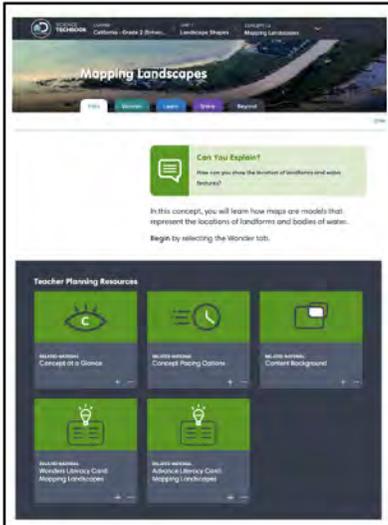




Grade 6
Teacher Edition

 | SCIENCE
TECHBOOK.

California Literacy Cards



The Discovery Education Literacy Connections Cards are designed to save teachers valuable planning time by bringing literacy into science and science into literacy. By aligning the Discovery Education Science units and concepts to the Wonders K-6 Literacy Curriculum, teachers can integrate reading and writing skills into science and also, use robust, digital content to make their literacy instruction differentiated and multimodal.

Where are the Literacy Connections Cards?

Find the cards in the digital Science Techbook under the Intro tab, among the Teacher Planning Resources.

How do you use the Literacy Connections Cards?

The Literacy Connections Cards were developed by aligning the pacing of Wonders to the pacing of the Discovery Education Science program.

The left side of the card delineates the Wonders unit, standards, literature, and matching skills and standards. The right side of the card delineates the Science unit and concept that matches Wonders, according to pacing.

Each of the Literacy Connections Cards has a corresponding Studio Board that can be accessed by scanning the QR code or typing the Quick Code in the digital Techbook. The code will take teachers to all the resources that are referenced on the Literacy Connections card.



The Literature Connections

The Literature Connections identify resources from Discovery Education Experience, and, if aligned, the science content, to the Wonders literature. Many of the resources will provide minilesson, small group or centers opportunities, complete with the content as well as an instructional strategy called SOS. These resources can be utilized during the literacy block to provide multimodal experiences for students as they grow their reading, writing, speaking and listening skills.

HOA's and Literacy Connections

The Hands-On Activity and Literacy Connections sections bring the Wonders skills and strategies into science. There are specific suggestions for not only how to integrate the teaching of reading and writing into science, but also where in the science concept these skills and strategies will have the most impact. Teachers will also find ideas on how to bring literacy into each of the science lessons using engaging SOS and other literacy activities like sentence frames or the creation of flipbooks.

LITERATURE CONNECTIONS

There are several resources in Discovery Education Experience that align to setting goals, week 5 Wonders content. These resources can be used as centers or small group activities with a focus on summarizing the content. Use the SOS Tabletop Texting and Tweet, Tweet as ways to have students practice summarization. Two Studio Boards with the video content and the two SOS are available to be assigned to students. Consider also copying the Studio Boards and adding the other videos.

There is also a Virtual Field Trip focused on "All About Your Happy." It's a good way to integrate social-emotional learning into the topic of goal setting.

There are also a number of resources to support the cultures content. There is a culture Channel; these resources can be paired with the texts, particularly since the texts are mostly realistic fiction. Use the Get Venn-y With It SOS to have students compare and contrast what they learn in the texts and in the video. This SOS will also connect with some of the Venn Diagrams that students will complete in the print SE, i.e. page 14.

LITERACY CONNECTIONS

Strategy - Visualize: On Literacy Card #3 the visualize and verbalize activity was shared. Continue with this activity and also, introduce the Filling the Silence SOS. However, flip the process. Have students listen to segments of the audio from the videos in the concept. Then, work with a partner to describe the picture in their head. Replay the video segment and have students reflect on how close they were.

Key Details [Use Illustrations]: There are several images in this unit. For example, activities 1, 2, and 7 have images that you can use with the SOS Half the Story. Click on the image and use the zoom feature to only show part of it. Students will also review many photos in this concept. Be sure to connect the key details skill from Wonders to Science.

Key Details [Sequence]: There are several blackline masters that align to the videos on Weather on the Resource Board. These sheets can be colored and then used to create a story. Students need to determine which ones they will use and how to sequence them to tell a narrative. This could then be recorded. Look at the PaperSlide SOS as an example.

Wonders California

UNIT 1: CHANGES

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|----------|----------------------|
| RL 6.1 | RI 6.1 | W 6.1a | SL 6.1b-d |
| RL 6.3 | RI 6.2 | W 6.2a | SL 6.2 |
| RL 6.4 | RI 6.6 | W 6.3a | SL 6.3 |
| RL 6.5 | RI 6.7 | W 6.6 | SL 6.4 |
| RL 6.7 | RI 6.8 | W 6.7 | |
| RL 6.10 | RI 6.10 | W 6.8 | |
| | | W 6.9a,b | |
| | | W 6.10 | |

LITERATURE

Read Aloud: "Crossing the Creek" [Realistic Fiction]

R/W Workshop: "Cow Music" [Realistic Fiction]

Anthology:

Little Blog on the Prairie [Realistic Fiction]

"The Writing on the Wall" [Personal Narrative]

Read Aloud: "The Drummer Boy" [Historical Fiction]

R/W Workshop: "Drumbeat of Freedom" [Historical Fiction]

Anthology:

"The Mostly True Adventures of Homer P. Figg" [Historical Fiction]

"Enough!" [Poetry]

Read Aloud: "Plants in Different Environments" [Expository Text]

R/W Workshop: "The Secret World of Caves" [Expository Text]

Anthology:

Journey into the Deep [Expository Text]

"Extreme Exploration: An Interview with Dr. Eva Ramirez-Llodra!" [Interview]

WEEKLY TOPIC

WEEK 1: PERSPECTIVES

Essential Question: How do new experiences offer new perspectives?

- Strategy: Visualize
- Skill: Character, Setting, Plot: Compare and Contrast
- Writing: Narrative
- Writing: Informative

WEEK 2: ALLIANCES

Essential Question: Why do people form alliances?

- Strategy: Visualize
- Skill: Character, Setting, Plot: Sequence
- Writing: Argument

WEEK 3: ENVIRONMENTS

Essential Question: How do life forms vary in different environments?

- Strategy: Read
- Skill: Main Idea and Key Details
- Test Features: Headings, Photographs and Captions, Diagrams
- Writing: Informative

Science Techbook Concept

UNIT 1: SYSTEMS ON EARTH

Concept: Body Systems

NGSS PERFORMANCE EXPECTATIONS

MS-LS1-1: Conduct an investigation to provide evidence that living things are made of cells, either one cell or many different numbers and types of cells.

MS-LS1-3: Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.

MS-LS1-8: Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.

MS-ETS1-1: Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

MS-ETS1-2: Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

Lesson Questions:

- How does the body sense and respond to the environment?
- How does the body react to stress?
- How does the body transport materials?
- How does the body get fuel?
- How does the body use oxygen?
- How does the body move?

LITERATURE CONNECTIONS

Connect the Wonders essential question "How do new experiences offer new perspectives?" to the following videos from the Discovery Education Experience to help students develop a new perspective on how people can avoid bad stress and thrive from good stressors. Have students complete a graphic organizer labeled (My current understanding of stress/Now my understanding of stress) prior to viewing and then after viewing.

Have students discuss if their perspective on stress has changed. Use the Read All About SOS Strategy. This strategy will build background knowledge about stress as well as help students develop a better understanding of how a main idea is supported with details.

HANDS-ON ACTIVITY CONNECTIONS

The specific HOA listed below may be connected to activities that are part of Environments.

- HOA: You are Getting on My Nerves

LITERACY CONNECTIONS

Visualize: Using one of the following audio clips: The Wind Story or Boat Storm/Storm at Sea. While listening to the audio clip, have students sketch what they visualize is happening. Have students share their sketches.

Compare and Contrast: Using a Venn Diagram, have students compare and contrast two body systems to provide evidence that interactions among body systems contribute to the overall function of the body. Students should have had a lot of experience with Venn Diagrams, so this should be an independent activity.

