

Zoe Floats Into the Science of Gravity

Grade 5

Science

Nonfiction

Travel Theme

~159 words

NGSS.5-PS2-1

Name: _____ Date: _____

 **READ — READ THIS PASSAGE CAREFULLY. YOU MAY READ IT TWICE.**

Zoe visited a space travel museum and discovered something amazing about gravity. Gravity is an invisible force that pulls objects toward each other. Earth's gravity pulls everything down toward its center. Zoe noticed that every display showed objects falling, never floating away on their own. Inside the museum, Zoe studied a model of an astronaut on the Moon. The Moon has much less mass than Earth. Because of this, the Moon's gravity is weaker. Objects weigh about six times less on the Moon than on Earth. Zoe realized that gravity changes depending on where you travel in space. Next, Zoe watched a video about deep space travel. Far from any planet, astronauts experience ****microgravity****, a condition where gravity's pull becomes extremely weak. Objects and people seem to float freely. Zoe saw that without strong gravity, even simple tasks like drinking water become difficult challenges. By the end of her visit, Zoe understood that gravity is not the same everywhere in the universe.

 *Tip: Read the passage twice before turning to the questions on the next page.*

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Questions

 **ANSWER** USE THE PASSAGE ON PAGE 1 TO HELP FIND YOUR ANSWERS.

MAIN IDEA

1. What is this passage mostly about?

TEXT EVIDENCE

2. According to the passage, what did Zoe notice about every display in the museum? Use evidence from the text in your answer.

VOCABULARY

3. What does the word microgravity mean as it is used in this passage?

INFERENCE

4. Why would it be harder for astronauts to live and work in deep space than on the Moon or Earth?

CAUSE AND EFFECT

5. What causes objects to weigh less on the Moon than on Earth?

TEXT EVIDENCE

6. What evidence in the passage shows that microgravity makes life difficult for astronauts? Use a direct quote in your answer.

✓ ANSWER KEY — Zoe Floats Into the Science of Gravity

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TEACHER / PARENT USE ONLY — Suggested answers shown below each question

Zoe visited a space travel museum and discovered something amazing about gravity. Gravity is an invisible force that pulls objects toward each other. Earth's gravity pulls everything down toward its center. Zoe noticed that every display showed objects falling, never floating away on their own. Inside the museum, Zoe studied a model of an astronaut on the Moon. The Moon has much less mass than Earth. Because of this, the Moon's gravity is weaker. Objects weigh about six times less on the Moon than on Earth. Zoe realized that gravity changes depending on where you travel in space. Next, Zoe watched a video about deep space travel. Far from any planet, astronauts experience **microgravity**, a condition where gravity's pull becomes extremely weak. Objects and people seem to float freely. Zoe saw that without strong gravity, even simple tasks like drinking water become difficult challenges. By the end of her visit, Zoe understood that gravity is not the same everywhere in the universe.

MAIN IDEA

1. What is this passage mostly about?

This passage is mostly about how Zoe visits a space museum and learns that gravity is a force that changes depending on where you are in the universe.

TEXT EVIDENCE

2. According to the passage, what did Zoe notice about every display in the museum? Use evidence from the text in your answer.

Zoe noticed that objects always fell rather than floating away, as the passage states she observed that "every display showed objects falling, never floating away on their own."

VOCABULARY

3. What does the word microgravity mean as it is used in this passage?

In this passage, microgravity means a condition far from planets where gravity's pull becomes extremely weak, causing objects and people to appear to float freely in space.

INFERENCE

4. Why would it be harder for astronauts to live and work in deep space than on the Moon or Earth?

In deep space, microgravity makes even simple tasks like drinking water very difficult, so astronauts would struggle with everyday actions that gravity makes easy on Earth or the Moon.

CAUSE AND EFFECT

5. What causes objects to weigh less on the Moon than on Earth?

The Moon has much less mass than Earth, which causes its gravity to be weaker, so objects weigh about six times less on the Moon than they do on Earth.

TEXT EVIDENCE

6. What evidence in the passage shows that microgravity makes life difficult for astronauts? Use a direct quote in your answer.

The passage shows that daily life becomes a challenge in microgravity, stating that "without strong gravity, even simple tasks like drinking water become difficult challenges."