional Guide, steps 2–3, Possible Responses tab, and Critical Juncture Assessment ● Lesson 1.5, **Activity 1**, Instructional Guide, Possible Responses tab, and simulation ● Lesson 2.2 ○ **Activity 2**, Instructional Guide ○ **Student book,** *Energy Makes It All Go*, pages 4, 6 [SEP] *Modeling Matter*: ● Lesson 1.6 ○ **Activity 2**, Instructional Guide, On-the-Fly Assessment, and Teacher Support tab (“Background, Pedagogical Goals: Developing Models”) ○ **Investigation Notebook,** page 14

SC.5.8.2 Gather and analyze data to communicate understanding of matter and energy in organisms and ecosystems.	SC.5.8.2.B Support an argument that plants get the materials they need for growth chiefly from air and water.	[SEP, DCI] *Ecosystem Restoration* unit: ● Lesson 2.7, **Activity 3**, Instructional Guide, steps 5–6, Possible Responses tab, and Critical Juncture Assessment [DCI] *Ecosystem Restoration* unit: ● Lesson 2.3 ○ **Activity 1**, Instructional Guide ○ **Activity 2**, Instructional Guide ○ **Activity 4**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ● **Printable Resources**, Print Materials (8.5" x 11"), Leaves and Roots Game Board, and Leaves and Roots Game Cards, pages 22–28 [DCI, CCC] *Ecosystem Restoration* unit: ● Lesson 2.1, **Activity 3**, Instructional Guide, Possible Responses tab and simulation ● Lesson 2.2 ○ **Activity 1**, Instructional Guide ○ **Student book,** *Energy Makes It All Go*, page 8 [CCC] *Ecosystem Restoration* unit: ● Lesson 1.7 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide, steps 4–5, and On-the-Fly Assessment ● **Printable Resources**, Print Materials (8.5" x 11"), Organism Name Cards: Set 1, pages 12–17 ● Lesson 3.3 ○ **Activity 1**, Instructional Guide ○ **Activity 4**, Instructional Guide, steps 1–3, Teacher Support tab ("Instructional Suggestion, Providing More Support: Drawing Conclusions About Matter and Energy"), and simulation

SC.5.8.2 Gather and analyze data to communicate understanding of matter and energy in organisms and ecosystems.	SC.5.8.2.C Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. Assessment does not include molecular explanations or the biochemical mechanisms of photosynthesis.	[DCI, SEP] *Ecosystem Restoration* unit: ● Lesson 1.6, **Activity 2**, Instructional Guide, Possible Responses tab, and Modeling Tool: 1.6 Healthy Ecosystem Model ● Lesson 2.3, **Activity 3**, Instructional Guide, steps 1–4, Possible Responses tab, and Modeling Tool: 2.3 Plant Needs Model ● Lesson 3.7, **Activity 1**, Instructional Guide, Possible Responses tab, and Modeling Tool: 3.7 No Decomposers Model [DCI] *Ecosystem Restoration* unit: ● **Unit Guide**, Unit Overview ● Lesson 1.5, **Activity 1**, Instructional Guide and Possible Responses tab ● Lesson 2.1, **Activity 3**, Instructional Guide and Possible Responses tab ● Lesson 3.3 ○ **Activity 1**, Instructional Guide and Possible Responses tab ○ **Activity 4**, Instructional Guide, steps 1–3 ● Lesson 3.2 ○ **Activity 2**, Instructional Guide ○ **Activity 3,** Instructional Guide ○ **Student book**, *Walk in the Woods*, page 5–15 ● Lesson 1.8, **Activity 3**, Instructional Guide, steps 6–8, and Possible Responses tab ● Lesson 3.6, **Activity 2**, Instructional Guide, steps 4–5, Possible Responses tab, and Critical Juncture Assessment ● Lesson 2.5, **Activity 3**, Instructional Guide ● Lesson 3.5 ○ **Activity 2**, Instructional Guide, and Teacher Support tab (“Instructional Suggestion, Going Further: Balance and Interdependence of Ecosystems: Impacts of Invasive Species”) ○ **Student book,** *Restoration Case Studies*, pages 11, 31, 47 [DCI, CCC] *Ecosystem Restoration* unit: ● Lesson 3.4, **Activity 2**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment [DCI, SEP] *Ecosystem Restoration* unit: ● Lesson 1.7 ○ **Activity 2**, Instructional Guide

		○ **Activity 3**, Instructional Guide, steps 3–7 and On-the-Fly Assessment ● **Printable Resources**, Print Materials (8.5" x 11"), Organism Name Cards: Set 1, pages 12–17 [DCI, CCC] *Ecosystem Restoration* unit: ● Lesson 1.3, **Activity 2**, Instructional Guide, steps 6–7 ● Lesson 1.6 ○ **Activity 4**, Instructional Guide, steps 2–10 ○ **Student book**, *Matter Makes It All Up*, pages 10–18 [SEP] *Modeling Matter* unit: ● Lesson 1.6 ○ **Activity 2**, Instructional Guide, On-the-Fly Assessment, and Teacher Support tab ("Background, Pedagogical Goals: Developing Models") ○ **Investigation Notebook**, page 14

SC.5.11 Space Systems: Earth's Stars and Solar System

SC.5.11.3 Gather and analyze data to communicate understanding of space systems: Earth's stars and solar system.	SC.5.11.3.A Support an argument that the gravitational force exerted by Earth on objects is directed down. Assessment does not include mathematical representation of gravitational force.	[DCI] *Patterns of Earth and Sky* unit: ● Lesson 2.4 ○ **Activity 1**, Instructional Guide, steps 4–6 ○ **Investigation Notebook,** page 33 ○ **Activity: Observing The Way Things Fall**, Instructional Guide, The Way Things Fall video ○ **Investigation Notebook,** page 34 ○ **Activity 2**, Instructional Guide ○ **Student book,** *Which Way Is Up?* ○ **Activity 3**, Instructional Guide ● Lesson 3.6 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "End-of-Unit Writing: Explaining the Artifact Version A copymaster," Section 4, and "Assessment Guide" ● Lesson 2.5, **Activity 1**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment [SEP] *Ecosystem Restoration* unit: ● Lesson 1.8, **Activity 3**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ● Lesson 2.7, **Activity 3**, Instructional Guide, steps 5–6, Possible Responses tab, and Critical Juncture Assessment ● Lesson 3.6, **Activity 2**, Instructional Guide, steps 4–5, Possible Responses tab, and Critical Juncture Assessment ● Lesson 3.7 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide," Rubric 1 [CCC] *The Earth System* unit: ● Lesson 5.4 ○ **Activity 2**, Instructional Guide ○ **Activity 3**, Instructional Guide and Teacher Support tab ("Assessment, Assessment Opportunity: Assessing Student Understanding of Cause and Effect in Explaining Change") ○ **Investigation Notebook,** pages 106–107 [CCC]

		Patterns of Earth and Sky unit: ● Lesson 2.1, **Activity 2**, Instructional Guide and Teacher Support tab ("Background, Crosscutting Concept: What Is Meant by Cause and Effect" and "Background, Crosscutting Concept: Cause and Effect Across Chapter 2")

SC.5.11.3 Gather and analyze data to communicate understanding of space systems: Earth's stars and solar system.	SC.5.11.3.B Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth. 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, and stage).	[DCI, SEP] *Patterns of Earth and Sky* unit: ● Lesson 1.6 ○ **Activity 1**, Instructional Guide, Possible Responses tab, On-the-Fly Assessment, and Teacher Support tab ("Background, Science Note: The Brightness of Stars ○ **Activity: Reflecting on Brightness**, Instructional Guide, steps 5–6 [DCI, CCC] *Patterns of Earth and Sky* unit: ● Lesson 1.7, **Activity 3**, Instructional Guide, steps 1–2, Possible Responses tab, and Critical Juncture Assessment ● Lesson 1.3 ○ **Activity 2**, Instructional Guide, and Teacher Support tab ("Background, Crosscutting Concept: What Is Meant by Scale, Proportion, and Quantity in This Unit?") ○ **Student book,** *How Big Is Big? How Far Is Far?*, pages 10–23 [DCI] *Patterns of Earth and Sky* unit: ● Lesson 1.5, **Activity 3**, Instructional Guide [SEP] *Ecosystem Restoration* unit: ● Lesson 1.8, **Activity 3**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ● Lesson 2.7, **Activity 3**, Instructional Guide, steps 5–6, Possible Responses tab, and Critical Juncture Assessment ● Lesson 3.6, **Activity 2**, Instructional Guide, steps 4–5, Possible Responses tab, and Critical Juncture Assessment ● Lesson 3.7 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide," Rubric 1, Possible Student Responses [CCC] *Modeling Matter* unit: ● Lesson 1.3 ○ **Activity 1**, Instructional Guide and Scale Tool ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment

		○ **Student book,** *Made of Matter*

SC.5.11.3 Gather and analyze data to communicate understanding of space systems: Earth's stars and solar system.	SC.5.11.3.C Represent data in graphical displays to reveal patterns of daily changes in the length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. Assessment does not include causes of seasons.	[Length and direction of shadows] [DCI] *Patterns of Earth and Sky* unit: ● Lesson 2.3 ○ **Activity: Spinning Earth**, Teacher Support tab ("Instructional Suggestion, Going Further: Investigating How Shadows Change") ○ **Lesson Brief**, Digital Resources, "Extension: Investigating Shadows copymaster" [Day and night] [DCI] *Patterns of Earth and Sky* unit: ● Lesson 2.2 ○ **Activity 2**, Instructional Guide and Possible Responses ○ **Activity 3**, Instructional Guide, Possible Responses and simulation [CCC, DCI] *Patterns of Earth and Sky* unit: ● Lesson 2.1, **Activity 1**, Instructional Guide, steps 3–8, On-the-Fly Assessment, and Teacher Support tab ("Instructional Suggestion, Providing More Support: Patterns," "Background, Crosscutting Concept: What is Meant by Patterns?," and "Background, Crosscutting Concept: Patterns Across Ch. 2") [Different positions of the sun, moon, and stars] [DCI] *Patterns of Earth and Sky* unit: ● Lesson 3.3 ○ **Activity 2,** Instructional Guide, steps 6–8 ○ **Activity 3,** Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ○ **Activity 4,** Instructional Guide ○ **Activity 5,** Instructional Guide [DCI, CCC] *Patterns of Earth and Sky* unit: ● Lesson 3.6 ○ **Activity 1,** simulation ○ **Activity 2**, Instructional Guide, steps 2–6 ○ **Lesson Brief**, Digital Resources, "End-of-Unit Writing: Explaining the Artifact Version A copymaster," Sections 2–3, and "Assessment Guide"