Sequence: Use readings throughout the digital text and have students identify the primary text structure supported with evidence from the text. For example, in the Beyond section, the "Chemical & Physical Changes in Digestion" is a good text to use for this. Also, use the two readings, "Getting to Know: Digestive" and "Getting to Know: Circulatory" to discuss sequential texts. Have students identify which parts of the text are sequential and discuss why this type of writing is important for this content.

Text Features: Embedded in the digital science textbook are multiple opportunities for students to identify and use text features. As students are interacting with the texts listed in the sequence section, have them also identify text features in these pieces. Have students discuss text features that could be added to help enhance their comprehension, SE topics and pages: Getting Fuel [p. 42-43], Mighty Muscles [p. 53], and Follow Your Food [p. 45].

Wonders California

UNIT 1: CHANGES

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|----------|----------------------|
| RL 6.1 | RI 6.1 | W 6.1a | SL 6.1b-d |
| RL 6.3 | RI 6.2 | W 6.2a | SL 6.2 |
| RL 6.4 | RI 6.6 | W 6.3a | SL 6.3 |
| RL 6.5 | RI 6.7 | W 6.6 | SL 6.4 |
| RL 6.7 | RI 6.8 | W 6.7 | |
| RL 6.10 | RI 6.10 | W 6.8 | |
| | | W 6.9a,b | |
| | | W 6.10 | |

LITERATURE

Read Aloud: "The Roar of Lava" [Narrative Nonfiction]

R/W Workshop: "The Monster in the Mountain" [Narrative Nonfiction]

Anthology:

Into the Volcano [Narrative Nonfiction]

"Donna O'Meara: The Volcano Lady" [Biography]

Read Aloud: "Making Money for America" [Informational Article - Expository]

R/W Workshop: "Making Money: A Story of Change" [Informational Article - Expository]

Anthology:

The Economic Roller Coaster [Informational Article - Expository]

"Our Federal Reserve at Work" [Persuasive Article]

WEEKLY TOPIC

WEEK 4: DYNAMIC EARTH

Essential Question: How do natural forces affect Earth?

- Strategy: Reread
- Skill: Main Idea and Key Details
- Text Features: Maps, Model
- Writing: Informative

WEEK 4: USING MONEY

Essential Question: What factors influence how people use money?

- Strategy: Reread
- Skill: Author's Point of View
- Text Features: Graphs, Sidebars
- Writing: Argument

WEEK 6: REVIEW AND ASSESS

Science Techbook Concept

UNIT 1: SYSTEMS ON EARTH

Concept: The Cell as a System

NGSS PERFORMANCE EXPECTATIONS

MS-LS1-2: Develop and use a model to describe the function of a cell as a whole and ways parts of the cells contribute to the function.

MS-LS1-3: Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.

MS-LS1-1: Conduct an investigation to provide evidence that living things are made of cells, either one cell or many different numbers and types of cells.

Lesson Questions:

- What are cells and why are they important?
- How can cells be considered a system?

LITERATURE CONNECTIONS

Use the Table-top Texting Strategy as students watch the video segment: "The Characteristics of Living Things." Use this strategy to help them identify characteristics common to all living things. After viewing the video, tie it back to the Wonders Essential Question "How do natural forces affect Earth?" by asking students how natural forces affect living things.

HANDS-ON ACTIVITY CONNECTIONS

HOA: Cell Theory Evidence: Connect the reading passage in the Explore More Resources section entitled "Discovery of Cells and Cell Theory" with this HOA.

LITERACY CONNECTIONS

Reread: Use the following print passages to practice the rereading strategy.

- In the print SE, pages 90-91, have students complete a first read of "A Fight to Death," paragraphs 1-3. Then have students reread to answer the following questions: How do cancer cells behave? How is cancer treated? How can cells be considered a system?
- In the print SE, page 104 as well as the digital text, have students complete a first read of "Why it is It Alive? Living or Not Living." Then have them reread to underline all the sentences that use evidence incorrectly to support the claim.

Main Idea and Key Details:

- In the print SE, pages 98-99: The students are instructed to read the text and examine the images and record the tenets of cell theory in the Main Idea Web.
- In the print SE, pages 130-131: Have students read "Career: Cancer Researcher" and complete one of the main idea graphic organizers. Idea graphic organizer.
- Using the videos that are in the digital Science Techbook, use the Video Four Square Board to have students identify components to generate a main idea.

Text Features: Embedded in both the print and digital student editions, there are multiple opportunities for students to use, identify and create text features.

- In the print SE, pages 114 and/or page 118: Have students identify the type of text features presented and explain how the text features help them understand the difference between plant and animal cells.
- In the print SE, pages 124, have students create drawings with labels to illustrate Cell City models for both healthy cells and cancerous cells.
- Embedded in the digital text in the Beyond section: Have students read the passage "Viruses." After they have read and discussed the main idea of the passage, have them identify the type of text features used in the passage and how it enhanced their comprehension.

Author's Point of View: Have students read "Time to CElLebrate" by Kathy De Antonis. Using evidence from the text, have students identify the author's point of view and purpose for writing the article.

Writing: Informative: When reading "Getting to Know: Characteristics of Living Things" that is embedded in the digital text, have students complete a main idea graphic organizer. Using the completed graphic organizer, have student write an informative paragraph about the characteristics of living things.

Writing: Argument: Using the digital text, Scientific Explanation: The Cell as a System, students need to select the best way to communicate their explanation to "What happens to the body when someone gets cancer?" Students need to include in their explanation a claim, evidence, and reason for connecting the evidence to the claim. After students have presented their scientific explanations, select several and have students identify and evaluate the effectiveness of the claim, evidence, and reason for connecting the evidence to the claim.

Wonders California

UNIT 2: EXCURSIONS ACROSS TIME

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|---------------------|----------------------|
| RL 6.1 | RI 6.1 RH 6.1 | W 6.1a | SL 6.1b-d |
| RL 6.2 | RI 6.2 RH 6.2 | W 6.2b | SL 6.2 |
| RL 6.3 | RI 6.3 | W 6.3a, c-e | SL 6.3 |
| RL 6.5 | RI 6.4 | W 6.4 | SL 6.5 |
| RL 6.6 | RI 6.5 RH 6.5 | W 6.6 | |
| RL 6.7 | RI 6.7 RH 6.7 | W 6.7 | |
| RL 6.9 | RI 6.8 | W 6.8 | |
| RL 6.10 | RI 6.10 | W 6.9a, b W 6.10 | |

LITERATURE

Read Aloud: "The Builders of Ancient Egypt" [Expository Text]

R/W Workshop: "Empire of the Sea" [Expository Text]

Anthology:

The Technology of Mesopotamia [Expository Text]

Gilgamesh Lost and Found [Expository Text]

Read Aloud: "The Road to Democracy" [Expository Text]

R/W Workshop: "The Democracy Debate" [Expository Text]

Anthology:

Who Created Democracy? [Expository Text]

"How Ideas Become Laws" [Narrative Nonfiction]

Read Aloud: "The Special Guest" [Historical Fiction]

R/W Workshop: "Yaskul's Mighty Trade" [Historical Fiction]

Anthology:

Roman Diary [Historical Fiction]

The Genius of Roman Aqueducts [Expository Text]

WEEKLY TOPIC

WEEK 1: CONTRIBUTIONS

Essential Question: What contributions were made by early civilizations?

- Strategy: Ask and Answer Questions
- Skill: Text Structure: Problem and Solution
- Text Features: Timelines, Maps
- Writing: Informative

WEEK 2: DEMOCRACY

Essential Question: How did democracy develop?

- Strategy: Ask and Answer Questions
- Skill: Text Structure: Compare and Contrast
- Text Features: Charts, Diagrams
- Writing: Argument

WEEK 3: ANCIENT SOCIETIES

Essential Question: What factors influence how people use money?

- Strategy: Make, Confirm, Revise Predictions
- Skill: Point of View
- Writing: Narrative

Science Techbook Concept

UNIT 1: SYSTEMS ON EARTH

Concept: Earth's Interacting Systems

NGSS PERFORMANCE EXPECTATIONS

MS-ESS2-4: Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

MS-LS1-2: Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function.

