



## A Lesson on Learning about the Solar System by Pearl Reberkenny

**Grade Level:** Grade 4

**Subject Area:** English Language Arts

**Lesson Length:** 1 hour 30 minutes

**Lesson Keywords:** Vocabulary, Reading, Critical Thinking, Solar System, Planets, Earth

**Lesson Description:** During this lesson, students will learn reading skills, vocabulary, critical thinking, and reading comprehension. The students will have the opportunity to use the reading and writing habits they've been practicing on a regular basis to answer and critically think about our solar system. By reading and rereading the passage closely, and focusing their reading through a series of questions and discussions about the text, students will identify how and why the solar system is important and how it impacts and connects to our everyday lives.

### Common Core Standards Covered with This Lesson

CCSS.ELA-Literacy.RI.4.4: Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

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CCSS.ELA-Literacy.W.4.1: Write opinion pieces on topics or texts, supporting a point of view with reasons and information.

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CCSS.ELA-Literacy.W.4.1b: Provide reasons that are supported by facts and details.

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CCSS.ELA-Literacy.SL.4.1d: Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

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CCSS.ELA-Literacy.L.4.4a: Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.

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## Lesson Content: Book/Story/Reading Passage

**Instructions:** Please read the following reading passage as many times as needed (aloud and silent) before starting to go through other lesson pages. Understanding the content of this passage is very important since the lesson activities will be all about this content. Feel free to print the passage if needed.

### Learning about the Solar System

by

**Content:** When scientists looked at the stars long ago, they saw patterns. They did not understand everything about what they saw. So they kept looking to learn more. That is what scientists do. They ask questions and look for information to answer their questions. They are like explorers. They do not travel far the way explorers do. But they do make a kind of journey. They want to learn more. They go from what they know to what they discover.

Scientists have learned about our planet. It is very big. It is very diverse. There are places that are hot. There are places that are freezing. There are mountains and plains. There are hills and valleys. There are deep oceans. There are great rivers and waterfalls. There are rainforests. There are deserts. Those are all parts of our planet. There is much more to learn about what is here on Earth. A scientist dedicates much time to learning. The scientist works hard. The scientist helps us all find out more about our world.

Our planet is in a galaxy called the Milky Way. The sun is a big star in our part of this giant galaxy. Our galaxy holds millions of other stars. The sun is very important to our planet. The sun gives us light during the day. It gives us heat, too. Two other planets are closer to the sun than Earth: Mercury and Venus.

Scientists figured out how the Earth changes. Earth orbits the sun once each year. It travels once around the sun every 365 days. The other eight planets in our solar system also orbit around the sun. All travel in a pattern called an ellipse, which is a kind of oval. So at times Earth is farther from the sun. Scientists figured out that made it cooler on Earth then. But they also figured out that it is the tilt of the Earth's axis, however, that has the greatest effect on temperatures.

Scientists are still learning about our galaxy. There is much to discover. Today astronauts travel into space. They are explorers. It is dangerous to travel in space, but they are dauntless. They bravely travel thousands of miles to learn.

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## Task 1: Vocabulary

**Instructions:** Please complete the following vocabulary activity by choosing the correct meaning of each word selected from the passage and use of each word correctly in a sentence.

**Q: 1 WordPhrase:** dauntless **WordPhraseTier:** 2

**Question:** The author in our reading says "It is dangerous to travel in space, but they are dauntless..." What does the word "dauntless" mean in this sentence?

- A: afraid
- B: brave or determined
- C: strong
- D: intimidated

**Question:** Which one of the sentences below uses the word "dauntless" correctly?

- A: The men were dauntless for carrying cement bags to the construction site.
- B: Kara was dauntless when she got to the 8th grade dance, unsure whether to go inside.
- C: Jake was dauntless when he flew on a plane by himself for the first time.
- D: The students were dauntless when it came to their test, they believed they got every answer correct.

**Q: 2 WordPhrase:** ellipse **WordPhraseTier:** 3

**Question:** The author in our story states "All travel in a pattern called an ellipse..." What does the word ellipse mean in this sentence?

- A: A pattern that the Sun goes around other planets
- B: Circle shape pattern that Earth goes around the Sun
- C: Oval shape pattern that Earth goes around the Sun
- D: A specific part of space

**Question:** Which of the sentences uses the word "ellipse" correctly?

- A: The Earth rotates in a circular pattern called an ellipse.
- B: The Earth rotates in a oval pattern called an ellipse.
- C: The Sun rotates on a circular pattern called an ellipse.
- D: There was a solar ellipse.

**Q: 3 WordPhrase:** diverse **WordPhraseTier:** 2

**Question:** There is a statement in the reading, "It is very diverse..." What does the word "diverse" mean in this sentence?

- A: It is very big and various.
- B: It is small and identical.
- C: It is dark and mysterious.
- D: It is light and discovered.

**Question:** Which of the sentences below uses the word "diverse" correctly?

- A: The room was diverse with it's single chair.
- B: The solar system is not diverse.
- C: The Earth is full of diverse people and cultures.
- D: The one question test was quite diverse.

**Q: 4 WordPhrase:** Axis **WordPhraseTier:** 3

**Question:** The author in our reading says, "But they also figured out that is the tilt of the Earth's axis..." What does the word "axis" mean in this sentence?

- A: An axis is an oval rotation that goes around the Sun.
- B: An axis is an invisible line around which an object rotates, or spins.
- C: An axis is a visible line around which an object rotates, or spins.
- D: An axis is an circular rotation that goes around the Sun.

**Question:** Which of the following sentences use the word "axis" correctly?

- A: Day and night is not affected by Earth's axis.
- B: Earth has seasons since the axis does stand up straight.
- C: Earth's axis affects the tides in our oceans.
- D: Earth has seasons since the axis doesn't stand up straight.

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## Task 2: Forum Discussion

**Instructions:** This discussion forum will have questions for students to respond. Read the posted questions, and respond to each. Students are responsible for posting one initial and and two peer responses for each topic.

### 1 - Why is it important to explore space?

Why do you think it is important to explore space??Provide points from the reading to help you answer this question.

### 2 - Does the Sun rotate?

Does the Sun rotate, why or why not? Provide evidence from the text to answer this question.

### 3 - Why is it dangerous?

The author states, It is dangerous to travel in space, but they are dauntless. What do you think the author means by this statement?

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Task 3: Writing Activity

**Instructions:** You are to write and post here 350 words essay on how the Earth is affected by our solar system.?Make sure to provide specific terminology when describing these effects.

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