		[DCI] *Patterns of Earth and Sky* unit: ● Lesson 3.2**, Activity 3**, Instructional Guide and On-the-Fly Assessment ● Lesson 2.5, **Activity 3**, Instructional Guide ● Lesson 3.1 ○ **Activity 4**, Teacher Support tab ("Instructional Suggestion, Going Further: Investigating the Sun Throughout the Year") ○ **Lesson Brief**, Digital Resources, "Extension: Investigating the Sun Throughout the Year copymaster" [SEP] *Ecosystem Restoration* unit: ● Lesson 2.1, **Activity 2**, Teacher Support tab ("Instructional Suggestion, Going Further: Graphing Plant Heights") [SEP] *The Earth System* unit: ● Lesson 3.2, **Activity 3**, Instructional Guide, steps 1–5, Possible Responses tab, On-the-Fly Assessment, and Modeling Tool: 3.2 Condensation Data

SC.5.13 Earth's Systems

SC.5.13.4 Gather and analyze data to communicate understanding of Earth's systems.	SC.5.13.4.A Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. Assessment is limited to the interactions of two systems at a time.	[DCI, CCC] *The Earth System* unit: ● **Unit Guide**, Unit Overview ● Lesson 4.4 ○ **Activity 1**, Instructional Guide, and Teacher Support tab ("Instructional Suggestion, Providing More Experience: Examples of Systems") ○ **Student book**, *How the Earth System Explains Dinosaur Extinction* ○ **Activity 2**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ○ **Activity 3**, Instructional Guide, Teacher Support tab ("Instructional Suggestion, Providing More Experience: Earth System Interactions Matching Game" and "Instructional Suggestion, Crosscutting Concepts: Making Connections Across Science Topics") ○ **Lesson Brief**, Digital Resources, "Labeling Earth System Interactions copymaster" ○ **Activity 4**, Instructional Guide, steps 3–6 and Teacher Support tab ("Providing More Experience: Home Investigation") ○ **Lesson Brief**, Digital Resources, "Optional: Chapter 4 Home Investigation: Earth System Interactions copymaster" ● Ch. 4, Lesson 4.3 ○ **Activity 2**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Assessment Guide" [SEP] *The Earth System* unit ● Lesson 2.3, **Activity 4**, Instructional Guide, steps 1–4, Possible Responses tab, On-the-Fly Assessment, and Modeling Tool: 2.3 Condensation [SEP, DCI] *The Earth System* unit: ● Lesson 3.3, **Activity 2**, Instructional Guide, steps 1–4, Possible Responses tab, and Modeling Tool: 3.3 Raindrop Formation ● Lesson 4.2, **Activity 2**, Instructional Guide, Possible Responses tab, and Modeling Tool: 4.2 Rain Shadow ● Lesson 1.3 ○ **Activity: Human Impact on Water**, Instructional Guide, steps 5–8, and Teacher Support tab ("Instructional Suggestion, Going Further: Hydrosphere-Biosphere Interactions in the Ocean") ○ **Student book**, *Water Encyclopedia*, pages 16, 27

		[DCI] *The Earth System* unit: ● Lesson 4.2 ○ **Activity 3**, Instructional Guide and Teacher Support tab ("Instructional Suggestion, Going Further: Hydrosphere-Geosphere Interactions") ○ **Lesson Brief**, Digital Resources, "Extension: Hydrosphere-Geosphere Interactions copymaster" [SEP] *Modeling Matter* unit: ● Lesson 1.6 ○ **Activity 2,** Instructional Guide, On-the-Fly Assessment, and Teacher Support tab ("Background, Pedagogical Goals: Developing Models") ○ **Investigation Notebook**, page 14 ● Lesson 2.4, **Activity 2**, Instructional Guide, steps 2–4, Possible Responses tab, On-the-Fly Assessment, and Modeling Tool: 2.4 Dissolving Model

SC.5.13.4 Gather and analyze data to communicate understanding of Earth's systems.	SC.5.13.4.B Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. Assessment is limited to oceans, lakes, rivers, glaciers, groundwater, and polar ice caps but does not include the atmosphere.	[DCI, SEP, CCC] *The Earth System* unit: ● Lesson 1.1 ○ **Activity 4**, Instructional Guide, steps 6–15, and Teacher Support, Assessment tab ("Assessment Opportunity: Assessing Student Understanding of the Distribution of Water on Earth" and "Instructional Suggestion, Student Thinking: Scale, Proportion, and Quantity") ○ **Student book,** *Water Encyclopedia*, pages 30–31 [SEP, CCC] *Ecosystem Restoration* unit: ● Lesson 2.1 ○ **Activity 2**, Instructional Guide, Possible Responses tab, and Teacher Support tab ("Instructional Suggestion, Going Further: Graphing Plant Heights" and "Assessment, Assessment Opportunity: Assessing Student Understanding of the Uses of Measurement") ○ **Investigation Notebook,** pages 32–33 [SEP, CCC] *The Earth System* unit: ● Lesson 3.2, **Activity 3**, Instructional Guide, steps 1–5, Possible Responses tab, On-the-Fly Assessment, and Modeling Tool, 3.2 Condensation Data ● Lesson 4.2, **Activity 1**, Teacher Support tab ("Instructional Suggestion, Going Further: Mathematical Thinking"), and simulation [CCC] *Ecosystem Restoration* unit: ● Lesson 1.3, **Activity 1**, Teacher Support tab ("Instructional Suggestion, Science Practice: Linear Measurement in the Metric System" and "Instructional Suggestion, Going Further: Mathematical Thinking") and Scale Tool [CCC] *Modeling Matter* unit: ● Lesson 1.3 ○ **Activity 3**, Instructional Guide and On-the-Fly Assessment ○ **Student book,** *Made of Matter*

SC.5.13.4 Gather and analyze data to communicate understanding of Earth's systems.	SC.5.13.4.C Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	[DCI, SEP] *Ecosystem Restoration* unit: ● Lesson 2.5 ○ **Activity 3**, Instructional Guide, steps 3–9 ○ **Student book**, *Restoration Case Studies* ● Lesson 3.5 ○ **Activity 2**, Instructional Guide, Possible Responses tab, and Teacher Support tab ("Assessment, Assessment Opportunity: Assessing Student Understanding of Human Impacts on Earth's Systems") ○ **Student book**, *Restoration Case Studies* [SEP, DCI] *The Earth System* unit: ● Lesson 1.2 ○ **Activity 2**, Instructional Guide, steps 4–7 ○ **Activity 3**, Instructional Guide ○ **Activity 4**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ○ **Student books**, *Water Encyclopedia*, pages 30–31, 9–10, 40, and *Water Shortages, Water Solutions* [DCI] *Patterns of Earth and Sky* unit: ● Lesson 1.3, **Activity 3**, Instructional Guide, step 4 and Teacher Support tab ("Instructional Suggestion, Going Further: Discussing Human Impacts on Outer Space") [DCI] *Ecosystem Restoration* unit: ● Lesson 2.6 ○ **Activity 2,** Instructional Guide ○ **Student book**, *Why Do Scientists Argue?*, green (even) pages ● **Unit Guide**, Unit Overview ● Lesson 1.2, **Activity 1**, Instructional Guide, steps 4–11 ● Lesson 1.8 ○ **Activity 4**, Instructional Guide ○ **Lesson Brief**, Digital Resources, "Rain Forest Restoration Plan 1 Action Steps chart" ● Lesson 2.7, **Activity 4**, Instructional Guide and Possible Responses tab ● Lesson 3.6, **Activity 3**, Instructional Guide and Possible Responses tab

		[CCC] *The Earth System* unit: ● Lesson 4.4 ○ **Activity 1**, Instructional Guide and Teacher Support tab (“Instructional Suggestion, Providing More Experience: Examples of Systems”) ○ **Activity 2**, Instructional Guide, Possible Responses tab, and On-the-Fly Assessment ○ **Activity 3**, Instructional Guide, and Teacher Support tab (“Instructional Suggestion, Crosscutting Concepts: Making Connections Across Science Topics”) ○ **Student book**, *How the Earth System Explains Dinosaur Extinction* [CCC] *Ecosystem Restoration* unit: ● Lesson 1.6, **Activity 3**, Instructional Guide, step 6 and Teacher Support tab (“Background, Crosscutting Concept: What is Meant by Systems and System Models?” and “Background, Crosscutting Concept: Systems and System Models Across This Unit”)

SC.5.13.4 Gather and analyze data to communicate understanding of Earth's systems.	SC.5.13.4.D Define a simple design problem that can be solved by applying scientific ideas about the conservation of fresh water on Earth.	[DCI, SEP] *The Earth System* unit: ● **Unit Guide**, Unit Overview ● Lesson 2.7 ○ **Activity 1**, Instructional Guide, steps 6–9 ○ **Activity 2**, Instructional Guide, steps 2–6 ● Lesson 2.8 ○ **Activity 3**, Instructional Guide, steps 2–6 and Teacher Support tab ("Background, Engineering Note: Constraints in the Design Process" and "Assessment, Assessment Opportunity: Assessing Student Performance of Defining Problems") ○ **Student book,** *Engineering Clean Water*, pages 8–15 [DCI] *The Earth System* unit: ● Lesson 3.4 ○ **Activity 1**, Instructional Guide, steps 4–8 ○ **Activity 2**, Instructional Guide ○ **Investigation Notebook,** page 59 ● Lesson 4.5 ○ **Activity 1**, Instructional Guide ○ **Activity 2**, Instructional Guide ○ **Investigation Notebook,** page 83

SC.5.13.4 Gather and analyze data to communicate understanding of Earth's systems.	SC.5.13.4.E Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	[DCI, SEP] *The Earth System* unit: ● Lesson 2.7 ○ **Activity 1**, Instructional Guide, steps 6–9 ○ **Activity 2**, Instructional Guide, steps 2–6 ● Lesson 2.8 ○ **Activity 3**, Instructional Guide, steps 2–6 and Teacher Support tab ("Background, Engineering Note: Constraints in the Design Process" and "Assessment, Assessment Opportunity: Assessing Student Performance of Defining Problems") ○ **Student book,** *Engineering Clean Water*, pages 8–15 [DCI] *The Earth System* unit: ● Lesson 3.4 ○ **Activity 1**, Instructional Guide, steps 4–8 ○ **Activity 2**, Instructional Guide ○ **Investigation Notebook,** page 59 ● Lesson 4.5 ○ **Activity 1**, Instructional Guide ○ **Activity 2**, Instructional Guide ○ **Investigation Notebook,** page 83
Grade 6		
Standard	**Indicator**	**Where Taught**
SC.6.4 Energy		