Lesson Questions:

- What can cause sea levels to rise?
- How does sea level rising impact coastal aquifers?
- What impact does saltwater have on plants?

LITERATURE CONNECTIONS

There is a wealth of content in Discovery Education Experience that aligns to the Wonders content. Pairing texts with videos will provide students with opportunities to practice the skills and strategies in Wonders. There is a Government, an American Democracy and an Ancient Civilizations Channel that includes videos, images and even songs.

In the Instructional Inspiration Channel, there are ready-made, turnkey assignments on Studio Boards that can be copied and assigned to students on Ancient Egypt and Ancient Greece.

Consider using the SOS The Question Is, Twenty Questions and especially Snowball Fight (which your students will love) to generate questions that can be asked and answered with these resources.

HANDS-ON ACTIVITY CONNECTIONS

HOA: Melting Ice, Rising Sea?

HOA: Plants in Saltwater

Both of the HOAs require students to predict prior to the investigation. Use this as an opportunity to bring the strategy Make, Confirm and Revise predictions from Wonders into the HOAs.

LITERACY CONNECTIONS

Ask and Answer Questions: The ask and answer questions strategy is an important one for scientists. With the questions in the digital Techbook and the print SE, help students to identify the types of questions they are answering. Using a QAR [Question, Answer, Response] type of structure, have students identify if a question is right there, think and search, author and you, on your own. Have students code the questions in the SE. The reason this strategy is important in science is it helps students identify what they need to do to answer the question and how they are going to answer it. Throughout the coding process, reflect on the types of questions that are prevalent in science.

Make, Confirm, Revise Predictions: In addition to using prediction with the HOAs, students will also use prediction as well as the confirmation and revision of their prediction in Activity 9. This is a good opportunity to use the point-of-use dashboard to show examples of how students predict, and then revise and confirm their predictions.

Text Structure - Problem and Solution; Compare and Contrast: In the print SE, there are opportunities for students to compose texts that follow the problem and solution or compare and contrast text structure. On page 150-151 the problem is outlined, students respond and can write the solution. There are also several texts for students to analyze and determine their text structure: Activities 5, 9, 16, and 18. Have students identify if these structures are problem and solution or compare and contrast. Once students determine the structure, discuss how they should read the passage. Have students write key "reading pointers" on the pages for each text in the SE.

Text Features - Timelines, Maps, Charts, Diagrams: Use the SOS Feature Find to build a scavenger hunt that has students find these different text features throughout the concept. An example of this type of scavenger hunt is included in the SOS description.

Point of View: Some of the topics in this unit lend themselves to discussing point of view with students. Use the Multiple Perspectives SOS and have students examine different points of view. For example, with the Water Solutions: Groundwater video in the Beyond section, students could examine the problem from several viewpoints. The STEM in Action text on Protecting Marshes can also be examined from multiple perspectives.

Writing - Informative, Argument, Narrative: There are several opportunities to write in different modes in this unit. Bring the Wonders writing focus areas into the pieces that students write in this concept. The specific modes list in Wonders with their accompanying writing trait and the coordinating Science writing pieces are as follows:

- Informative: Ideas: Supporting Details – Activity 1, Activity 2, Activity 4, Activity 6
- Argument: Develop a Topic – Activity 5, Activity 7
- Narrative: Organization; Strong Conclusions – Activity 20 [have students develop this into a narrative story]

Wonders California

UNITS 2 & 3: EXCURSIONS ACROSS TIME & ACCOMPLISHMENTS

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|-------------|----------------------|
| RL 6.1 | RI 6.1 RH 6.1 | W 6.1a | SL 6.1b-d |
| RL 6.2 | RI 6.2 RH 6.2 | W 6.2b | SL 6.2 |
| RL 6.3 | RI 6.3 | W 6.3a, c-e | SL 6.3 |
| RL 6.5 | RI 6.4 | W 6.4 | SL 6.4 |
| RL 6.6 | RI 6.5 RH 6.5 | W 6.6 | SL 6.5 |
| RL 6.7 | RI 6.7 RH 6.7 | W 6.7 | |
| RL 6.9 | RI 6.8 | W 6.8 | |
| RL 6.10 | RI 6.10 | W 6.9a, b | |
| | | W 6.10 | |

LITERATURE

Read Aloud: "Aban and the Physician" [Historical Fiction]

R/W Workshop: "Cusi's Secret" [Historical Fiction]

Anthology:

A Single Shard [Historical Fiction]

"A Scholar in the Family" [Drama]

Read Aloud: "My Friend Fred, Each New Moment" [Poetry]

R/W Workshop: "Ozymandias", "Lifelong Friends" [Poetry]

Anthology:

Majestic, Mummy, Clay [Poetry]

"Maestro", "Tradition" [Poetry]

Read Aloud: "The Neighborhood Problem" [Realistic Fiction]

R/W Workshop: "The Rockers Builder a Soccer Field" [Realistic Fiction]

Anthology:

How Tia Lola Came to Visit [Realistic Fiction]

"The Music of Many" [Allegory]

WEEKLY TOPIC

WEEK 4: INFLUENCES

Essential Question: What influences the development of a culture?

- Strategy: Make, Confirm, Revise Predictions
- Skill: Point of View
- Writing: Narrative

WEEK 5: PAST AND PRESENT

Essential Question: What can the past teach us?

- Strategy: Visualize
- Skill: Theme
- Writing: Narrative

WEEK 6: REVIEW AND ASSESS

WEEK 1: COMMON GROUND

Essential Question: What happens when people share ideas?

- Strategy: Make, Confirm, Revise Predictions
- Skill: Theme
- Writing: Narrative

Science Techbook Concept

UNIT 2: CAUSES OF WEATHER

Concept: Energy Transfer in the Water Cycle

NGSS PERFORMANCE EXPECTATIONS

MS-ESS2-4: Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

MS-PS3-3: Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.

MS-PS3-4: 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.

MS-PS3-5: 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.

Lesson Questions:

- How does water change state?
- How do solar energy and gravity drive the processes of the water cycle?

LITERATURE CONNECTIONS

There is a wealth of content in Discovery Education Experience that aligns to the Wonders content. Pairing texts with videos will provide students with opportunities to practice the skills and strategies in Wonders. There is a Place and Regions Channel which includes videos, images and text that addresses the Wonders essential question "What influences the development of culture?"

Consider using the SOS Step Inside; this teaching strategy encourages students to consider content from multiple perspectives.

There are also several History video series, History Kids, The Beanbody Histories, that can be paired with the week 5 content. Because the strategy that week is visualization, use the Surround Sound SOS a little differently with the content. Play the sounds of the video and have students answer the questions that are part of the strategy as a way to practice visualizing.

During the Common Ground week, the STEM Connect unit called "What a Waste" will use some of the concepts from the science unit and it will also have students work together to design a solution.

HANDS-ON ACTIVITY CONNECTIONS

HOA: Activity 7 - A Watched Pot Never Boils

HOA: Activity 13 - Observing Evaporation and Condensation

These HOAs tie to the literacy strategy Make, Confirm, Revise Predictions. Students are asked to predict throughout the HOAs. At the completion of the investigation, have students reread their predictions and have them confirm or revise their predictions.

LITERACY CONNECTIONS

Make, Confirm, Revise Predictions: This strategy is embedded in the HOAs. Students will also use prediction in Activity 19: Making a Cloud In a Jar. In this activity, have students write their predictions in the digital Techbook and use the point-of-use dashboard to select some pieces to critique. The short video segment called "Question and Hypothesis" is a good reinforcement of the importance of predicting in science.

Visualize: Have students read the Passage: "Water-Drop Odyssey." While reading the passage, have students "Sketch to Stretch" (draw) key ideas and details they visualize under each heading in the passage. You can also use the SOS Fold Draw Learn with different vocabulary words in the concept that students can visualize. There is also a video segment on visualizing that can be used as a minilesson.

