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? | 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. There are labeled illustrations of the planets and facts about them. The photos with captions 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? | 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.” |
| 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. |
| A *telescope* is a tool used to make faraway objects look larger and closer. 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. |
| 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. |
| 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. |
| 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. | 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 | Telescope | Probably  Main  Dwarf |
| **STUDENTS FIGURE OUT THE MEANING**  sufficient context clues are provided in the text | Solar System  Meteoroids, Asteroids, Comet  Satellite, Planets (illustrations)  Orbit (illustrations)  Rocket | Dim  Easily  Temperatures  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.