Unit 2/Week 4

Title: The Planets in Our Solar System

Suggested Time: 5 days (45 minutes per day)

Common Core ELA Standards: RI.3.1, RI.3.2, RI.3.3, RI.3.4, RI.3.7, RI.3.9, W.3.2, W.3.3, SL.3.1, SL.3.2, SL.3.3, SL.3.4, L.3.1, L.3.2, L.3.4, L.3.6.

Teacher Instructions

*Refer to the Introduction for further details.*

**Before Teaching**

1. Read the Big Ideas and Key Understandings and the Synopsis. Please do **not** read this to the students. This is a description for teachers, about the big ideas and key understanding that students should take away **after** completing this task.

Big Ideas and Key Understandings

The Sun is the center of our Solar System in which 8 large, diverse planets are positioned in a specific order.

Synopsis

This informational, non-fiction text introduces the solar system and its many parts – the sun, the eight planets, the satellites of the planets, asteroids, comets, and meteoroids. It includes models that show sizes of the planets relative to the Earth and their distances from the Sun. The reader learns that the Earth is the only planet with an environment to support humans; therefore, it is the most important planet to us.

1. Read entire main selection text, keeping in mind the Big Ideas and Key Understandings.
2. Re-read the main selection text while noting the stopping points for the Text Dependent Questions and teaching Vocabulary.

**During Teaching**

1. Students read the entire main selection text independently.
2. Teacher reads the main selection text aloud with students following along.

(Depending on how complex the text is and the amount of support needed by students, the teacher may choose to reverse the order of steps 1 and 2.)

3. Students and teacher re-read the text while stopping to respond to and discuss the questions and returning to the text. A variety of methods can be used to structure the reading and discussion (i.e.: whole class discussion, think-pair-share, independent written response, group work, etc.)

Text Dependent Questions

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| **Text Dependent Questions** | **Answers** |
| How do you know this selection is nonfiction? What do the title, photos, illustrations, labels, captions, and diagrams in this text tell you about the topic? (p. 230-31, 236-37 and 238-39) | Nonfiction presents facts and information about a topic, such as the planets in the solar system. The title shows that this selection is about planets in the solar system. On pages 230-31 there are labeled illustrations of the planets and facts about them. Pages 236-237 contain photos with captions and pages 238-9 show a diagram of the planets and their positions in orbit. |
| According to the text, what does the phrase solar system mean? How did it get that name? (p. 232) | In the third sentence on page 232, there is a definition that tells what Solar System means. The clue word “means” comes after Solar System and shows that the rest of the sentence gives the definition. Solar System means “Sun System.” |
| Reread pages 230- 232. What are the two most important parts of the Solar System? What are the most important details about these parts? | The two most important parts of the Solar System are: the *Sun* and the *eight planets*.  The planets are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.  (Summarizing) |
| According to the author, when you look at the night sky, what can you do to tell whether you are looking at a star or a planet? Why? | I can look at the object for a little while to see if it is twinkling. Stars twinkle, but planets just glow. P.234-235 |
| A *telescope* is a tool used to make faraway objects look larger and closer. Refer to pages 234 and 235. List the objects in the sky you can see without a telescope. | You can see Venus, Mars, Jupiter, Saturn, Mercury, and the moon without a telescope. |
| Refer to the text, photos, and captions on pages 236-237 to answer this question. How are the asteroids and planets alike? How are they different? | Asteroids and planets both circle the sun. Asteroids, however, are much smaller than planets. |
| On pages 242 and 243, what is the author describing about other planets? Why are there such differences between these planets? | The author writes about the temperatures of other planets. Neptune reaches -328 F. However, Mercury reaches 600 F and Venus reaches 860 F. The reason for the differences in temperatures for these planets is because of the distance from the sun: the closer the planet to the sun, the hotter it gets. Conversely, the farther the planet is away from the sun, the colder it gets. |
| On page 244, what does the author mean when he says, “Over 1,000 Earths could fit inside Jupiter”? What is he helping you to understand? | The author writes that Jupiter is the biggest planet. Then he asks the reader to picture Jupiter as a hollow, or empty, ball. If we wanted to fill this empty ball, we could fit 1,000 Earths inside of it. So, Jupiter is much bigger than Earth. Thinking carefully about this description helped me understand how much bigger Jupiter is than Earth. |
| Why does the author ask readers to think about flying in a rocket from Mercury to the sun? | The author probably thinks that if readers can picture flying in a spaceship, the information will be easier to understand. Readers will know that Mercury is very far from the sun when they read how long it would take to travel between them, even moving at 50,000 miles an hour. |
| Do you think that the last paragraph in the story is a good conclusion for a nonfiction selection about the solar system? Why or why not? Support your answer with details from the selection. | p.246  Answers will vary.  Some students may say: It is a good ending because it makes the story more personal. Others may say: Sentences like “Earth is the most important planet” and “it’s just right for us” are not facts, they are opinions, so it’s not a good conclusion for a nonfiction piece. Whichever side the student chooses – they should use evidence from the text to prove their point of view. |