Point of View: Have students read the Passage: "Water-Drop Odyssey." Have students identify the point of view and discuss the effectiveness of it. Did it help them to better understand the water cycle? Why or Why not? Consider the SOS Multiple Perspectives that was used on Literacy Card #3 to support point of view. This strategy can be used again.

Writing - Narrative: Have students write a narrative story about the water cycle through a water drop's perspective. Also, there are several editable video segments in the Beyond section. Students can write a narrative story to go with a segment of the video and rerecord the sound.

Wonders California

UNIT 3: ACCOMPLISHMENTS

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|------------------------------|----------------------|
| RL 6.1 | RI 6.1 RST 6.1 | W 6.1a | SL 6.1b-d |
| RL 6.2 | RI 6.2 | W 6.2a | SL 6.2 |
| RL 6.3 | RI 6.3 | W 6.3b, c | SL 6.3 |
| RL 6.5 | RI 6.5 | W 6.6 | SL 6.4 |
| RL 6.6 | RI 6.7 | W 6.7 | SL 6.5 |
| RL 6.10 | RI 6.8 RI 6.10 | W 6.8 W 6.9a, b W 6.10 | |

LITERATURE

Read Aloud: "On the Mountain" [Realistic Fiction]

R/W Workshop: "Facing the Storm" [Realistic Fiction]

Anthology:

Lizzie Bright and the Buckminster Boy [Realistic Fiction]

"Confronting a Challenge" [Personal Narrative]

Read Aloud: "A Spur-of-the-Moment Speech" [Narrative Nonfiction]

R/W Workshop: "Jewels from the Sea" [Narrative Nonfiction]

Anthology:

The Pot that Juan Built [Narrative Nonfiction]

"A Box of Ideas" [Drama]

Read Aloud: "Benjamin Reifel and the IRA" [Biography]

R/W Workshop: "Marian Anderson: Struggles and Triumphs" [Biography]

Anthology:

Major Taylor [Biography]

"Margaret Bourke-White: Fearless Photographer" [Biography]

WEEKLY TOPIC

WEEK 2: TRANSFORMATIONS

Essential Question: What kinds of challenges transform people?

- Strategy: Make, Confirm, Revise Predictions
- Skill: Theme
- Writing: Narrative

WEEK 3: INSPIRATION

Essential Question: What can people accomplish by working together?

- Strategy: Summarize
- Skill - Text Structure: Sequence
- Text Feature: Author's Voice/Tone
- Writing: Informative

WEEK 4: MILESTONES

Essential Question: How can one person affect the opinions of others?

- Strategy: Summarize
- Skill: Text Structure: Cause and Effect
- Text Features: Fictionalized Elements; Suspense
- Writing: Informative

Science Techbook Concept

UNIT 2: CAUSES OF WEATHER

Concept: Weather Patterns

NGSS PERFORMANCE EXPECTATIONS

MS-ESS2-5

Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.

MS-ESS2-4

Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

MS-PS3-4

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.

MS-PS3-5

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.

Lesson Questions:

- What factors impact temperature changes?
- How do the properties of the atmosphere vary?
- How does the movement of air masses affect weather?
- Why do clouds, rain, and snow form?

LITERATURE CONNECTIONS

There is a wealth of content in Discovery Education Experience that aligns to the Wonders content. Pairing texts with videos will provide students with opportunities to practice the skills and strategies in Wonders.

There are pre-made assignments on overcoming challenges that includes different modes of writing. These can be easily assigned to students. There is also a fabulous video series from the Shoah Foundation that includes Holocaust Survivors talking about their experiences. There are also biographical pieces to describe many of the survivors.

To support students' understanding of the skill theme, consider using the video "Literary Element: Theme." To support students' understanding of the skill tone, consider using the video "Basic Literary Terms: Tone and Mood."

The Community Helpers Channel includes videos that addresses the Wonders essential question, "What can people accomplish by working together?"

To support the Wonders essential question, "How can one person affect the opinions of others?" consider using the SOS Circle of Viewpoints. It is a teaching strategy that provides a structure that allows students to consider a topic, text, or event from multiple viewpoints. Students practice identifying a character or object within a piece of multimedia and imagining what its thoughts or opinions might be.

HANDS-ON ACTIVITY CONNECTIONS

- HOA: Pollinators
- HOA: Traveling Seeds

These HOAs tie to the literacy strategy Make, Confirm, Revise Predictions. Students are asked to predict throughout the HOAs. At the completion of the investigation, have students reread their predictions and have them confirm or revise their predictions.

LITERACY CONNECTIONS

Make, Confirm, Revise Predictions: This strategy is embedded throughout the concept since making predictions is an important science strategy. In Activity 11, students determine if a statement is confirmed or busted. The SOS Myth Bustin' is good to use as a way to get students to write statements that can be confirmed or revised.

Text Structure - Sequence: In the Beyond tab, there is a video segment entitled "Powerful Weather." Have students view the video and identify the segments of the video that have a sequential structure.

Summarize: The SOS That Sums It Up is a good way to have students summarize information they learn in videos. As an example, have students use this SOS with Activity 3.

Text Structure - Cause and Effect: Since cause and effect is a crosscutting concept, it is embedded throughout the concept. Here are specific examples where cause and effect is an integral part of the concept:

- Activity 2 (SE 280-282): Have students complete a cause and effect graphic organizer while they are viewing the video.
- Elaborate with Stem Unit Project 1: Students will analyze a satellite image of CA and draw conclusions about the effects of landforms on weather.
- Beyond Tab: Use the reading passage "Cause and Effect of Urban Heat" to have students complete a cause/effect graphic organizer as they read the passage. This is a good small group instruction passage. There is a graphic organizer on the Resource Board.

Writing - Informative: In Activity 17 (SE 324-327), students will use data and evidence they obtained throughout the concept to construct a scientific explanation for the Can You Explain? question or a question of their own. These questions are a good opportunity to incorporate the informative writing traits from Wonders.

Wonders California

UNITS 3 & 4: ACCOMPLISHMENTS & CHALLENGES

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|-----------|----------------------|
| RL 6.1 | RI 6.1 RST 6.1 | W 6.1a | SL 6.1b-d |
| RL 6.2 | RI 6.2 | W 6.2a | SL 6.2 |
| RL 6.3 | RI 6.3 | W 6.3a-d | SL 6.3 |
| RL 6.4 | RI 6.5 RH 6.5 | W 6.6 | SL 6.4 |
| RL 6.5 | RI 6.6 | W 6.7 | SL 6.5 |
| RL 6.6 | RI 6.7 | W 6.8 | |
| RL 6.7 | RI 6.8 | W 6.9a, b | |
| RL 6.9 | RI 6.10 | W 6.10 | |
| RL 6.10 | | | |

LITERATURE

Read Aloud: "Away with E-Waste!" [Informational Article]
R/W Workshop: "Is Your City Green?" [Informational Article]
Anthology:
 Stewards of the Environment [Informational Article]
 "Modern Transit for an Ancient City" [Persuasive Article]

Read Aloud: Accessing the Great Lakes [Expository Text]
R/W Workshop: "The Day the Dam Broke" [Expository Text]
Anthology:
 Years of Dust [Expository Text]
 "Erica Fernandez: Environmental Activist" [Biographical Sketch]

WEEKLY TOPIC

WEEK 5: A GREENER FUTURE

Essential Question: What steps can people take to promote a healthier environment?

- Strategy: Ask and Answer Questions
- Skill: Main Idea and Key Details
- Text Features: Flowcharts and Sidebars
- Writing: Argument

WEEK 6: REVIEW AND ASSESS

WEEK 1: CHANGING ENVIRONMENTS

Essential Question: How do people meet environmental challenges?

- Strategy: Reread
- Skill: Author's Point of View
- Text Features: Primary Sources
- Writing: Argument

Science Techbook Concept

UNIT 3: CAUSES AND EFFECTS OF REGIONAL CLIMATES Concept: Creating Climate Regions

NGSS PERFORMANCE EXPECTATIONS

MS-ESS2-5

Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.

MS-PS3-4

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.