SC.6.4.1 Gather, analyze, and communicate evidence of energy.	SC.6.4.1.A Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer. Assessment does not include calculating the total amount of thermal energy transferred.	[DCI] *Thermal Energy* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" ● Lesson 3.3, **Activity 4**, screens 1–2 of 2, Student View, Possible Responses tab, "Dumpling Dilemma: Oil or Water" article and Teacher Support tab ("Rationale, Pedagogical Goals: Additional Reading About Thermal Energy and Temperature" and "Assessment, Assessment Opportunity: Student Understanding of How the Nature of a Material Affects Energy Transfer") [SEP, DCI] *Earth's Changing Climate Engineering Internship* unit: ● Lesson 1.9 ○ **Activity: Writing the Conclusion**, Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Printable Proposal Rubric" [SEP, DCI] *Metabolism Engineering Internship* unit: ● Lesson 1.9 ○ **Activity: Finalizing the Proposal**, Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Printable Proposal Rubric" [CCC] *Earth's Changing Climate* unit: ● Lesson 2.3, **Activity 1**, Instructional Guide, steps 1–2, Student View, Possible Responses tab, and On-the-Fly Assessment [CCC] *Thermal Energy* unit: ● Lesson 2.3, **Activity 4**, screens 2–3 of 3, Instructional Guide, steps 4–12
SC.6.4.1 Gather, analyze, and communicate evidence of energy.	SC.6.4.1.B Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principle and potential impacts on people and the natural environment that may limit possible solutions.	*Earth's Changing Climate Engineering Internship* unit: ● Lesson 1.9 ○ **Activity: Writing the Conclusion**, Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Printable Proposal Rubric" *Metabolism Engineering Internship* unit: ● Lesson 1.9 ○ **Activity: Finalizing the Proposal**, Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Printable Proposal Rubric"

SC.6.4.1 Gather, analyze, and communicate evidence of energy.	SC.6.4.1.C Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample. Assessment does not include calculating the total amount of thermal energy transferred.	[SEP, DCI] *Thermal Energy* unit ● Lesson 3.3 ○ **Lesson Brief**, Materials & Preparation, Preparation Before the Day of the Lesson, step 10 ○ **Lesson Brief**, Digital Resources, "Planning and Conducting Investigations of Thermal Energy Transfer copymaster" and "Rubrics for Assessing Students' Investigations of Thermal Energy Transfer" ○ **Activity 4**, "Dumpling Dilemma: Oil or Water" article [DCI] *Thermal Energy* unit: ● Lesson 4.3, **Activity 4**, Student View, Possible Responses tab, and "Rubrics for Final Written Argument" [DCI, CCC] *Thermal Energy* unit: ● Lesson 3.4 ○ **Activity 2**, Instructional Guide, steps 1–5, and Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Modeling Tool: Differences in Temperature Change copymaster" [CCC] *Thermal Energy* unit: ● Lesson 3.2, **Activity 2**, Instructional Guide, steps 1–9, Student View, and "Thermal Energy Is NOT Temperature" article

SC.6.4.1 Gather, analyze, and communicate evidence of energy.	SC.6.4.1.D Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object. Assessment does not include calculations of energy.	[DCI, SEP, CCC] *Thermal Energy* unit: • Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [SEP] *Earth's Changing Climate* unit: ● Lesson 4.2, **Activity 2**, Instructional Guide, steps 8–11, Student View, and On-the-Fly Assessment [DCI] *Thermal Energy* unit: ● Lesson 2.3, **Activity 2**, Student View, and simulation
SC.6.6 Structure and Function and Information Processing		

SC.6.6.2 Gather, analyze, and communicate evidence of the relationship between structure and function in living things.	SC.6.6.2.A Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.	[DCI] *Microbiome* unit: ● Lesson 2.8, **Activity 2**, "Viruses: On the Edge of Life" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of the Cell as the Basic Unit of Life") ● Lesson 2.6, **Activity 3**, "Bacteria: B. animalis" article, "Bacteria: B. fragilis" article, and "Bacteria: L. reuteri" article ● Lesson 2.4 ○ **Activity 3**, "Bacteria: Salmonella" article ○ **Activity 5**, "Bacteria: C. difficile" article [CCC, DCI] *Microbiome* unit: ● Lesson 1.3, **Activity 4**, Instructional Guide, steps 1–6, Student View, and On-the-Fly Assessment ● Lesson 2.8 ○ **Activity 1**, Student View ○ **Lesson Brief**, Digital Resources, "Microbiome End-of-Unit Assessment Scoring Guide" [SEP] *Thermal Energy* unit: ● Lesson 3.3, **Lesson Brief**, Digital Resources, "Planning and Conducting Investigations of Thermal Energy Transfer copymaster," and "Rubrics for Assessing Students' Investigations of Thermal Energy Transfer" [SEP] *Traits and Reproduction* unit: ● Lesson 3.2, **Activity 3**, Instructional Guide, steps 1–8, Student View, and simulation

SC.6.6.2 Gather, analyze, and communicate evidence of the relationship between structure and function in living things.	SC.6.6.2.B Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function. Assessment of organelle structure/function relationships is limited to the cell wall and cell membrane. Assessment of the function of the other organelles is limited to their relationship to the whole cell. Assessment does not include the biochemical function of cells or cell parts.	[DCI] *Microbiome* unit: ● Lesson 1.2, **Activity 5**, Instructional Guide, steps 1–2, Student View, "Cells" article, and Teacher Support tab (“Assessment, Assessment Opportunity: Student Understanding of Cellular Structures and the Subsystems of Multicellular Organisms”) *Metabolism* unit: ● Lesson 3.3, **Activity 3**, Instructional Guide, steps 1–5, Student View, Possible Responses tab, Modeling Tool: Model a Cell, and On-the-Fly Assessment *Traits and Reproduction* unit: ● Lesson 2.2, **Activity 2**, Instructional Guide, steps 1–9, Student View, and On-the-Fly Assessment [CCC] *Traits and Reproduction* unit: ● Lesson 1.5, **Activity 3**, Instructional Guide, steps 1–9, Student View, simulation, Possible Responses tab, and On-the-Fly Assessment [SEP] *Ocean, Atmosphere, and Climate* unit: ● Lesson 2.4, **Activity 3**, Instructional Guide, steps 1–9, Student View, Modeling Tool: Currents and Temperature, Possible Responses tab, and On-the-Fly Assessment [CCC] *Traits and Reproduction* unit: ● Lesson 1.3 ○ **Activity 2**, Instructional Guide, steps 1–2, *Surprising Spider Silk* article set ○ **Activity 3**, screens 1–4 of 4, Instructional Guide, steps 1–15, and Student View [SEP] *Earth’s Changing Climate* unit: ● Lesson 1.3, **Activity 3**, Instructional Guide, steps 5–9, Student View, and Teacher Support tab (“Background, Pedagogical Goals: Developing Models”)

SC.6.6.2 Gather, analyze, and communicate evidence of the relationship between structure and function in living things.	SC.6.6.2.C Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells. Assessment does not include the mechanism of one body system independent of others. Assessment is limited to the circulatory, excretory, digestive, respiratory, muscular, and nervous systems.	[DCI, CCC] *Metabolism* unit: ● Lesson 2.1, **Activity 4**, Instructional Guide, steps 1–5, Student View, and On-the-Fly Assessment [DCI] *Metabolism* unit: ● Lesson 2.6 ○ **Activity 5**, Student View, *Systems of the Human Body* article set ○ **Activity 4**, Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Body Systems") [SEP] *Metabolism* unit: ● Lesson 4.2, **Activity 3**, Instructional Guide, steps 1–5, Student View, and On-the-Fly Assessment [SEP, CCC] *Metabolism* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubric for Final Written Argument" [SEP] *Traits and Reproduction* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubric for Final Written Argument"

SC.6.6.2 Gather, analyze, and communicate evidence of the relationship between structure and function in living things.	SC.6.6.2.D Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories. Assessment does not include mechanisms for the transmission of this information.	[DCI] *Metabolism* unit: ● Lesson 3.3, **Activity 5**, Student View, Possible Responses tab, "The Big Climb" article, paragraphs 7–9, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Sensory Receptors and Information Processing") ● Lesson 2.6 ○ **Activity 5**, *Systems of the Human Body* article set, Ch. 4, "The Nervous System", Student View, Possible Responses tab ○ **Activity 4**, Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Body Systems") [SEP] *Microbiome* unit: ● Lesson 2.1, **Activity 5**, Instructional Guide, steps 1–5, "The Human Microbiome" article, and On-the-Fly Assessment [SEP] *Traits and Reproduction* unit: ● Lesson 2.1, **Activity 3**, Instructional Guide, steps 1–10, "Hemophilia, Proteins, and Genes" article, and On-the-Fly Assessment [CCC] *Ocean, Atmosphere, and Climate* unit: ● Lesson 2.4, **Activity 3**, Instructional Guide, steps 1–9, Student View, Modeling Tool: Currents and Temperature, Possible Responses tab, and On-the-Fly Assessment ● Lesson 3.4 ○ **Activity 2**, Instructional Guide, steps 1–5, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Write and Share Routine copymaster" [CCC] *Thermal Energy* unit: ● Lesson 3.3, **Activity: Setting Up the Thermal Energy and Size Demo**, Instructional Guide, step 10
SC.6.9 Growth, Development, and Reproduction of Organisms		

SC.6.9.3 Gather, analyze, and communicate evidence of the inheritance and variation of traits.	SC.6.9.3.A Construct an argument based on evidence for how plant and animal adaptations affect the probability of successful reproduction.	[DCI] *Traits and Reproduction* unit: ● Lesson 3.2, **Activity 5**, Student View, "Why the Corpse Flower Smells So Bad" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Plant Structures Used for Reproduction") [DCI] *Traits and Reproduction* unit: ● Lesson 3.1, **Activity 5**, Student View, "Invasion of the Periodical Cicadas" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of How Animal Behaviors Affect the Odds of Reproduction") [SEP] *Metabolism* unit: ● Lesson 4.2, **Activity 3**, Instructional Guide, steps 1–5, Student View, and On-the-Fly Assessment *Traits and Reproduction* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubric for Final Written Argument" [SEP, CCC] *Ocean, Atmosphere, and Climate* unit: ● Lesson 4.3 ○ **Activity 4**, Student View, and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubric for Final Written Argument" [CCC] *Ocean, Atmosphere, and Climate* unit: ● Lesson 2.4, **Activity 3**, Instructional Guide, steps 1–9, Student View, Modeling Tool: Currents and Temperature, Possible Responses tab, and On-the-Fly Assessment

SC.6.9.3 Gather, analyze, and communicate evidence of the inheritance and variation of traits.	SC.6.9.3.B Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. Assessment does not include genetic mechanisms, gene regulation, or biochemical processes.	[PE] *Traits and Reproduction* unit: ● Lesson 3.5, **Activity 2**, Purple Group, Student View, and simulation [DCI] *Traits and Reproduction* unit: ● Lesson 4.1, **Activity 5**, Student View, "Growing Giant Pumpkins" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of How Genetic and Environmental Factors Influence Growth") [CCC] *Ocean, Atmosphere, and Climate* unit: ● Lesson 2.4, **Activity 3**, Instructional Guide, steps 1–9, Student View, Modeling Tool: Currents and Temperature, Possible Responses tab, and On-the-Fly Assessment [CCC, SEP] *Ocean, Atmosphere, and Climate* unit: ● Lesson 3.4 ○ **Activity 2**, Instructional Guide, steps 1–5, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Write and Share Routine copymaster" [SEP] *Metabolism* unit: ● Lesson 2.7, **Activity 2**, screens 1–2 of 2, Instructional Guide, steps 1–7, and Student View

