



A Lesson on Learning about the Solar System by Triston Williams

Grade Level: Grade 4

Subject Area: English Language Arts

Lesson Length: 45 minutes

Lesson Keywords: Earth Science

Lesson Description: This lesson will provide basic information on the structure and the purpose of the solar system. Students will be expected to construct clear sentences that express an understanding of the reading. Create coherent and effective statements with the use of specific examples and details provided within the reading.

Common Core Standards Covered with This Lesson

CCSS.ELA-Literacy.RL.4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

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.

CCSS.ELA-Literacy.RI.4.5: Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

CCSS.ELA-Literacy.RI.4.6: Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

CCSS.ELA-Literacy.RF.4.4a: Read grade-level text with purpose and understanding.

CCSS.ELA-Literacy.W.4.1d: Provide a concluding statement or section related to the opinion presented.

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: Dedicates **WordPhraseTier:** 2

Question: In the passage, the author states "A scientist dedicates much time to learning.". What is the definition of the word, "dedicates", as used in the sentence given?

- A:** To lose the motivation to complete a task
- B:** To put strong effort and desire into a goal/task
- C:** To give up after failing
- D:** To try something only one time

Question: Which of the following shows the proper use of the word "dedicate"?

- A:** I dedicate myself to school so that I can graduate one day.
- B:** I gave up on trying to play sports because I was dedicated to them.
- C:** A student was really dedicated to finishing the in-class assignments, so they left class early.
- D:** I will soon quit my job because I am so dedicated towards it.

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

Question: Near the end of the passage, the author states "It is dangerous to travel in space, but they are dauntless.". What is the definition of the word "dauntless" as used in this sentence?

- A:** to be fearless and brave
- B:** to be scared and afraid
- C:** To run away when there is danger
- D:** To do something fast and swiftly

Question: Which of the following sentences best uses the word "dauntless" correctly?

- A:** I ran away from my neighbors dog because I was feeling dauntless.
- B:** The teacher was dauntless enough to return graded quizzes to her students,
- C:** Even in the face of police brutality, activists remained dauntless in their marches.
- D:** The mouse ran away from the cat because it was dauntless.

Q: 3 WordPhrase: orbit **WordPhraseTier:** 3

Question: The author states "The other eight planets in our solar system also orbit around the sun". What does orbit mean when used in this sentence?

- A:** To avoid being around something else
- B:** To crash into another object/person's path
- C:** To circle/revolve around another object
- D:** To be absorbed into another object or being

Question: Which sentence shows the appropriate use of the word "orbit"?

- A:** The students always orbit the classroom door in order to enter.
- B:** The Sun is so large, that the Earth orbits around it.
- C:** The students like to orbit the teacher when she walks around the class while they are seated.
- D:** The police were orbiting another car as they were in a high-speed chase.

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

Question: The author states "But they also figured out that it is the tilt of the Earth's axis, however, that has the greatest effect on temperatures.". What does Axis mean as it is used in the sentence?

- A:** an imaginary line used to describe a point that an object/body rotates on
- B:** a tool used to fix cars
- C:** a physical part of the Earth that has no real effect
- D:** something used to measure distance

Question: Which of the following sentences shows the proper use of the word "axis" as used in the text?

- A:** The Earth rotates on an axis, which can be estimated by the North and South poles.
- B:** The Moon's axis can be found on the Earth as the moon orbits around it.
- C:** To find points on a graph, you need to use the x and y-axis.
- D:** The main road can be split into an east and west axis.

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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 two peer responses for each topic.

1 - The importance of understanding space

Do to how hard it is to access, space is gnerally unpredictable and unfamiliar to us humans. With that in mind, how important is it to use our resources to explore and understand the unknown aspects of space?

2 - The influence of space

To what extent does the activities in?space affect our direct environment?

3 - The dangers of space

Is it worth the risk to send human beings to space despite how unpredictable it can be? Explain.

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Task 3: Writing Activity

Instructions: Read the prompt thoroughly and provide an answer using critical thinking. The answer should range from 100-150 words total.?

Do you feel obligated to find out more information on space? Or to prepare the Earth's environment for any sudden changes? Explain why or why not.

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