MS-ESS2-6

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.

Lesson Questions:

- What is the relationship among Earth's shape, latitude, and climate regions?
- What is the relationship among wind, energy transfer, and climate?
- What is the relationship among ocean currents, energy transfer, and climate?

LITERATURE CONNECTIONS

The Conservation Channel takes a look at the environmental threats and conservation efforts in six key areas: forests, oceans, freshwater, wildlife, climate and food. There are also several World Wildlife Federation lessons included on this Channel. The ask and answer questions strategy and the main ideas and key details skill can easily be paired with these resources. Use an SOS like 20 Questions and Six Word Story to have students apply these strategies. There is a Studio Board template on the Resource Board that can be used with the Conservation resources. Remember that you can assign Boards or copy and revise them.

HANDS-ON ACTIVITY CONNECTIONS

- HOA: Modeling the Sun's Energy on Earth
- HOA: Density Currents

In both of these HOAs, students will answer questions. This is also an opportunity to engage students in asking questions as well. In addition, help students to analyze the types of questions that are asked in the HOAs and how they can learn from these kinds of questions to formulate those they ask when they read. Also, since Wonders is focusing students on reading flowcharts, have students create flowcharts for these investigations.

LITERACY CONNECTIONS

Ask and Answer Questions: Throughout this concept, students will ask and answer questions. Have students create an anchor chart with the different types of questions they will answer throughout the concept. Use these questions as models for helping them with generating reading questions. Also, in the Beyond tab, there is a reading passage entitled "Climate and Factors That Affect It: Dust." Have students turn the headings into questions and read to answer the questions created.

Main Idea and Key Details: There are several pages in this concept where students can find the main idea and complete the main idea web on the Resource Board. Another more engaging way to get students to identify key details is through the 3 Truths and a Lie SOS. After reading passages in this concept, have students "test" each other by developing three truths and a lie.

Text Features - Flowcharts, Sidebars, Primary Sources: As students encounter text features, have them identify the type and discuss how it enhanced their comprehension. Have students read and identify the text features in the reading passage "It Takes All Kinds." Also, there is a good primary and secondary source video on the Resource Board to help students identify their purpose and differences between them. There are also different examples of flowcharts on the Resource Board that students can practice reading or they can be used as a minilesson.

Reread: There are several passages in the Beyond section that can be used for small group instruction. Have students work in pairs to reread several paragraphs together. After one read, what was learned. After a second read, what new information was learned. Rereading is also a useful strategy to teach students to use with videos. The Silence is Golden SOS has students watch a video without the sound and then predict the key details. Draw parallels between rereading and this type of activity.

Author's Point of View: As students get to unit 4 on climate change, author's point of view is an important skill to bring into science. Consider using one of the Beyond pieces from unit 4 to integrate into this concept. Two examples are on the Resource Board.

Writing - Argument: In Activity 15 (SE 54-57), students will use a model to construct an argument with evidence that explains a cause-effect relationship between a region's location and its climate. Integrate the Wonders focus traits of ideas and organization into this piece.

Wonders California

UNIT 3 & 4: ACCOMPLISHMENTS & CHALLENGES

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|-----------------|----------------------|
| RL 6.1 | RI 6.1 | W 6.1a-c | SL 6.1b-d |
| RL 6.2 | RI 6.2 | W 6.3a, b, c, d | SL 6.2 |
| RL 6.3 | RI 6.3 | W 6.6 | SL 6.3 |
| RL 6.4 | RI 6.5 RH 6.5 | W 6.7 | SL 6.5 |
| RL 6.5 | RI 6.6 | W 6.8 | |
| RL 6.6 | RI 6.7 | W 6.9a, b | |
| RL 6.7 | RI 6.8 | W 6.10 | |
| RL 6.9 | RI 6.10 | | |
| RL 6.10 | | | |

LITERATURE

Read Aloud: Accessing the Great Lakes [Expository Text]

R/W Workshop: "The Day the Dam Broke" [Expository Text]

Anthology:

Years of Dust [Expository Text]

"Erica Fernandez: Environmental Activist" [Biographical Sketch]

Read Aloud: "Going the Distance" [Biography]

R/W Workshop: "She Had to Walk Before She Could Run" [Biography]

Anthology:

Seeing Things His Own Way [Biography]

"Get Fit for Fun!" [Expository Text]

Read Aloud: "Stage Fright" [Drama]

R/W Workshop: "Treasure in the Attic" [Drama]

Anthology:

The Case of the Magic Marker Mischief Maker: A Mickey Rangel Mystery [Drama]

"Dramatic Decisions: Theater Through the Ages" [Expository Text]

WEEKLY TOPIC

WEEK 1: CHANGING ENVIRONMENTS [con't from Literacy Connections Card #6]

Essential Question: How do people meet environmental challenges?

- Strategy: Reread
- Skill: Author's Point of View
- Text Features: Primary Sources
- Writing: Argument

WEEK 2: OVERCOMING CHALLENGES

Essential Question: How do people meet environmental challenges?

- Strategy: Reread
- Skill: Author's Point of View
- Text Features: Tables and Photographs
- Writing: Argument

WEEK 3: STANDING TALL

Essential Question: When are decisions hard to make?

- Strategy: Summarize
- Skill: Theme
- Writing: Narrative

Science Techbook Concept

UNIT 3: CAUSES AND EFFECTS OF REGIONAL CLIMATES

Concept: Environmental and Genetic Influences

NGSS PERFORMANCE EXPECTATIONS

MS-LS1-5

Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

Lesson Questions:

- What traits are beneficial in specific climate regions?
- How do environmental factors influence the growth of living things?
- How do genetic factors influence organism growth?

LITERATURE CONNECTIONS

The Conservation Channel provides text, images and videos that aligns to both Wonders essential questions "How do people meet environmental challenges?" The Channel takes a look at the environmental threats and conservation efforts in six key areas: forests, oceans, freshwater, wildlife, climate and food. There are several resources on this Channel that can provide argumentation content.

There are several health and wellness personal challenge stories in Discovery Education Experience. There is also a ready-made assignment focused on Helen Keller. Introduce students to the SOS Inquiry Chart and have students work in groups to complete this table with the different overcoming challenges videos. This also aligns to the text feature of reading tables.

The SOS Inquiry Chart can also be used with the making choices resources. Since all the readings on this topic fall into the drama genre, consider pairing some informational resources. There are options on the Resource Board.

HANDS-ON ACTIVITY CONNECTIONS

- HOA: Characteristic for the Climate
- HOA: Growing Greens

These HOAs include reflections which can be written as summaries.

LITERACY CONNECTIONS

Reread: There are several passages in the Beyond section that can be used for small group instruction, allowing students to practice a rereading strategy. Have students work in pairs to reread several paragraphs together. After one read, what was learned. After a second read, what new information is learned. Rereading is also a useful strategy to teach students to use with videos. The Silence is Golden SOS has students watch a video without the sound and then predict the key details. Draw parallels between rereading and this type of activity.

Author's Point of View: Have students analyze the author's point of view in Activity 17's passage, "Rebuilding a Community with Plants." Use the following questions to have students analyze this piece:

- What point of view does the author use?
- How objective and/or reliable is the author?
- How limited are his perceptions, and what contributes to these limitations?
- Why does the author choose certain language, report the details that she does, reveal information in the manner that he does, offer or not offer interpretive comments, and/or tell the passage in a certain order?

Text Features - Tables and Photographs: There are several photographs in this concept. Use the Eye Spy SOS to engage students in reading photographs.

Writing - Argument: Have students read the passage "Human Growth and Development" in the Beyond section. Select one of the Human Growth and Development factors, i.e. eating healthy, exercise, and write an argumentative piece on the topic. Use the claim, evidence, reasoning format for creating the argument.

Summarize: Introduce students to the UNRAVEL strategy to help them summarize, particularly since there are many questions that students need to answer after they read the passages. There are also several videos in the Beyond section where students can revise the UNRAVEL strategy to use with summaries of videos. The UNRAVEL strategy is explained on the Resource Board.