SC.6.9.3 Gather, analyze, and communicate evidence of the inheritance and variation of traits.	SC.6.9.3.C Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation. Assessment does not include specific changes at the molecular level, mechanisms for protein synthesis, or specific types of mutations.	[DCI] *Traits and Reproduction* unit: ● Lesson 3.3 ○ **Activity 3**, Instructional Guide, steps 1–12, Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, Modeling Tool: Venom Inheritance Model copymaster ● Lesson 3.3, **Activity 4**, Student View, Possible Responses tab, "Sea Anemones: Two Ways to Reproduce" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Sexual and Asexual Reproduction") ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" ● Lesson 4.4 ○ **Activity 2**, Student View and Possible Responses tab ○ **Activity 3**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "End-of-Unit Assessment Answer Key and Scoring Guide" [PE] *Traits and Reproduction* unit: ● Lesson 3.3, **Activity 2**, screen 2 of 3, Teacher Support tab ("Instructional Suggestion, Going Further: Mathematical Thinking") [SEP] *Ocean, Atmosphere, and Climate* unit: ● Lesson 2.4, **Activity 3**, Instructional Guide, steps 1–9, Student View, Modeling Tool: Currents and Temperature, Possible Responses tab, and On-the-Fly Assessment [CCC] *Ocean, Atmosphere, and Climate* unit: ● Lesson 4.3 ○ **Activity 4**, Instructional Guide, steps 1–7, and Student View ○ **Lesson Brief**, Digital Resources, "Rubrics for Assessing Students' Final Written Arguments" [SEP] *Earth's Changing Climate* unit:

		● Lesson 2.3, **Activity 3**, Instructional Guide, steps 1–8, Student View, Possible Responses tab, Modeling Tool: Carbon Dioxide/Methane, and On-the-Fly Assessment [CCC] *Thermal Energy* unit: ● Lesson 3.3, **Activity: Setting Up the Thermal Energy and Size Demo**, Instructional Guide, step 10

SC.6.12 Weather and Climate		
SC.6.12.4 Gather, analyze, and communicate evidence of factors and interactions that affect weather and climate.	SC.6.12.4.A Collect data to provide evidence for how the motions and complex interactions of air masses result in changes in weather conditions. Assessment does not include recalling the names of cloud types or weather symbols used on weather maps or the reported diagrams from weather stations.	[DCI, SEP] *Weather Patterns* unit: ● Lesson 2.3, **Activity 3**, Instructional Guide, steps 1–12, Student View, simulation, and On-the-Fly Assessment [DCI, CCC] *Ocean, Atmosphere, and Climate* unit: ● Lesson 3.3, **Activity 2**, Instructional Guide, steps 1–7, Student View, Modeling Tool: Christchurch Model, and On-the-Fly Assessment ● Lesson 4.3 ○ **Activity 4**, Instructional Guide, steps 1–7, and Student View ○ **Lesson Brief**, Digital Resources, Rubrics for Assessing Students' Final Written Arguments ○ **Activity 6**, Student View [SEP] *Thermal Energy* unit: ● Lesson 3.3, **Lesson Brief**, Digital Resources, "Planning and Conducting Investigations of Thermal Energy Transfer copymaster" and "Rubrics for Assessing Students' Investigations of Thermal Energy Transfer"

SC.6.12.4 Gather, analyze, and communicate evidence of factors and interactions that affect weather and climate.	SC.6.12.4.B Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. Assessment does not include the dynamics of the Coriolis effect.	[PE] *Ocean, Atmosphere, and Climate* unit: ● Lesson 3.2, **Activity 4**, Student View, "What Causes Prevailing Winds?" article, and "The Coriolis Effect" article [DCI, SEP] *Ocean, Atmosphere, and Climate* unit: ● Lesson 3.3, **Activity 2**, Instructional Guide, steps 1–7, Student View, Modeling Tool: 3.3 Christchurch Model, and On-the-Fly Assessment ● Lesson 1.4: **Activity 3**, Instructional Guide, steps, 1–6, Student View, Modeling Tool: 1.4 Different Temperatures, and On-the-Fly Assessment [DCI] *Ocean, Atmosphere, and Climate* unit: ● Lesson 4.3 ○ **Activity 4**, Instructional Guide, steps 1–7, and Student View ○ **Lesson Brief**, Digital Resources, “Rubrics for Assessing Students’ Final Written Arguments” ○ **Activity 6**, Student View [CCC] *Metabolism* unit: ● Lesson 3.3, **Activity 3**, Instructional Guide, steps 1–6, Student View, Modeling Tool: 3.3 Model a Cell, and On-the-Fly Assessment *Earth’s Changing Climate* unit: ● Lesson 2.3, **Activity 3**, Instructional Guide, steps 1–6, Student View, and Modeling Tool: Carbon Dioxide/Methane [DCI] *Ocean, Atmosphere, and Climate* unit: ● Lesson 3.3, **Activity 4**, Student View, and “Deep Ocean Currents: Driven by Density” article

SC.6.12.4 Gather, analyze, and communicate evidence of factors and interactions that affect weather and climate.	SC.6.12.4.C Ask questions to clarify evidence of the factors that have caused the change in global temperatures over thousands of years.	[DCI, CCC] *Earth's Changing Climate* unit: ● Lesson 4.3 ○ **Activity 3**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [SEP] *Ocean, Atmosphere, and Climate* unit: ● Lesson 2.1, **Activity 2**, Instructional Guide, step 12, Student View, "The Ocean in Motion" article, and On-the-Fly Assessment ● Lesson 4.2 ○ **Activity 2**, Instructional Guide, steps 1–5, and Student View ○ **Activity: Introducing the Science Seminar**, Instructional Guide, steps 1–6 ○ **Activity 3**, Instructional Guide, steps 1–11, and Student View [DCI] *Earth's Changing Climate* unit: ● Lesson 3.3, **Activity 3**, Instructional Guide, steps 1–7, Modeling Tool: Climate Change Solution, Possible Responses tab, and On-the-Fly Assessment [CCC] *Earth's Changing Climate* unit: ● Lesson 4.3, **Activity 2**, Instructional Guide, step 11

SC.6.12.4 Gather, analyze, and communicate evidence of factors and interactions that affect weather and climate.	SC.6.12.4.D Analyze and interpret data on weather and climate to forecast future catastrophic events and inform the development of technologies to mitigate their effect.	[DCI] *Plate Motion Engineering Internship* unit: ● Lesson 1.9 ○ **Activity: Finalizing the Proposal**, Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Printable Proposal Rubric" [CCC, DCI] *Plate Motion* unit: ● Lesson 1.3, **Activity 3**, Instructional Guide, steps 1–24, Student View**,** and On-the-Fly Assessment ● **Printable Resources,** Print Materials (8.5" x 11"), Earthquake Map and Plate Boundary Map, pages 20–21 [SEP] *Plate Motion* unit: ● Lesson 4.3 ○ **Activity 3**, Instructional Guide, steps 1–5, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Science Seminar Reasoning Tool copymaster" [SEP] *Populations and Resources* unit: ● Lesson 2.7 ○ **Activity 3**, Instructional Guide, steps 1–13, and Student View ○ **Lesson Brief**, Digital Resources, "Glacier Sea Evidence Cards Set 1 copymaster" [CCC] *Plate Motion Engineering Internship* unit: ● Lesson 1.3 ○ **Activity: Researching Plate Boundaries**, Instructional Guide, steps 1–7, and *Futura Geohazards Engineer's Dossier,* Ch. 3, "Plate Motion and Tsunamis" article ○ **Activity: Investigating Earthquakes with TsunamiAlert,** Instructional Guide, steps 1–6, and TsunamiAlert Design Tool
SC.6.13 Earth's Systems		

SC.6.13.5 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter associated with Earth's materials and processes.	SC.6.13.5.A Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity. A quantitative understanding of the latent heats of vaporization and fusion is not assessed.	[DCI, CCC] *Weather Patterns* unit: ● Lesson 2.3, **Activity 3**, Instructional Guide, steps 1–12, Student View, simulation, and On-the-Fly Assessment [SEP] *Thermal Energy* unit: ● Lesson 1.4 ○ **Activity 3**, Instructional Guide, steps 1–10, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Modeling Tool: Differences in Temperature copymaster" [SEP] *Earth's Changing Climate* unit: ● Lesson 1.3, **Activity 3**, Instructional Guide, steps 5–9, and Student View [CCC] *Weather Patterns* unit: ● Lesson 2.1, **Activity 3**, Instructional Guide, steps 1–9, Student View, and Teacher Support tab [DCI] *Weather Patterns* unit: ● Lesson 1.2, **Activity 1**, Instructional Guide, steps 1–5, and Student View

Grade 7		
Standard	**Indicator**	**Where Taught**
SC.7.3 Structure and Properties of Matter		

SC.7.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.	SC.7.3.1.A Develop models to describe the atomic composition of simple molecules. Assessment does not include valence electrons and bonding energy, discussing the ionic nature of subunits of complex structures, or a complete description of all individual atoms in a complex molecule or extended structure is not required.	[DCI] *Chemical Reactions* unit: ● Lesson 4.1, **Activity 1**, screens 1–12 of 12, Student View [DCI, SEP] *Chemical Reactions* unit: ● Lesson 1.6, **Activity 3**, screen 2 of 4, Instructional Guide, step 8, and On-the-Fly Assessment [SEP] *Phase Change* unit: ● Lesson 1.6, **Activity 4**, Instructional Guide, steps 1–9, Student View, Possible Responses tab, Modeling Tool: Methane Lake Freezing, Modeling Tool: Methane Lake Evaporating, and On-the-Fly Assessment [CCC] *Phase Change* unit: ● Lesson 1.5, **Activity 3**, Instructional Guide, steps 1–10, Student View, and On-the-Fly Assessment
SC.7.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.	SC.7.3.1.B Gather and make sense of information to describe that synthetic materials come from natural resources and impact society. Assessment is limited to qualitative information.	[PE] *Chemical Reactions* unit: ● Lesson 2.1, **Activity 5**, Student View, "Synthetic Materials: Making Substances in the Lab" article, and Teacher Support tab [DCI] *Chemical Reactions* unit: ● Lesson 2.1, **Activity 4**, Instructional Guide, step 2, and On-the-Fly Assessment ● Lesson 2.2, **Activity 3**, Instructional Guide, step 6, and On-the-Fly Assessment ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [SEP]