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|  | **KEY WORDS ESSENTIAL TO UNDERSTANDING**  **BIG IDEAS OF TEXT**  Words addressed with a question or task | **WORDS WORTH KNOWING**  Words to be part of systematic vocabulary instruction, not essential for understanding the big ideas of the text |
| **TEACHER PROVIDES DEFINITION**  not enough contextual clues provided in the text | Page 234 -Telescope | Page 231 – Probably  Page 238 - Main  Page 241 - Dwarf |
| **STUDENTS FIGURE OUT THE MEANING**  sufficient context clues are provided in the text | Page 231 - Solar System  Page 236 – Meteoroids, Asteroids, Comet  Page 238 – Satellite, Planets (illustrations)  Page 239 - Orbit (illustrations)  Page 240 - Rocket | Page 234 – Dim  Page 235 - Easily  Page 243 - Temperatures  Page 241 – Farther (illustrations) |

Vocabulary

Culminating Task

* Re-Read, Think, Discuss, Write

*Create an illustration or a diagram illustrating the parts of the Solar System including the Sun and eight planets. Using the informational text as your resource, write one page summarizing the parts of our solar system as described in* The Planets in Our Solar System*. Be sure to include the most important details.*

Answer: The answer should include the eight planets in relation to the Sun with details about position, size, and climate.

Additional Tasks

* The author uses a special kind of comparison called a simile in the story. A simile compares two things that are very different, using the words *like* or *as*. A simile can help a reader picture or visualize the object that is being described. The author compares objects in the solar system to objects we’re familiar with in order to help us better understand what the solar system is like. Search the text for these comparisons and illustrate a picture of the comparisons to show how they help you to understand what the author is trying to tell the reader.

Answer: Some meteorites are as large as boulders, but most are as small as grains of sand.” Meteorites’ sizes are compared to boulders and grains of sand. Another example: Asteroids are big chunks of rock…Some are as big as a house. Some are as big as a mountain, or even bigger. (p. 236) In the third paragraph on page 236.

Supports for English Language Learners (ELLs) to use with Basal Alignment Project Lessons

When teaching any lesson, it is important to make sure you are including supports to help all students. We have prepared some examples of different types of supports that you can use in conjunction with our Basal Alignment Project Lessons to help support your ELLs. They are grouped by when they would best fit in a lesson. While these supports reflect research in how to support ELLs, these activities can help ALL students engage more deeply with these lessons. Note that some strategies should be used at multiple points within a lesson; we’ll point these out. It is also important to understand that these scaffolds represent options for teachers to select based on students’ needs; it is not the intention that teachers should do *all* of these things at every lesson.

**Before the reading:**

* Read passages, sing songs, watch videos, view photographs, discuss topics (e.g., using the [four corners strategy](http://www.theteachertoolkit.com/index.php/tool/four-corners)), or research topics that help provide context for what your students will be reading. This is especially true if the setting (e.g., 18th Century England) or topic (e.g., boats) is one that is unfamiliar to the students.
* Provide instruction, using multiple modalities, on selected vocabulary words that are *central to understanding the text*. When looking at the lesson plan, you should note the Tier 2 words, particularly those words with high conceptual complexity (i.e., they are difficult to visualize, learn from context clues, or are abstract), and consider introducing them ahead of reading. For more information on selecting such words, go [here](https://achievethecore.org/page/3167/selecting-and-using-academic-vocabulary-in-instruction). **You should plan to continue to reinforce these words, and additional vocabulary, in the context of reading and working with the text. (See additional activities in the During Reading and After Reading sections.)**

**Examples of Activities:**

* Provide students with the definition of the words and then have students work together to create [Frayer models](http://www.theteachertoolkit.com/index.php/tool/frayer-model) or other kinds of word maps for the words.
* When a word contains a prefix or suffix that has been introduced before, highlight how the word part can be used to help determine word meaning.
* Keep a word wall or word bank where these new words can be added and that students can access later.
* Have students create visual glossaries for whenever they encounter new words. Then have your students add these words to their visual glossaries.
* Create pictures using the word. These can even be added to your word wall!
* Create lists of synonyms and antonyms for the word.
* Have students practice using the words in conversation. For newcomers, consider providing them with [sentence frames](https://achievethecore.org/page/3159/ell-supports-for-writing-and-discussion) to ensure they can participate in the conversation.
  + Practice spelling the words using different spelling practice strategies and decoding strategies. Students could take turns spelling with a partner.
* Use graphic organizers to help introduce content.