Point of View and Writing - Narrative: After completing Engage Activity 1, 2 and 3 (SE 66-72), have students write a narrative from the point of view of a caribou focused on his/her migration.

Wonders California

UNIT 4: CHALLENGES

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|-----------|----------------------|
| RL 6.1 | RI 6.1 | W 6.1a-c | SL 6.1b-d |
| RL 6.2 | RI 6.2 | W 6.3a-d | SL 6.2 |
| RL 6.3 | RI 6.3 | W 6.6 | SL 6.3 |
| RL 6.4 | RI 6.5 RH 6.5 | W 6.7 | SL 6.5 |
| RL 6.5 | RI 6.6 | W 6.8 | |
| RL 6.6 | RI 6.7 | W 6.9a, b | |
| RL 6.7 | RI 6.8 | W 6.10 | |
| RL 6.9 | RI 6.10 | | |
| RL 6.10 | | | |

LITERATURE

Read Aloud: "Humor in Humiliation" [Realistic Fiction]

R/W Workshop: "My Visit to Arizona" [Realistic Fiction]

Anthology:

Home of the Brave [Realistic Fiction]

"Animata's Tale" [Realistic Fiction]

Read Aloud: "Alejandro's Music" [Poetry]

R/W Workshop: "Hey Nilda, Hi Rachael" [Poetry]

Anthology:

This is Just to Say; to Mrs. Garcia, in the office; to Thomas [Poetry]

"Primer Lesson, If I can stop one Heart from breaking" [Poetry]

WEEKLY TOPIC

WEEK 4: A GREENER FUTURE

Essential Question: How do people uncover what they have in common?

- Strategy: Summarize
- Skill: Theme
- Writing: Narrative

WEEK 5: TAKING RESPONSIBILITY

Essential Question: How can we take responsibility?

- Strategy: Ask and Answer Questions
- Skill: Point of View
- Writing: Narrative

WEEK 6: REVIEW AND ASSESS

Science Techbook Concept

UNIT 3: CAUSES AND EFFECTS OF REGIONAL CLIMATES

Concept: Reproductive Success

NGSS PERFORMANCE EXPECTATIONS

MS-LS3-2

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.

MS-LS1-4

Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

Lesson Questions:

- How do living things reproduce?
- How do animal behaviors and plant structures affect the probability of successful reproduction?

LITERATURE CONNECTIONS

The week 4 and 5 Wonders content is fairly nebulous and therefore, it is difficult to locate content that would fit well. However, remember that you can use the search feature in Discovery Education Experience to find necessary resources.

HANDS-ON ACTIVITY CONNECTIONS

- HOA: Organism Reproduction
- HOA: Watching Yeast Grow [Beyond section]
- HOA: Pathway to Pollination [Beyond section]

Both of the strategies, summarization and ask and answer questions, can be integrated into these HOAs.

LITERACY CONNECTIONS

Summarize: There are several opportunities to integrate summarization into the multiple passages in this concept. In some cases, summarization is already included. For example, in Activity 2 (SE 112-113), students will create a social media post to summarize their learning. In Activity 4, and 7, students will use a highlighting strategy to support summarization. In Activity 10, students will create a Six-Word story to summarize. There are also several reading passages at different Lexiles in the Beyond section. Use the Z Chart SOS to help students summarize.

Ask and Answer Questions: Beginning with Activity 2 (SE: 112-113), students will generate questions. Since there are several passages in this concept, use the quote and question activity. Students should create a two-column chart with quotes on the left side and questions on the right. Students can also create this structure on a Studio Board and work together in collaborative teams to collect their quotes and questions.

Point of View: STEM Activity 14 (SE 150-155) focuses on the topic genetic engineering and agriculture. This is a good topic to analyze the point of view. Students can also analyze the images in this piece to determine the point of view.

Writing - Narrative: There are many topics in this concept that lend themselves to narrative writing. For example, in the Build a Better Pollinator (SE 142-145), students use information to design a hypothetical superior pollinator. Have students write a narrative about their superior pollinator from its point of view. There are also several of the images from this concept on the Resource Board. Students can use these images to generate a narrative that includes the Wonders traits: Ideas and Word Choice.

Wonders California

UNIT 5: DISCOVERIES

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|-----------|----------------------|
| RL 6.1 | RI 6.1 | W 6.1c | SL 6.1b-d |
| RL 6.3 | RI 6.2 | W 6.2a | SL 6.2 |
| RL 6.4 | RI 6.3 | W 6.3b | SL 6.3 |
| RL 6.5 | RI 6.5 RST 6.5 | W 6.6 | |
| RL 6.9 | RI 6.6 | W 6.7 | |
| RL 6.10 | RI 6.7 | W 6.8 | |
| | RI 6.8 | W 6.9a, b | |
| | RI 6.10 | W 6.10 | |

LITERATURE

Read Aloud:

"The Flower of Lirolay" [Myth]

R/W Workshop:

"Thunder Helper" [Myth]

Anthology:

The Hero and the Minotaur [Myth]

"The A-MAZE-ing tale of Theseus and the Minotaur [Parody]

Read Aloud:

"Lok and the Transcontinental Railroad" [Historical Fiction]

R/W Workshop:

"Journey to Freedom" [Historical Fiction]

Anthology:

Elijah of Buxton [Historical Fiction]

"The People Could Fly" [Folktale]

WEEKLY TOPIC

WEEK 1: MYTHS

Essential Question: Why do people tell and retell myths?

- Strategy: Make, Confirm, Revise Predictions
- Skill - Character, Setting, Plot: Problem and Solution
- Writing: Narrative

WEEK 2: PERSONAL STRENGTH

Essential Question: How do people show inner strength?

- Strategy: Make, Confirm, Revise Predictions
- Skill - Character, Setting, Plot: Cause and Effect
- Writing: Narrative

Science Techbook Concept

UNIT 3: CAUSES AND EFFECTS OF REGIONAL CLIMATES

Concept: Heredity

NGSS PERFORMANCE EXPECTATIONS

MS-LS3-2

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.

Lesson Questions:

- What is heredity, and how were the principles of heredity discovered?
- How do scientists make predictions about genetic inheritance and expression of traits?

LITERATURE CONNECTIONS

There is a wealth of content in Discovery Education Experience that aligns to the Wonders content. Pairing texts with videos will provide students with opportunities to practice the skills and strategies in Wonders.

The following videos "Greek Mythology" and "Myths & Legends of Ancient Greece" align to the week 1 Wonders content. Since making, confirming and revising predictions is the Wonders strategy, use the Get a Clue SOS to predict which video aligns to which script. Discuss how they know. What clues did they see? The scripts for the videos are on the Resource Board as well.

On Literacy Connections Card #5, the Shoah Foundation series was referenced. If this series wasn't used in conjunction with the literature in that unit, consider using it with the personal strength topic. There is a specific Channel that includes testimonies, mini quests, lessons and challenges.

HANDS-ON ACTIVITY CONNECTIONS

- HOA: Punnett: Live

There are no specific hands-on activities embedded into this concept. In the Beyond section, there is an HOA that uses the predictions strategy.

LITERACY CONNECTIONS

Make, Confirm, Revise Predictions: Making, confirming and revising predictions is common throughout this concept. Be sure to point out how this strategy is used in science. A good example is in Activity 3 (SE 164-167). In this activity, students use a model to make predictions about a pattern of inheritance in rabbit offspring, supporting their argument with evidence.

There are several videos in the Beyond section. Use these videos to have students practice their make, confirm and revise predictions strategy with this concept. Use the SOS Pause and Play to have students generate a prediction, then confirm and revise.

Text Structure - Cause and Effect: Throughout this concept there are writing activities that focus on cause and effect relationships. After students have completed each activity, have them go into their written piece and highlight the elements that make their written piece's text structure cause and effect. Also, in Activity 4 (SE: 168), students analyze a model of a family tree and construct an explanation for the fact that siblings can inherit different traits from the same parents. In Activity 7 (SE 174-176), students gather information from text and media about alleles, dominant and recessive genes, and the Punnett square to support or refute claims about a cause-effect relationship between traits and how they are inherited. These are two examples where students can analyze cause and effect.