		Populations and Resources unit: ● Lesson 3.1, **Activity 2**, "Jelly Population Explosion" article and On-the-Fly Assessment [CCC] *Phase Change Engineering Internship* unit: ● Lesson 1.9, **Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Printable Proposal Rubric" [SEP] *Populations and Resources* unit: ● Lesson 3.4 ○ **Activity 2**, Instructional Guide, steps 1–6, and Student View ○ **Lesson Brief,** Digital Resources, "Glacier Sea Ecosystem Evidence Card Set 2 copymaster" ○ **Activity 3**, Instructional Guide, steps 1–4, Student View, and Possible Responses tab [CCC] *Phase Change Engineering Internship* unit: ● Lesson 1.4, **Activity: Analyzing Incubator Material,** Instructional Guide, steps 1–11, BabyWarmer Design Tool, and Teacher Support tab ("Rationale, Connection to Crosscutting Concept of Structure and Function")
SC.7.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.	SC.7.3.1.C Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.	[DCI] *Phase Change* unit: ● Lesson 4.4 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [DCI, SEP] *Phase Change* unit: ● Lesson 1.6, **Activity 4**, Instructional Guide, steps 1–9, Student View, Possible Responses tab, Modeling Tool: Methane Lake Freezing, Modeling Tool: Methane Lake Evaporating, and On-the-Fly Assessment [CCC] *Populations and Resources* unit: ● Lesson 3.3

		○ **Activity 3**, Instructional Guide, steps 1–6, Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Write and Share Routine copymasters" [CCC] *Phase Change* unit: ● Lesson 1.3 ○ **Lesson Brief,** Digital Resources, "Modeling Molecules and Phases copymaster" ○ **Activity 2**, screen 2 of 2, Instructional Guide, steps 11–13 ○ **Activity 5**, Student View [CCC] *Rock Transformations* unit: ● Lesson 3.2, **Activity 3**, Instructional Guide, steps 1–8, Student View, and simulation
SC.7.5 Chemical Reactions		
SC.7.5.2 Gather, analyze, and communicate evidence of chemical reactions.	SC.7.5.2.A Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. Assessment is limited to analysis of the following properties: density, melting point, boiling point, solubility, flammability, and odor.	[DCI] *Chemical Reactions* unit: ● Lesson 3.4, **Activity 4**, Student View and Possible Responses tab ● Lesson 2.1, **Activity 4,** Instructional Guide, step 2, and On-the-Fly Assessment ● Lesson 2.2, **Activity 3**, Instructional Guide, step 6, and On-the-Fly Assessment ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [SEP, CCC] *Chemical Reactions* unit: ● Lesson 1.3, **Activity 4**, Instructional Guide, steps 1–7, Student View, Possible Responses tab, Sorting Tool: Evaluating Evidence, and On-the-Fly Assessment

		[CCC] *Chemical Reactions* unit: ● Lesson 1.5, **Activity 3**, Instructional Guide, steps 6–7, and "Atomic Zoom-In: Comparing Substances at a Very Small Scale" article [SEP] *Phase Change Engineering Internship* unit: ● Lesson 1.6 ○ **Activity: Testing Final Designs**, Instructional Guide, steps 1–5 ○ **Lesson Brief**, Digital Resources, "BabyWarmer Data copymaster"
SC.7.5.2 Gather, analyze, and communicate evidence of chemical reactions.	SC.7.5.2.B Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved. Assessment does not include the use of atomic masses, balancing symbolic equations, or intermolecular forces.	[DCI, SEP, CCC] *Chemical Reactions* unit: ● Lesson 3.4 ○ **Activity 3**, Instructional Guide, steps 1–5, and Student View ○ **Lesson Brief**, Digital Resources, "Modeling Tool: Products of the Reaction copymaster" [SEP] *Phase Change* unit: ● Lesson 1.6, **Activity 4**, Instructional Guide, steps 1–9, Student View, Possible Responses tab, Modeling Tool: Methane Lake Freezing, Modeling Tool: Methane Lake Evaporating, and On-the-Fly Assessment [DCI and CCC] *Chemical Reactions* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Assessing Students' Final Written Arguments" ● Lesson 4.4 ○ **Activity 2**, Student View and Possible Responses tab ○ **Activity 3**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "End-of-Unit Assessment Answer Key and Scoring Guide"

SC.7.5.2 Gather, analyze, and communicate evidence of chemical reactions.	SC.7.5.2.C Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes. Assessment is limited to the criteria of amount, time, and temperature of substance in testing the device.	[SEP, DCI] *Phase Change Engineering Internship* unit: ● Lesson 1.9, **Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Printable Proposal Rubric" [DCI] *Chemical Reactions* unit: ● Lesson 2.5, **Activity 5**, Student View, "Endothermic and Exothermic Reactions" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Energy in Chemical Reactions") [SEP, DCI] *Plate Motion Engineering Internship* unit: ● Lesson 1.9 ○ **Activity: Finalizing the Proposal**, Possible Responses tab ○ **Digital Resources**, Lesson Brief, "Printable Proposal Rubric copymaster" [CCC] *Matter and Energy in Ecosystems* unit: ● Lesson 1.6, **Activity 4**, Instructional Guide, steps 1–7, Student View, Possible Responses tab, Modeling Tool: Energy Storage Molecules, and On-the-Fly Assessment [CCC] *Populations and Resources* unit: ● Lesson 2.2, **Activity 3**, Instructional Guide, steps 8–15, and Teacher Support tab ("Background, Crosscutting Concept: Energy and Matter")
SC.7.5.2 Gather, analyze, and communicate evidence of chemical reactions.	SC.7.5.2.D Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.	[DCI, SEP] *Plate Motion Engineering Internship* unit: ● Lesson 1.9 ○ **Activity: Finalizing the Proposal**, Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Printable Proposal Rubric" *Phase Change Engineering Internship* unit: ● Lesson 1.9, **Activity: Finalizing the Proposal,** Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Printable Proposal Rubric"

SC.7.7 Interdependent Relationships in Ecosystems

SC.7.7.3 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	SC.7.7.3.A Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	[DCI, SEP] *Populations and Resources* unit: • Lesson 2.4 ○ **Activity 3**, Instructional Guide, steps 1–9, Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Write and Share Copymaster" [CCC] *Plate Motion* unit: ● Lesson 2.5, **Activity 2,** Instructional Guide, steps 1–10, Student View, and On-the-Fly Assessment [DCI] *Populations and Resources* unit: ● Lesson 3.3, **Activity 4**, Student View, "The Ant and the Acacia" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Mutually Beneficial Relationships among Organisms") [SEP] *Populations and Resources* unit: ● Lesson 2.7 ○ **Activity 2**, Instructional Guide, steps 1–13, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Modeling Tool: Increasing Births in the Moon Jelly Population copymaster" and "Modeling Tool: Decreasing Deaths in the Moon Jelly Population copymaster" ○ **Activity 3**, Instructional Guide step 13 [CCC] *Plate Motion Engineering Internship* unit: ● Lesson 1.5, **Activity: Testing Warning System Design**, Instructional Guide, steps 1–3, and TsunamiAlert Design Tool

SC.7.7.3 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	SC.7.7.3.B Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	[DCI] *Populations and Resources* unit: ● Lesson 1.3, **Activity 3**, Student View, "How Ecosystems Clean Earth's Water" article, and Teacher Support ("Assessment, Assessment Opportunity: Student Understanding of the Importance of Ecosystem Services to Humans") [CCC] *Populations and Resources* unit: Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [SEP] *Plate Motion Engineering Internship* unit: Lesson 1.8 ○ **Activity: Revising Design Decisions**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Printable Proposal Rubric" *Populations and Resources* unit: ● Lesson 4.1, **Activity 2**, Instructional Guide, step 1, and Teacher Support tab ("Background, Crosscutting Concept: Stability and Change")
SC.7.7.3 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	SC.7.7.3.C Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	[DCI, SEP] *Plate Motion Engineering Internship* unit: Lesson 1.9 ○ **Activity: Finalizing the Proposal**, Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Printable Proposal Rubric" *Phase Change Engineering Internship* unit: ● Lesson 1.9, **Activity: Finalizing the Proposal,** Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Printable Proposal Rubric"
SC.7.7.3 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	SC.7.7.3.D Apply scientific principles to design a method for monitoring and increasing positive human impact on the environment.	[DCI, SEP] *Earth's Changing Climate Engineering Internship* unit: Lesson 1.9 ○ **Activity: Writing the Conclusion**, Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Printable Proposal Rubric" *Earth's Changing Climate* unit:

		• Lesson 3.3, **Activity 2**, Instructional Guide, steps 1–8, Student View, *Climate Change Solutions* article set, and On-the-Fly Assessment [DCI] *Earth's Changing Climate* unit: • Lesson 1.2, **Activity 5**, Student View, *The Effects of Climate Change* article set, and On-the-Fly Assessment [CCC] *Ocean, Atmosphere, and Climate* unit: • Lesson 2.4, **Activity 3**, Instructional Guide, steps 1–9, Student View, Modeling Tool: 2.4 Currents and Temperature, and On-the-Fly Assessment *Earth's Changing Climate* unit: • Lesson 2.1, **Activity 2**, Instructional Guide, steps 1–2
SC.7.8 Matter and Energy in Organisms and Ecosystems		
SC.7.8.4 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter in organisms and ecosystems.	SC.7.8.4.A Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms. Assessment does not include the biochemical mechanisms of photosynthesis.	[DCI, CCC] *Matter and Energy* unit: • Lesson 1.5, **Activity 2**, Instructional Guide, steps 1–10, Student View, Modeling Tool: Energy Storage Molecules, Possible Responses tab and On-the-Fly Assessment • Lesson 3.4, **Activity 3**, Instructional Guide, steps 1–5, Student View, Modeling Tool: Biodome Model, Possible Responses tab, and On-the-Fly Assessment [SEP] *Matter and Energy in Ecosystems* unit: • Lesson 1.6, **Activity 4**, Instructional Guide, steps 1–7 and Student View, Modeling Tool: Energy Storage Molecules, Possible Responses tab, and On-the-Fly Assessment [SEP] *Plate Motion* unit: • Lesson 4.2, **Activity 2**, Instructional Guide, steps 1–6, Student View and On-the-Fly Assessment

SC.7.8.4 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter in organisms and ecosystems.	SC.7.8.4.B Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as matter moves through an organism. Assessment does not include details of the chemical reactions for photosynthesis or respiration.	[DCI, CCC, SEP] *Matter and Energy in Ecosystems* unit: ● Lesson 2.2, **Activity 3**, Instructional Guide, steps 1–6, Student View, Possible Responses tab, Modeling Tool: Carbon Dioxide in Air, and On-the-Fly Assessment [CCC, SEP] *Chemical Reactions* unit: ● Lesson 3.3, **Activity 3**, Instructional Guide, steps 1–8, Student View, Possible Responses tab, and On-the-Fly Assessment [DCI] *Chemical Reactions* unit: ● Lesson 3.3, **Activity 4**, Student View, "What Happens to Your Food?" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Chemical Reactions That Happen to Food in the Body") [DCI, CCC] *Matter and Energy in Ecosystems* unit: ● Lesson 2.3, **Activity 4**, Instructional Guide, steps 1–9, Student View, and On-the-Fly Assessment
SC.7.8.4 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter in organisms and ecosystems.	SC.7.8.4.C Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.	[DCI] *Populations and Resources* unit: ● Lesson 2.3, **Activity 3**, Instructional Guide, steps 1–4, Student View, and On-the-Fly Assessment [DCI, CCC] *Populations and Resources* unit: ● Lesson 3.3 ○ **Activity 3**, Instructional Guide, steps 1–7, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Write and Share Routine copymasters" [DCI] *Populations and Resources* unit: ● Lesson 4.3

