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A Lesson on Learning about the Solar System by Brittney Crook

Grade Level: Grade 4

Subject Area: English Language Arts

Lesson Length: 3 hours

Lesson Keywords: Reading, Writing, Learning about the Solar System

Lesson Description: The goal of this lesson is to give students the opportunity to hone in on their reading and writing skills they have been working on thus far. Students will read the text, Learning about the Solar System, then be able to answer vocabulary and critical thinking questions based of the text and higher order thinking. Students will be asked to display an array of reading and writing techniques through independent and collaborative questions.

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.4.1a: Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose.

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CCSS.ELA-Literacy.W.4.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

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CCSS.ELA-Literacy.L.4.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

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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.

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: Diverse **WordPhraseTier:** 2

Question: In the text the author states "Scientists have learned about our planet. It is very big. It is very diverse." What does the word "diverse" mean in this sentence?

- A: Common
- B: A like
- C: Diffrent
- D: Small

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

- A: There is only one color to choose from, it is so diverse.
- B: We live in a diverse world, all the people are different.
- C: All the stars are the same size and color, they are so diverse!
- D: All the students in your class are taking a reading test about the solar system right now, we are all doing diverse things.

Q: 2 WordPhrase: Galaxy **WordPhraseTier:** 3

Question: In the text the author states "Our planet is in a galaxy called the Milky Way. The sun is a big star in our part of this giant galaxy." what is the meaning of the word "galaxy"?

- A: Earth and its moon
- B: A candy bar
- C: A collection of people
- D: A system or collection of stars and planets

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

- A: I live on Earth, which is in a galaxy.
- B: My favorite candy is a galaxy bar!
- C: I like to play the game galaxy.
- D: My family is a galaxy.

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

Question: In the text the author states "All travel in a pattern called an ellipse, which is a kind of oval" What does the word "ellipse" mean in this sentence?

- A: An imaginary oval pattern the planets move around the sun.
- B: An oval like pattern the stars use to travel in space.
- C: An oval pair of sunglasses.
- D: The oval shape of the planets.

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

- A: Mars is shaped like an ellipse.
- B: I just bought a new pair of ellipse sunglasses!
- C: The Earth and all other planets move on an ellipse around the sun.
- D: The stars move on an ellipse around the planets.

Q: 4 WordPhrase: Dauntless **WordPhraseTier:** 2

Question: In the text the author states "Today astronauts travel into space. They are explorers. It is dangerous to travel in space, but they are dauntless." What does the word "dauntless" mean in this sentence?

- A: scared
- B: travelers
- C: fearfull
- D: fearless

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

- A: The children ran away screaming because they were dauntless.
- B: A firefighter rescued a dog from a burning building because he was dauntless.
- C: There was a dauntless circus that went from town to town.
- D: I was once a dauntless little child who was afraid of my own shadow.

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 two peer responses for each topic.

1 - Scientists Vs. Explorers

Why do you think the author compares scientists to explorers??

2 - Sun's effects on other planets.

In the story the author states 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. What do you think the effects of the sun are on these two closer planets? Do you think the sun affects them the same way it affects Earth? Why or Why not??

3 - Earth's path around the sun

The author talked about the Earth's orbit around the sun in an elliptical pattern and how this was a reason for temperatures on Earth. Why do you think this has an effect on Earth's Temperature? What do you think would happen if we were closer or farther away from the sun??

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Task 3: Writing Activity

Instructions: Think about what you already know about scientists, the solar system, what we have read, and what we have discussed in class. In a few paragraphs answer the following questions. How do you think having scientists explore and study the solar system has helped us understand our planet better? Do you think there have been any issues that hindered this process? How does this compare to other planets?

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