Writing - Narrative: On the Resource Board there is a complete lesson on genetics and sharks. The second part of this activity allows students to draw a picture of their shark offspring. Have students generate a story about their baby shark (hopefully, it won't include an annoying song...doo, doo, doo, doo, doo, doo...).

Wonders California

UNIT 5: DISCOVERIES

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|-----------|----------------------|
| RL 6.1 | RI 6.1 | W 6.1c | SL 6.1b-d |
| RL 6.3 | RI 6.2 | W 6.2a | SL 6.2 |
| RL 6.4 | RI 6.3 | W 6.3b | SL 6.3 |
| RL 6.5 | RI 6.5 RST 6.5 | W 6.6 | |
| RL 6.9 | RI 6.6 | W 6.7 | |
| RL 6.10 | RI 6.7 | W 6.8 | |
| | RI 6.8 | W 6.9a, b | |
| | RI 6.10 | W 6.10 | |

LITERATURE

Read Aloud: "Fishing Through the Ages" [Expository Text]

R/W Workshop: "The Science of Silk" [Expository Text]

Anthology:

Before Columbus [Expository Text]

"Looking Back to Move Forward" [Expository Text]

Read Aloud: "Seeing Inside the Body" [Expository Text]

R/W Workshop: "Light Detectives" [Expository Text]

Anthology:

Planet Hunter [Expository Text]

"Excursion to Mars" [Science Fiction]

WEEKLY TOPIC

WEEK 3: INNOVATIONS

Essential Question: How do people benefit from innovation?

- Strategy: Reread
- Skill - Text Structure: Cause and Effect
- Text Features: Diagrams and Maps
- Writing: Informative

WEEK 4: BREAKTHROUGHS

Essential Question: How does technology lead to discoveries?

- Strategy: Reread
- Skill - Text Structure: Sequence
- Text Features: Diagrams and Models
- Writing: Informative

Science Techbook Concept

UNIT 4: OUR CHANGING CLIMATE

Concept: Causes of Climate Change

NGSS PERFORMANCE EXPECTATIONS

MS-ESS3-5

Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

MS-ESS3-3

Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

Lesson Questions:

- How do natural processes affect global temperature changes?
- How does human activity affect global temperature change?
- What is the evidence for global warming?

LITERATURE CONNECTIONS

The Inventors and Innovators Channel which includes videos, images and text aligns to the Wonders essential question, "How do people benefit from innovation?" The video "Greatest Inventions with Bill Nye: Communication" which retraces the innovations that allow us to contact almost anyone anywhere also addresses the essential question.

There is a wealth of content to support the breakthroughs topic, beginning with a virtual field trip. The Itron Virtual Field Trip takes your students on a tour of the Itron Innovation Center to explore how technology powers sustainable solutions to the challenges of modern life. It highlights a variety of interesting, highly-skilled careers related to technology, engineering, city planning, and sustainability. It also showcases how new technologies can solve real world problems, such as safety, disaster response, and protecting ecosystems and wildlife. There is an Educator Guide to go with this VFT; pay attention to the engage activity.

There is also a 4 Awesome Discoveries series that students will find very engaging. There are many videos from which to choose. Several examples are loaded on the Resource Board. Use the Pechakucha SOS to have students develop a min-presentation on one of the discoveries.

HANDS-ON ACTIVITY CONNECTIONS

- HOA: Model a Meteorite Impact
- HOA: Observe the Greenhouse Effect [Beyond section]

Both of these HOAs include explanatory, informative writing. Integrate the focus on organization from Wonders, particularly since strong paragraphs is the specific trait. Additionally, the Observe the Greenhouse Effect HOA can pair with the passage, entitled "The Greenhouse Effect" also in the Beyond section. After students have completed the HOA and read the passage have them write an informational piece about the cause and effects of the Greenhouse Effect.

LITERACY CONNECTIONS

Reread: This strategy is used often in Wonders. Find different ways to engage students in rereading. The Silence is Golden SOS has been used previously. Another SOS that can be used with rereading is A-E-I-O-U. Have students read and complete the SOS, then reread and complete it again.

Text Features - Diagrams and Maps: Embedded in concept there are multiple opportunities for students to use, identify and discuss how the text feature(s) enhanced their comprehension. The following activities have students using diagrams and maps as well as tables and graphs to gather information: Activity 7 (SE 233), Activity 10 (SE 240), Activity 14 (SE 251), Activity 15 (SE 253). Consider using the Think Aloud SOS and have students record their think aloud in reading different diagrams.

Text Structure - Cause and Effect: This whole concept is focused on causes of climate change. Have students analyze every reading passage to determine what the causes are and highlight them in one color. Determine effects and highlight them in a different color. Have students collect additional information like cause and effect words. Have students build a graphic organizer or a diagram on how to read cause and effect using examples from this concept.

Text Structure - Sequence: Several of the videos in the Beyond section use a sequence structure. Use the SOS Instagramin' to have students select three images from the videos that show a sequence. Students then need to write an informational sentence to explain their Instagram photo. Please note that students might need help with grabbing a screenshot from a video. Students can print their screenshots or they can use a Studio Board to post their photos. Be sure to help students use sequential language in their sentence.

Wonders California

UNITS 5 & 6: DISCOVERIES & TAKING ACTION

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|------------|----------------------|
| RL 6.1 | RI 6.1 RH 6.1 | W 6.1a,c | SL 6.1b-d |
| RL 6.2 | RI 6.2 | W 6.2a | SL 6.2 |
| RL 6.3 | RI 6.3 | W 6.3a,b,d | SL 6.3 |
| RL 6.4 | RI 6.5 RH 6.5 | W 6.4 | |
| RL 6.5 | RI 6.6 | W 6.6 | |
| RL 6.7 | RI 6.7 | W 6.7 | |
| RL 6.9 | RI 6.8 | W 6.8 | |
| RL 6.10 | RI 6.9 | W 6.9a, b | |
| | RI 6.10 | W 6.10 | |

LITERATURE

Read Aloud:

"Where in the World Am I? [Informational Article – Expository]

R/W Workshop:

"Tools of the Explorer's Trade" [Informational Article – Expository]

Anthology:

Out of This World [Informational Article – Expository]

"Space Shuttles on the Move" [Informational Article]

Read Aloud:

"Technology in the Ground" [Expository Text]

R/W Workshop:

"The Fortunes of Fragrance" [Expository Text]

Anthology:

The Story of Salt [Expository Text]

"The Not-So-Golden Touch" [Myth]

"Excursion to Mars" [Science Fiction]

WEEKLY TOPIC

WEEK 5: EXPLORATION

Essential Question: How have tools used for exploration evolved over time?

- Strategy: Summarize
- Skill: Author's Point of View
- Text Features: Sidebars and Graphs
- Writing: Argument

WEEK 6: REVIEW AND ASSESS

WEEK 1: RESOURCES

Essential Question: How have people used natural resources?

- Strategy: Ask and Answer Questions
- Skill: Main Idea and Details
- Text Features: Diagrams
- Writing: Informative

Science Techbook Concept

UNIT 4: OUR CHANGING CLIMATE

Concept: Climate Change Impacts Organisms

NGSS PERFORMANCE EXPECTATIONS

MS-LS1-5

Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

MS-LS1-4

Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

MS-ESS3-3

Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

Lesson Questions:

- How might climate change affect habitats?
- How does climate change affect organism behavior?

LITERATURE CONNECTIONS

There are numerous resources to support and accompany the Wonders focus on Space Shuttles. Consider beginning with the Virtual Field Trip to the Johnson Space Center in Houston, TX. There are lesson plans that include literacy skills like compare and contrast. This VFT is conducted by Boeing, giving students a perspective from their point of view. Additionally, there is a Mars Exploration Virtual Field Trip conducted by Lockheed Martin. On the Resource Board, there are several images on space exploration. Use a modified version of the SOS Puppet Pictures with these images. While this is primarily a primary strategy, the objective is for students to place themselves in the image and then talk or write about it. Students can use their pictures or use an app that allows students to embed their picture in the image.