		○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [SEP] *Plate Motion* unit: ● Lesson 4.3 ○ **Activity 3**, Instructional Guide, steps 1–5, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Science Seminar Reasoning Tool copymaster" [SEP] *Populations and Resources* unit: ● Lesson 4.2 ○ **Activity 2**, Instructional Guide, steps 1–7, and Student View ○ **Lesson Brief**, Digital Resources, "Island Evidence Cards A-H copymaster" ○ **Activity 3**, Instructional Guide, steps 1–11, and Student View ○ **Lesson Brief**, Digital Resources, "Island Evidence Card I copymaster" [CCC, DCI] *Populations and Resources* unit: ● Lesson 2.4, **Activity 2**, Instructional Guide, steps 3–6, and Student View
SC.7.8.4 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter in organisms and ecosystems.	SC.7.8.4.D Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. Assessment does not include the use of chemical reactions to describe the processes.	[DCI, CCC] *Matter and Energy* unit: ● Lesson 1.5, **Activity 2**, Instructional Guide, steps 1–10, Student View, Modeling Tool: Energy Storage Molecules, Possible Responses tab and On-the-Fly Assessment ● Lesson 3.4, **Activity 3**, Instructional Guide, steps 1–5, Student View, Modeling Tool: Biodome Model, Possible Responses tab, and On-the-Fly Assessment [SEP] *Matter and Energy in Ecosystems* unit: ● Lesson 1.6, **Activity 4**, Instructional Guide, steps 1–7 and Student View, Modeling Tool: Energy Storage Molecules, Possible Responses tab, and On-the-Fly Assessment [SEP] *Plate Motion* unit:

		• Lesson 4.2, **Activity 2**, Instructional Guide, steps 1–6, Student View and On-the-Fly Assessment
SC.7.8.4 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter in organisms and ecosystems.	SC.7.8.4.E Construct an argument supported by evidence that changes to physical or biological components of an ecosystem affect populations.	[DCI, CCC, SEP] *Populations and Resources* unit: • Lesson 4.3 ○ **Activity 4**, Student View, and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [DCI, SEP] *Matter and Energy in Ecosystems* unit: • Lesson 4.3 ○ **Activity 4**, Student View, and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [DCI] *Matter and Energy in Ecosystems* unit: • Lesson 3.4, **Activity 2**, Instructional Guide, steps 1–8, Student View, Possible Responses tab and Sorting Tool activity: Cause and Effect in the Biodome [CCC] *Populations and Resources* unit: • Lesson 4.1, **Activity 2**, Instructional Guide, step 1, and Teacher Support tab ("Background, Crosscutting Concept: Stability and Change")
SC.7.13 Earth's Systems		
SC.7.13.5 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter associated with Earth's materials and processes.	SC.7.13.5.A Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process. Assessment does not include the identification and naming of minerals.	[DCI, CCC, SEP] *Matter and Energy in Ecosystems* unit: • Lesson 3.4, **Activity 2**, Instructional Guide, steps 1–8, Student View, Possible Responses tab, and Sorting Tool activity: Cause and Effect in the Biodome [DCI] *Populations and Resources* unit:

		● Lesson 2.3, **Activity 3**, Instructional Guide, steps 1–3, Student View, and On-the-Fly Assessment [SEP] *Populations and Resources* unit: ● Lesson 1.2, **Activity 4**, Student View, *Arctic Ecosystem* article set, and Teacher Support tab ("Instructional Suggestion, Going Further: Gathering Initial Models for Future Reflection") [CCC] *Populations and Resources* unit: ● Lesson 2.2, **Activity 3**, Instructional Guide, steps 8–15 and Teacher Support tab ("Background, Crosscutting Concept: Energy and Matter")
SC.7.13.5 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter associated with Earth's materials and processes.	SC.7.13.5.B Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.	[DCI] *Rock Transformations unit:* ● Lesson 2.3, **Activity 4**, Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Renewable and Nonrenewable Resources") [SEP] *Rock Transformations* unit: ● Lesson 2.4 ○ **Activity 2**, Instructional Guide, steps 1–9, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Write-and Share Routine Student 1-4 copymaster" [CCC] *Populations and Resources* unit: ● Lesson 3.3 ○ **Activity 3**, Instructional Guide, steps 1–7, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Write and Share routine copymasters" [SEP] *Plate Motion* unit: ● Lesson 3.2, **Activity 3**, "A Continental Puzzle" article, and Teacher Support tab ("Rationale, Pedagogical Goals: Understanding the Nature of Science")

		[CCC] *Rock Transformations* unit: ● Lesson 3.2, **Activity 3**, Instructional Guide, steps 1–8, Student View, and simulation
SC.7.13.5 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter associated with Earth's materials and processes.	SC.7.13.5.C Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.	[DCI] *Natural Selection* unit: ● Lesson 4.5 ○ **Activity 2**, screens 1–3 of 3, Instructional Guide, steps 1–16, Student View, and "The Limits of Natural Selection" article ○ **Activity 3**, screens 1–2 of 2, Instructional Guide 1–11, Student View, Possible Responses tab, *Earth's Changing Climate* simulation, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Impact of Human Population and Resource Use on Earth Systems") ○ **Activity 4**, Instructional Guide, steps 1–5 [SEP and CCC] *Natural Selection* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [SEP] *Earth, Moon, and Sun* unit: ● Lesson 4.3 ○ **Activity 4**, Instructional Guide, steps 1–5, Student View, and Possible Responses tab ○ **Lesson Brief,** Digital Resources, "Rubrics for Final Written Argument" [CCC] *Natural Selection* unit: ● Lesson 3.2, **Activity 3**, Instructional Guide, steps 1–4, Student View, and ("Teacher Support, Background, Crosscutting Concept: Cause and Effect")

SC.7.14 History of Earth

SC.7.14.6 Gather, analyze, and communicate evidence to explain Earth's history.	SC.7.14.6.A Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.	[DCI] *Rock Transformations* unit: ● Lesson 2.3, **Activity 4**, Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Renewable and Nonrenewable Resources") [SEP] *Rock Transformations* unit: ● Lesson 2.4 ○ **Activity 2**, Instructional Guide, steps 1–9, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Write-and Share Routine Student 1-4 copymaster" [CCC] *Populations and Resources* unit: ● Lesson 3.3 ○ **Activity 3**, Instructional Guide, steps 1–7, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Write and Share routine copymasters" [SEP] *Plate Motion* unit: ● Lesson 3.2, **Activity 3**, "A Continental Puzzle" article, and Teacher Support tab ("Rationale, Pedagogical Goals: Understanding the Nature of Science") [CCC] *Rock Transformations* unit: ● Lesson 3.2, **Activity 3**, Instructional Guide, steps 1–8, Student View, and simulation

SC.7.14.6 Gather, analyze, and communicate evidence to explain Earth's history.	SC.7.14.6.B Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of past plate motions. Paleomagnetic anomalies in oceanic and continental crust are not assessed.	[DCI, SEP] *Plate Motion* unit: ● Lesson 4.3 ○ **Activity 3**, Instructional Guide, steps 1–5, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Science Seminar Reasoning Tool copymaster" ○ **Activity 4**, Instructional Guide, steps 1–6, and Student View ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" ○ **Activity 6**, Student View [DCI, CCC] *Plate Motion* unit: ● Lesson 3.3, **Activity 3**, Instructional Guide, steps 1–17, Student View, and On-the-Fly Assessment ● Lesson 2.5, **Activity 2**, Instructional Guide, steps 1–10, Student View, and On-the-Fly Assessment [SEP] *Plate Motion* unit: ● Lesson 3.1, **Activity 2**, Instructional Guide, steps 1–16, Student View, and simulation
SC.7.14.6 Gather, analyze, and communicate evidence to explain Earth's history.	SC.7.14.6.C Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.	[DCI] *Plate Motion Engineering Internship* unit: ● Lesson 1.9 ○ **Activity: Finalizing the Proposal**, Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Printable Proposal Rubric" [CCC, DCI] *Plate Motion* unit: ● Lesson 1.3 ○ **Activity 3**, Instructional Guide, steps 1–24, Student View**,** and On-the-Fly Assessment ○ **Printable Resources,** Print Materials (8.5" x 11"), Earthquake Map and Plate Boundary Map, pages 20–21 [SEP] *Plate Motion* unit:

		● Lesson 4.3 ○ **Activity 3**, Instructional Guide, steps 1–5, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Science Seminar Reasoning Tool copymaster" [SEP] *Populations and Resources* unit: ● Lesson 2.7 ○ **Activity 3**, Instructional Guide, steps 1–13, and Student View ○ **Lesson Brief**, Digital Resources, "Glacier Sea Evidence Cards Set 1 copymaster" [CCC] *Plate Motion Engineering Internship* unit: ● Lesson 1.3 ○ **Activity: Researching Plate Boundaries**, Instructional Guide, steps 1–7, and *Futura Geohazards Engineer's Dossier,* Ch. 3, "Plate Motion and Tsunamis" article ○ **Activity: Investigating Earthquakes with TsunamiAlert,** Instructional Guide, steps 1–6, and TsunamiAlert Design Tool:
Grade 8		
Standard	**Indicator**	**Where Taught**
SC.8.1 Forces and Interactions		
SC.8.1.1 Gather, analyze, and communicate evidence of forces and interactions.	SC.8.1.1.A Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects. Assessment is limited to vertical or horizontal interactions in one dimension.	[DCI] *Force and Motion* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" ● Lesson 4.4 ○ **Activity 2**, Student View and Possible Responses tab ○ **Activity 3**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "End-of-Unit Assessment Answer Key and Scoring Guide" [SEP] *Force and Motion Engineering Internship* unit:

		● Lesson 1.9, **Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1. 7**, Lesson Brief,** Digital Resources, "Printable Proposal Rubric copymaster" *Natural Selection Engineering Internship* unit: ● Lesson 1.9**, Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Printable Proposal Rubric copymaster" *Magnetic Fields* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [CCC] *Magnetic Fields* unit: ● Lesson 2.4 ○ **Activity 4**, Instructional Guide, steps 1–8, Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Lesson Brief,** Digital Resources, "Modeling Tool: Spacecraft Launch Energy copymaster"
SC.8.1.1 Gather, analyze, and communicate evidence of forces and interactions.	SC.8.1.1.B Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.	[DCI, SEP] *Natural Selection Engineering Internship* unit: ● Lesson 1.9 ○ **Activity: Finalizing the Proposal,** Possible Responses tab ● Lesson 1.7 ○ **Lesson Brief**, Digital Resources, "Printable Proposal Rubric copymaster" *Force and Motion Engineering Internship* unit: ● Lesson 1.9, **Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Printable Proposal Rubric copymaster"