**Examples of Activities:**

* Have students fill in a [KWL chart](http://www.nea.org/tools/k-w-l-know-want-to-know-learned.html) about what they will be reading about.
* Have students research setting or topic using a pre-approved website and fill in a chart about it. You could even have students work in groups where each group is assigned part of the topic.
* Have students fill in a bubble map where they write down anything that they find interesting about the topic while watching a video or reading a short passage about the topic. Then students can discuss why they picked the information.

**During reading:**

* Read the text aloud first so that ELLs can hear the passage read by a fluent reader before working with the text themselves.
* Allow ELLs to collaborate in their home languages to process content before participating in whole class discussions in English. Consider giving them the discussion questions to look over in advance (perhaps during the first read) and having them work with a partner to prepare.
* Encourage students to create sketch-notes or to storyboard the passage when they are reading it individually or with a partner. This will help show if they understand what they are reading as they are reading it.
* Ask questions related to the who, what, when, why, and how of the passage. For students that may need a little more help, provide them with [sentence stems](https://achievethecore.org/page/3159/ell-supports-for-writing-and-discussion).
* Continue to draw attention to and discuss the words that you introduced before the reading.

**Examples of Activities:**

* Have students include the example from the text in their glossary that they created.
* Create or find pictures that represent how the word was used in the passage.
* Practice creating sentences using the word in the way it was using in the passage.
* Have students discuss the author’s word choice.
* Use graphic organizers to help organize content and thinking.

**Examples of Activities:**

* Have students fill in a chart to keep track of their 5ws while they read to help them summarize later and figure out the central idea of a passage.
* It may again be beneficial to have somewhere for students to store new words that they encounter while reading the text. Students could use a chart to keep track of these new words and their meanings as they read.
* If you had students fill in a KWL, have them fill in the “L” section as they read the passage.
* Utilize any illustrations or text features that come with the story or passage to better understand the reading.
* Compare/contrast the passage with what the illustrations convey about the passage. Have students consider if the illustrations look the way they visualized the passage in their own minds or if the passage matches their predictions based on the illustrations.
* Identify any text features such as captions and discuss how they contribute to meaning.

**After reading:**

* Present directions for any post-reading assignments orally and visually; repeat often; and ask English Language Learners to rephrase.
* Allow ELLs to use English language that is still under development. Students should not be scored lower because of incorrect spelling or grammar (unless the goal of the assignment is to assess spelling or grammar skills specifically). When grading, be sure to focus on scoring your students only for the objective(s) that were shared with students.
* Scaffold questions for discussions so that questioning sequences include a mix of factual and inferential questions and a mix of shorter and more extended responses. Questions should build on each other and toward inferential and higher-order-thinking questions. There are not many factual questions already listed in the lesson instructions, so you will need to build some in as you see fit. More information on this strategy can be found [here](https://achievethecore.org/aligned/creating-sequencing-text-dependent-questions-support-english-language-learners/).
* Reinforce new vocabulary using multiple modalities

**Examples of activities:**

* Using the words that you had students work with before reading, have students write sentences in reference to the passage that you just finished reading.
* Require students to include the words introduced before reading in the culminating writing task.
* For newcomers, print out pictures that represent the words that you focused on and have students match the words to the pictures.
* Based on different features of the words, have the students sort them into different categories and explain their choices. For example, the students could sort the words by prefixes, suffixes, connotation, etc.
* After reading the passage, continue to examine important sentences (1–2) in the text that contribute to the overall meaning of the text. Guide students to break apart these sentences, analyze different elements, and determine meaning. More information on how to do this, including models of sentence deconstruction, can be found [here](https://achievethecore.org/page/3160/juicy-sentence-protocol).
* Provide differentiated scaffolds for writing assignments based on students’ English language proficiency levels.

**Examples of Activities:**

* For all students, go over the prompt in detail, making sure to break down what the prompt means before having the students get to work. Then have the students explain the directions back to you.
* Have students create an evidence tracking chart during reading, then direct them to look back over their evidence chart and work with a group to see if their evidence matches what the rest of the class wrote down. If some of the chart does not match, students should have a discussion about why.
* For students who need more support, model the proper writing format for your students and provide them with a properly formatted example for reference.
* For newcomers, you may consider creating sentence or paragraph frames to help them to write out their ideas.
* To further discussion about the passage, have students create their own who, what, when, where, why, and how questions related to the passage to ask each other and have students pair up and practice asking each other the questions. If available, pair students of the same home language to support the use of language still under development.