The Natural Resource Channel located in Discovery Education Experience addresses the essential question, "How have people used natural resources?" There are multiple resources on this Channel, including writing prompts, reading passages, even a podcast. Since the Wonders focus skill is main idea and key details, these resources can be used to have students practice that skill. One of the SOS that has not been utilized on any of the grade 6 Literacy Connection Cards is the Blurt Out SOS. You can have students work in teams to watch a video, read a passage, even one of the Encyclopedia articles on a topic in the Channel and create their questions.

HANDS-ON ACTIVITY CONNECTIONS

- HOA: Habitat Destruction

This HOA includes a number of questions that students need to answer. Answering questions can combine both the summarization and the ask and answer questions strategy. Teach students the **RACE** strategy to answer these questions.

R: Restate the question

A: Answer the question

C: Cite evidence from the investigation

E: Explain the evidence from the investigation.

LITERACY CONNECTIONS

Summarize: In Activity 7 (SE 292-294), students can write a summary about how global warming and climate change are affecting animal migration and hibernation. Additionally, the **RACE** strategy can be used for various questions throughout this concept.

Author's Point of View: In the Beyond tab, there is a video entitled, "The Effects of Climate Change." Have students view the video. Using evidence from the video, have students identify the author's point of view and purpose for creating the video.

Text Features - Sidebars, Graphs, and Diagrams: There are a variety of text features in this concept. Activity 11 (SE Page 300) includes a graph.

Writing - Argument: In Activity 15 (SE 310-313), students present a written argument supported by scientific reasoning. Incorporate the Wonders traits into this argument.

Ask and Answer Questions: In Activity 2 (SE 276-277), students gather, read, and synthesize information about monarch butterflies from multiple appropriate sources and communicate responses to questions in writing.

Main Idea and Details: In Activity 7 (SE 292-294), students critically read scientific text adapted for classroom use to obtain information to describe natural processes that can lead to habitat destruction. In Activity 12 (SE 302-304), students critically read text adapted for classroom use to determine the central ideas and obtain scientific information to describe how global warming and climate change are affecting animal migration and hibernation. Use the SOS Read My Mind with these passages. Select words that represent details of the passages. As a conclusion to the SOS, have students write a main idea.

Writing - Informative: In Activity 10 (SE 298-299), students write an explanation of why animals migrate or hibernate. In Activity 14 (SE 306-309), students communicate scientific information in written form.

Wonders California

UNIT 6: TAKING ACTION

CCSS ELA STANDARDS

| READING: LITERATURE | READING: INFORMATIONAL | WRITING | SPEAKING & LISTENING |
|---------------------|------------------------|-----------|----------------------|
| RL 6.1 | RI 6.1 RH 6.1 | W 6.1a | SL 6.1b-d |
| RL 6.2 | RI 6.2 | W 6.2a | SL 6.2 |
| RL 6.3 | RI 6.3 | W 6.3a,d | SL 6.3 |
| RL 6.4 | RI 6.5 RH 6.5 | W 6.4 | SL 6.5 |
| RL 6.5 | RI 6.6 | W 6.6 | |
| RL 6.7 | RI 6.7 | W 6.7 | |
| RL 6.9 | RI 6.8 | W 6.8 | |
| RL 6.10 | RI 6.9 | W 6.9a, b | |
| | RI 6.10 | W 6.10 | |

LITERATURE

Read Aloud: "Mystery of the Mummy" [Narrative Nonfiction]
R/W Workshop: "The Great Fire of London" [Narrative Nonfiction]
Anthology:
 The Great Fire [Narrative Nonfiction]
 "Aftermath of a Fire" [Magazine Article]

Read Aloud: "Space Neighbor" [Expository Text]
R/W Workshop: "Researcher to the Rescue" [Expository Text]
Anthology:
 Extreme Scientists [Expository Text]
 "Making the Scientific Method Work for You" [Expository Text]

Read Aloud: "Secrets Set in Stone" [Expository Text]
R/W Workshop: "Messages in Stone and Wood" [Expository Text]
Anthology:
 Pharaoh's Boat [Expository Text]
 "The Mystery of the Missing Sandals" [Mystery]

WEEKLY TOPIC

WEEK 2: WITNESSES

Essential Question: How do we learn about historical events?

- Strategy: Ask and Answer Questions
- Skill - Text Structure: Cause and Effect
- Text Features: Primary Sources
- Writing: Argument

WEEK 3: INVESTIGATIONS

Essential Question: How can a scientific investigation be an adventure?

- Strategy: Summarize
- Skill: Main Idea and Key Details
- Text Features: Technical Terms and Flowchart
- Writing: Informative

WEEK 4: EXTRAORDINARY FINDS

Essential Question: What can scientists reveal about ancient civilizations?

- Strategy: Summarize
- Skill - Text Structure: Sequence
- Text Features: Lists
- Writing: Informative

Science Techbook Concept

UNIT 4: OUR CHANGING CLIMATE

Concept: Reducing Human Impacts on the Environment

NGSS PERFORMANCE EXPECTATIONS

MS-ETS1-3

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.

MS-ETS1-4

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.

MS-ESS3-3

Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

Lesson Questions:

- How do scientists monitor populations for signs of pollution, and why is this important?
- How can preventative measures be used to reduce land-use and environmental problems?
- How do different design solutions help solve and prevent land-use and environmental problems?

LITERATURE CONNECTIONS

For the Week 2 Wonders content, there are several resources that can be paired with the texts. There are several resources on Mummies, including a Studio Board that uses the SOS AEIOU that can be copied and revised and/or assigned to students as well as a podcast on mummies.

The Week 3 Wonders content on science aligns with the Science Techbook, however, The Nature of Science Investigation Channel also provides different resources. Since summarization and main ideas and details are the key strategy and skill, there are several SOS strategies that can be utilized with the resources in this Channel. The SOS QR Code Graffiti Walk is a different way to use these skills and strategies with the content.

There are several Channels on ancient civilizations: Ancient Greece, Ancient Rome, Ancient Egypt and one Channel on Ancient Civilizations.

HANDS-ON ACTIVITY CONNECTIONS

- HOA: Causes and Effects of Water Pollution

This particular HOA focuses on cause and effect. Tie this to the Wonders focus on cause and effect text structures. Pair this HOA with the reading passage in the Beyond section entitled "Garbage Crisis!" and have students analyze the text structure.

LITERACY CONNECTIONS

Ask and Answer Questions: In Activity 11 (SE 348-352), students locate three questions, then read to find the answers.

Text Structure - Cause and Effect: Throughout this concept there is a focus on cause and effect relationships. In Activity 4 (SE 326-33), have students use all the information they gather to write a cause and effect paragraph. Have students highlight the causes in one color and highlight the effects in another color.

Writing - Argument: In Activity 13 (SE 354), students present a written argument supported by scientific reasoning as evidence for changing their diet in order to reduce their impact on the environment. In Activity 13 (SE 360-363), students construct an argument supported by scientific reasoning to support a claim of cause or effect for a variety of environmental problems and solutions.

Summarize: In Activity 12 (SE 353), will summarize the purpose of green roofs and consider the criteria used to evaluate the success of green roofs by analyzing possible constraints. There are also several videos in the Beyond section that can serve as centers or small group activities where students summarize their learning. In the STEM Unit Project, students summarize their findings.

Main Idea and Key Details: In Elaborate with STEM, have students read the article "Sustainability in Major League Baseball's Ballparks" and complete the main idea graphic organizer on the Resource Board.

Text Features - Technical Terms, Flowchart and Lists: To focus on these text features and how to read them, consider having students create them from the texts that are in the Beyond section. For technical terms, students can select terms in the passage and then create a glossary similar to Techbook. For example, they find a video, an animation and an image. Students can select one of the passages and create a flowchart or embed a list in the passages.

Writing - Informative: In the STEM Unit Project, students design a solution to reduce the environmental impact of methane from cows. They will complete explanatory and informative writing in this project. Integrate the Wonders writing traits into this piece.