SC.8.1.1 Gather, analyze, and communicate evidence of forces and interactions.	SC.8.1.1.C Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. Assessment is limited to forces and changes in motion in one-dimension in an inertial reference frame and to change in one variable at a time; does not include use of trigonometry.	[DCI, SEP] *Force and Motion* unit: ● Lesson 2.1 ○ **Activity 2**, Instructional Guide, steps 1–16, Student View, and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Assessing Students' Investigations of Forces on Different Objects" [DCI] *Force and Motion* unit: ● Lesson 1.6 ○ **Activity 3**, Instructional Guide, steps 3–11, Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Activity 4**, Student View ● Lesson 2.3, **Activity 3**, Instructional Guide, steps 1–13, Student View, Possible Responses tab, Modeling Tool: Claim 1, Ch. 2, Modeling Tool: Claim 2, Ch. 2 and On-the-Fly Assessment [CCC] *Evolutionary History* unit: ● Lesson 2.2, **Activity 2**, Instructional Guide, steps 1–5, and "Where Do Species Come From?" article set [SEP] *Magnetic Fields* unit: ● Lesson 3.1, **Activity 2**, Instructional Guide, steps 1–13, and Student View [CCC] *Evolutionary History* unit: ● Lesson 2.3, **Activity 2**, Teacher Support tab ("Background, Crosscutting Concept: Stability and Change")
SC.8.1.1 Gather, analyze, and communicate evidence of forces and interactions.	SC.8.1.1.D Ask questions about data to determine the factors that affect the strength of electrical and magnetic forces. Assessment about questions that require quantitative answers is limited to proportional reasoning and algebraic thinking.	[DCI] *Magnetic Fields* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" ● Lesson 4.4 ○ **Activity 2**, Student View and Possible Responses tab ○ **Activity 3**, Student View and Possible Responses tab

		○ **Lesson Brief**, Digital Resources, "End-of-Unit Assessment Answer Key and Scoring Guide" [CCC] *Force and Motion* unit: ● Lesson 1.6, **Activity 3,** Instructional Guide, steps 1–10, Student View, and On-the-Fly Assessment ● Lesson 3.2, **Activity 4**, Instructional Guide, steps 1–4, Student View, and On-the-Fly Assessment [SEP] *Force and Motion* unit: ● Lesson 2.2, **Activity 2**, On-the-Fly Assessment *Magnetic Fields* unit: ● Lesson 3.5 ○ **Activity 6**, Student View ○ **Lesson Brief**, Digital Resources, "Family Homework Experience: Asking Questions about Magnetic Forces copymaster"
SC.8.1.1 Gather, analyze, and communicate evidence of forces and interactions.	SC.8.1.1.E Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects. Assessment does not include Newton's Law of Gravitation or Kepler's Laws.	[DCI] *Magnetic Fields* unit: ● Lesson 3.2, **Activity 4**, screen 2 of 2, Student View, "Escaping a Black Hole" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Mass and Gravity") [SEP, CCC] *Magnetic Fields* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [SEP] *Force and Motion* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [CCC] *Magnetic Fields* unit:

		● Lesson 1.3, **Activity 4**, screen 1 of 2, Instructional Guide, steps 1–5, and Teacher Support tab ("Background, Crosscutting Concepts: Systems and System Models")
SC.8.1.1 Gather, analyze, and communicate evidence of forces and interactions.	SC.8.1.1.F Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact. Assessment is limited to electric and magnetic fields, and limited to qualitative evidence for the existence of fields.	[DCI] *Magnetic Fields* unit: ● Lesson 3.2 ○ **Activity 3**, Instructional Guide, steps 1–7, Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Activity 4**, screen 2 of 2, Student View, "Escaping a Black Hole" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Mass and Gravity") ● Lesson 1.5, **Activity 5**, Student View, "Painting with Static Electricity" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Electric Fields") [SEP] *Force and Motion* unit: ● Lesson 2.1 ○ **Activity 2**, Instructional Guide, steps 1–16, Student View, and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Assessing Students' Investigations of Forces on Different Objects" [CCC] *Force and Motion* unit: ● Lesson 1.6, **Activity 3**, Instructional Guide, steps 1–10, Student View, and On-the-Fly Assessment ● Lesson 3.2, **Activity 4**, Instructional Guide, steps 1–4, Student View, and On-the-Fly Assessment [SEP] *Magnetic Fields* unit: ● Lesson 3.1, **Activity 2**, Instructional Guide, steps 1–13, Student View, and Possible Responses tab

SC.8.2 Waves and Electromagnetic Radiation		
SC.8.2.2 Gather, analyze, and communicate evidence of waves and electromagnetic radiation.	SC.8.2.2.A Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave. Assessment does not include electromagnetic waves and is limited to standard repeating waves.	[DCI] *Light Waves* unit: ● Lesson 2.4 ○ **Activity 2**, Instructional Guide, steps 1–10, Student View, Possible Response tabs, and simulation ○ **Lesson Brief**, Digital Resources, "Modeling Tool: Light's Effect on Genetic Material copymaster" [SEP] *Force and Motion Engineering Internship* unit: ● Lesson 1.9, **Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1.7**, Lesson Brief,** Digital Resources, "Printable Proposal Rubric copymaster" [CCC] *Natural Selection* unit: ● Lesson 1.4, **Activity 2**, Instructional Guide, steps 1–6, Student View, Possible Responses tab, simulation, and On-the-Fly Assessment [SEP] *Light Waves* unit: ● Lesson 2.3 ○ **Activity 3**, Instructional Guide, steps 1–9, Student View, Possible Responses tab, and simulation ○ **Activity: Video: The Shape of Waves**, The Shape of Waves video ○ **Activity 4**, Instructional Guide, steps 1–7, Student View, and Teacher Support tab ("Background, Pedagogical Goals: Reflecting on How Light Waves are Different")

		[CCC] *Light Waves* unit: ● Lesson 2.5, **Activity 3**, Instructional Guide, steps 1–10, Student View, and Teacher Support tab ("Background, Crosscutting Concept: Using Graphs and Charts to Identify Patterns in Data")
SC.8.2.2 Gather, analyze, and communicate evidence of waves and electromagnetic radiation.	SC.8.2.2.B Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials. Assessment is limited to qualitative applications pertaining to light and mechanical waves.	[DCI] *Light Waves* unit: ● Lesson 2.3 ○ **Activity 5,** Student View, "Why No One in Space Can Hear You Scream" article, and Teacher Support ("Assessment, Assessment Opportunity: Student Understanding of How Sound Waves Travel") ● Lesson 2.4 ○ **Activity 2,** Instructional Guide, steps 6–10, Student View, Possible Responses tab, simulation, and On-the-Fly Assessment ● Lesson 4.3 ○ **Activity 4,** Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" *Magnetic Fields* unit: ● Lesson 3.3 ○ **Activity 3,** Instructional Guide, steps 1–5, Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Modeling Tool: Spacecraft Launches copymaster" [SEP] *Force and Motion* unit: ● Lesson 2.3, **Activity 3,** Instructional Guide, steps 1–13, Student View, Possible Responses tab, Modeling Tool: Claim 1, Ch. 2, Modeling Tool: Claim 2, Ch. 2 and On-the-Fly Assessment *Force and Motion Engineering Internship* unit: ● Lesson 1.9, **Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Printable Proposal Rubric copymaster" [CCC]

		Natural Selection Engineering Internship unit: ● Lesson 1.9, **Activity: Finalizing the Proposal,** Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Printable Proposal Rubric copymaster"
SC.8.2.2 Gather, analyze, and communicate evidence of waves and electromagnetic radiation.	SC.8.2.2.C Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals. Assessment does not include binary counting. Assessment does not include the specific mechanism of any given device.	[DCI] *Light Waves* unit: ● Lesson 3.1, **Activity 4,** Student View, "How Fiber-optic Communication Works" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of the Reliability of Digitized Signals") [SEP] *Evolutionary History* unit: ● Lesson 1.4, **Activity 3,** Instructional Guide, steps 1–9, Student View, Possible Responses tab, simulation, and On-the-Fly Assessment [CCC] *Force and Motion Engineering Internship* unit: ● Lesson 1.9, **Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Printable Proposal Rubric copymaster" [SEP] *Earth, Moon, and Sun* unit: ● Lesson 3.4, **Activity 3,** Instructional Guide, steps 1–9, Student View, and Possible Responses tab
SC.8.4 Energy		
SC.8.4.3 Gather, analyze, and communicate evidence of energy	SC.8.4.3.A 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.	[SEP, DCI] *Force and Motion* unit: ● Lesson 4.3 ○ **Activity 5**, Instructional Guide, steps 1–9, Student View, Possible Responses tab, simulation, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Mass and Velocity in Relation to Kinetic Energy ")

		○ **Lesson Brief**, Digital Resources, "Kinetic Energy and Mass copymaster," and "Kinetic Energy and Velocity copymaster" [DCI] *Force and Motion* unit: ● Lesson 3.3, **Activity 4**, screen 2 of 2, Student View, "Wrecking Ball," article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Mass and Speed in Relation to Kinetic Energy") [CCC] *Force and Motion* unit: ● Lesson 2.1, **Activity 2**, Instructional Guide, steps 1–14, Student View, Possible Responses tab, and On-the-Fly Assessment
SC.8.4.3 Gather, analyze, and communicate evidence of energy	SC.8.4.3.B Develop a model to describe that when the arrangement of objects interacting at a distance changes, then different amounts of potential energy are stored in the system. Assessment is limited to two objects and electric, magnetic, and gravitational interactions.	[DCI, SEP, CCC] *Magnetic Fields* unit: ● Lesson 3.3 ○ **Activity 3**, Instructional Guide, steps 1–5, Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Modeling Tool: Spacecraft Launches copymaster" ● Lesson 2.4 ○ **Activity 4**, Instructional Guide, steps 1–8, Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Lesson Brief,** Digital Resources, "Modeling Tool: Spacecraft Launch Energy copymaster" [DCI, CCC] *Magnetic Fields* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [DCI] *Force and Motion* unit: ● Lesson 3.3, **Activity 4**, Student View and "Wrecking Ball" article
SC.8.9 Heredity: Inheritance and Variation of Traits		

SC.8.9.4 Gather, analyze, and communicate evidence of the inheritance and variation of traits.	SC.8.9.4.A Develop and use a model to describe why structural changes to genes (mutations) may result in harmful, beneficial, or neutral effects to structure and function of organisms. Assessment does not include specific changes at the molecular level, mechanisms for protein synthesis, or specific types of mutations.	[DCI] *Natural Selection* unit: ● Lesson 2.1, **Activity 4**, Instructional Guide, steps 1–6, Student View, "Glowing Jellies" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Genes, Proteins, and Traits") ● Lesson 3.2, **Activity 2**, Instructional Guide, steps 1–9 and Student View, Possible Responses tab, and On-the-Fly Assessment ● Lesson 3.3 ○ **Activity 2**, Instructional Guide, steps 1–7 and Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Write and Share Routine #1, #2, and #3 copymaster" [SEP] *Evolutionary History* unit: ● Lesson 2.5, **Activity 2**, Instructional Guide, steps 1–7, Modeling Tool: Population Changes, Possible Responses tab, and On-the-Fly Assessment [CCC] *Force and Motion Engineering Internship* unit: ● Lesson 1.9, **Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Printable Proposal Rubric copymaster" [SEP] *Earth, Moon, and Sun* unit: ● Lesson 3.1, **Activity 2**, screen 3 of 3, Instructional Guide, steps 6–11, and Student View [CCC] *Force and Motion Engineering Internship unit:* ● Lesson 1.3, **Activity: Revising the Egg Drop Model Designs**, Instructional Guide, step 9, and Teacher Support tab ("Background, Crosscutting Concepts: Structure and Function")

SC.8.9.4 Gather, analyze, and communicate evidence of the inheritance and variation of traits.	SC.8.9.4.B Gather and synthesize information about technologies that have changed the way humans influence inheritance of desired traits in organisms.	[SEP, DCI] *Natural Selection* unit: ● Lesson 3.2, **Activity 5**, Student View, "How to Make a Venomous Cabbage" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Artificial Selection") [CCC] *Natural Selection* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubric for Final Written Argument" ● Lesson 3.2, **Activity 2**, Instructional Guide, steps 1–9, Student View, Possible Responses tab, and On-the-Fly Assessment [SEP] *Harnessing Human Energy* unit: ● Lesson 3.3 ○ **Activity: Introducing Quality of Evidence**, Instructional Guide, steps 1–8 ○ **Activity 2**, Instructional Guide, steps 1–13, Student View ● **Printable Resources,** Print Materials (8.5" x 11"), Ed-You-Swivel Evidence Cards, pages 24–28
SC.8.10 Natural Selection and Adaptations		
SC.8.10.5 Gather, analyze, and communicate evidence of natural selection and adaptations.	SC.8.10.5.A Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past. Assessment does not include the names of individual species or geological eras in the fossil record.	[DCI] *Evolutionary History* unit: ● Lesson 2.4, **Activity 5**, Student View, "Steno and the Shark" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Rock Strata and Geologic Time") ● Lesson 2.5, **Activity 2**, Instructional Guide, steps 1–7, Student View, Possible Responses tab, Modeling Tool: Population Changes, and On-the-Fly Assessment [SEP] *Natural Selection* unit: ● Lesson 1.4, **Activity 2**, Instructional Guide, steps 1–7, Student View, Possible Responses tab, and simulation [SEP]

		Evolutionary History unit: ● Lesson 3.3 ○ **Activity 3**, Instructional Guide, steps 1–11, Student View, Possible Responses tab, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Observing the Mystery Fossil Cards copymaster"
SC.8.10.5 Gather, analyze, and communicate evidence of natural selection and adaptations.	SC.8.10.5.B Apply scientific ideas to construct an explanation for the anatomical similarities and differences among and between modern and fossil organisms to infer evolutionary relationships.	[DCI, SEP] *Evolutionary History* unit: ● Lesson 3.2, **Activity 3**, Instructional Guide, steps 1–7, Student View, Possible Responses tab, and On-the-Fly Assessment [DCI, CCC] *Evolutionary History* unit: ● Lesson 4.3 ○ **Activity 3**, Student View ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" [CCC] *Natural Selection* unit: ● Lesson 1.4, **Activity 2**, Instructional Guide, steps 1–6, Student View, Possible Responses tab, simulation, and On-the-Fly Assessment [SEP] *Natural Selection*: unit: ● Lesson 3.3 ○ **Activity 3,** Instructional Guide, steps 1–7, and Student View ○ **Lesson Brief**, Digital Resources, "Modeling Tool: Newt Mystery Explanation"
SC.8.10.5 Gather, analyze, and communicate evidence of natural selection and adaptations.	SC.8.10.5.C Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.	[DCI, CCC] *Natural Selection* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" ● Lesson 4.4 ○ **Activity 1**, screens 1–18 of 18, Student View, and Possible Responses tab ○ **Activity 2**, Student View and Possible Responses tab ○ **Activity 3**, Student View and Possible Responses tab

		○ **Lesson Brief**, Digital Resources, "End-of-Unit Assessment Answer Key, and Scoring Guide" [DCI, SEP] *Natural Selection* unit: ● Lesson 2.4, **Activity 2**, Instructional Guide, steps 1–6, and On-the-Fly Assessment [SEP] *Magnetic Fields* unit: ● Lesson 3.3, **Activity 5**, Student View and Possible Responses tab
SC.8.10.5 Gather, analyze, and communicate evidence of natural selection and adaptations.	SC.8.10.5.D Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time. Assessment does not include Hardy Weinberg calculations.	[DCI and CCC] *Natural Selection* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, "Rubrics for Final Written Argument" ● Lesson 2.4, **Activity 2**, Instructional Guide, steps 1–6, Student View, Possible Responses tab, "The Deadly Dare" article, and On-the-Fly Assessment [DCI] *Natural Selection Engineering Internship* unit: ● Lesson 1.9**, Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Proposal Rubric copymaster" [DCI] *Evolutionary History* unit: ● Lesson 2.3, **Activity 2**, Instructional Guide, steps 1–6, Student View, "Where Do Species Come From?" article, and On-the-Fly Assessment [SEP] *Natural Selection* unit: ● Lesson 1.3, **Activity 4**, Instructional Guide, steps 1–4, Student View, and On-the-Fly Assessment [SEP, DCI] *Natural Selection* unit: ● Lesson 1.4, **Activity 2**, Instructional Guide, steps 1–6, Student View, Possible Responses tab, and simulation

		[CCC] *Natural Selection Engineering Internship* unit: ● Lesson 1.2, **Activity: Modeling Population Shifts**, Instructional Guide, step 12, and Teacher Support tab (“Instructional Suggestion, Crosscutting Concepts: Making Connections Across Science Topics”)
SC.8.11 Space Systems		
SC.8.11.6 Gather, analyze, and communicate evidence of the interactions among bodies in space.	SC.8.11.6.A Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.	[DCI, SEP] *Earth, Moon, and Sun* unit: ● Lesson 1.3, **Activity 3**, screen 2 of 2, Instructional Guide, step 7, and On-the-Fly Assessment [DCI, CCC] *Earth, Moon, and Sun* unit: ● Lesson 2.4, **Activity 3**, Instructional Guide, step 9, and On-the-Fly Assessment [DCI] *Earth, Moon, and Sun*: ● Lesson 4.4 ○ **Activity 1**, Student View ○ **Activity 2**, Student View ○ **Activity 3**, Student View [DCI] *Earth, Moon, and Sun* unit: ● Lesson 4.3 ○ **Activity 4**, Student View and Possible Responses tab ○ **Lesson Brief**, Digital Resources, “Rubrics for Final Written Argument” ● Lesson 3.1 ○ **Activity 5,** screen 2 of 2, Instructional Guide, Student View, Possible Responses tab, "The Endless Summer of the Arctic Tern" article ○ **Activity 4**, Teacher Support tab (“Assessment, Assessment Opportunity: Student Understanding of the Cause of Earth’s Seasons”)

		[DCI, SEP] *Force and Motion* unit: ● Lesson 1.2 ○ **Activity 5**, Student View and Teacher Support tab ("Background, Pedagogical Goals: Developing Models") ○ **Lesson Brief,** Digital Resources, "Creating a Model to Explain What Happened to the Pod copymaster" ● Lesson 1.3, **Activity 2**, Instructional Guide, step 1 [CCC] *Natural Selection* unit: ● Lesson 2.2, **Activity 2**, Instructional Guide, steps 6–15, Student View, simulation, and Teacher Support tab ("Background, Crosscutting Concept: Patterns")
SC.8.11.6 Gather, analyze, and communicate evidence of the interactions among bodies in space.	SC.8.11.6.B Develop and use a model to describe the role of gravity in the motions within the galaxy and the solar system. Assessment does not include Kepler's Laws of orbital motion or the apparent retrograde motion of planets as viewed from Earth.	[DCI, PE] *Earth, Moon, and Sun* unit: ● Lesson 2.4, **Activity 5**, "Gravity in the Solar System" article, Student View, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Gravity in the Solar System and the Galaxy") [SEP] *Earth, Moon, and Sun* unit: ● Lesson 1.3, **Activity 3**, screen 2 of 2, Instructional Guide step 7 and On-the-Fly Assessment [SEP, CCC, and DCI] *Earth, Moon, and Sun* unit: ● Lesson 2.2, **Activity 2**, Instructional Guide, steps 1–12 and Student View, and On-the-Fly Assessment [CCC] *Earth, Moon, and Sun* unit: ● Lesson 1.3, **Activity 3**, screen 1 of 2, Instructional Guide, steps 1–5

SC.8.11.6 Gather, analyze, and communicate evidence of the interactions among bodies in space.	SC.8.11.6.C Analyze and interpret data to determine scale properties of objects in the solar system. Assessment does not include recalling facts about properties of the planets and other solar system bodies.	[DCI, CCC] *Earth, Moon, and Sun* unit: ● Lesson 2.4, **Activity 5**, Student View, Possible Responses tab, "Gravity in the Solar System" article, paragraphs 1–5, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Gravity in the Solar System and Galaxy") [SEP] *Natural Selection Engineering Internship* unit: ● Lesson 1.9, **Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1.7**, Lesson Brief**, Digital Resources, "Printable Proposal Rubric" [SEP] *Force and Motion Engineering Internship* unit: ● Lesson 1.9, **Activity: Finalizing the Proposal**, Possible Responses tab ● Lesson 1.7, **Lesson Brief**, Digital Resources, "Printable Proposal Rubric copymaster" [CCC] *Evolutionary History* unit: ● Lesson 2.4, **Activity 5**, screen 1–2, Student View, Possible Responses tab, Sorting Tool Activity: Earth's History, "Steno and the Shark" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Rock Strata and Geologic Time")
SC.8.14 History of Earth		
SC.8.14.7 Gather, analyze, and communicate evidence to explain Earth's history.	SC.8.14.7.A Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6- billion-year-old history. Assessment does not include recalling the names of specific periods or epochs and events within them.	[SEP, DCI] *Evolutionary History* unit: ● Lesson 2.4, **Activity 5**, Student View and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Rock Strata and Geologic Time") [DCI] *Evolutionary History* unit: ● Lesson 3.2, **Activity 3**, Instructional Guide step 5, and On-the-Fly Assessment [CCC] *Earth, Moon, and Sun* unit:

		● Lesson 1.3, **Activity 3**, Instructional Guide, steps 1–7, Student View, and On-the-Fly Assessment [SEP] *Earth, Moon, and Sun* unit: ● Lesson 2.4 ○ **Activity 3**, Instructional Guide, steps 1–9, Student View, and On-the-Fly Assessment ○ **Lesson Brief**, Digital Resources, "Write and Share Routine: #1, #2, and #3 copymaster" [CCC] *Evolutionary History* unit: ● Lesson 2.4, **Activity 5**, Student View, Possible Responses tab, Sorting Tool: Earth's History, "Steno and the Shark" article, and Teacher Support tab ("Assessment, Assessment Opportunity: Student Understanding of Rock Strata and Geologic Time")