

Name _____

Date _____

Dear Luna

Victoria and her mother were sitting outside one night and Victoria noticed how beautiful the moon looked in the sky. They decided that it would be such a neat thing if you could write a letter to the moon and ask it questions about how it glows. Victoria's mother told her that since the moon is not actually living, she would get someone to respond to the moon letter as if they were the moon. Her mother also told her that she would not say who was responding to make it a little more fun. She told Victoria to write the letter and she would make sure that an answer was received. Victoria woke up the next morning and started writing her letter.

SCIENCE FACT #1

The sun always comes up in the morning and goes down in the evening in our sky. The moon is not the same. It does have a pattern, but it does not always come up at night and go down during the day. Watch a moon calendar to see the pattern of rising and setting or chart it yourself.

Dear Luna,

I sat outside with my mom tonight and noticed how beautiful you looked in the sky. I have some questions that I need answered. I want to know how you glow so brightly and how you move. I heard about an astronaut who landed on you a long time ago, and I have always wondered what you would look like if I were able to land on you one day. Would you feel hot or cold? Would there be living creatures on you? Where do you go when you are not in our sky? I know I have a bunch of questions and I thank you for taking the time to help me answer these questions.

Thank you,

Victoria

Victoria and her mom did a little research before they sent off their letter. Victoria's mother wanted her to be ready when the letter came back from the moon. They found out that astronauts landed on the moon in 1969. They watched videos and saw pictures that showed the astronauts walking on the moon. They learned that the moon gets all of its light from the sun and has no light of its own. About a week passed before Victoria received her reply letter from the moon.

SCIENCE FACT #2

If a person weighs 120 pounds on Earth (probably close to the weight of one of your parents) then he or she would weigh about 20 pounds on the moon.

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Dear Victoria,

I really appreciated your letter. The sun is so bright and so important to the people of the earth that very often I get overlooked. By lighting the night sky, I feel that I am very important to the earth as well. I do not provide heat to keep the people warm and my light does not cause sunburns, but it is still important to all of the living things on the earth.

I will start by telling you a little about myself. I am the moon for the earth only. Other planets in our solar system have moons of their own. A moon is simply an object that orbits a planet. I have a rocky surface and I have craters on me that you can see with a strong telescope.

The astronauts who landed on me have been able to bring back samples to earth to show everyone what my surface looks like. There are lots of pictures and even videos available to show you what it would be like if you were able to land on me one day.

I do not produce any light of my own. The light that you see from earth is the light that bounces off of me from the sun. I am a bit like a stop sign. If you go riding in your car with your mom at night look at the road signs as you pass them by. As the cars approach, you can see the car lights shining on the stop sign and bouncing off.

I circle the earth and I also spin on my axis. This would be like you spinning around in a circle as you walked around another object. I know this is a little bit difficult to understand. As I circle the Earth, you will see me differently at different times of the month. This is called a moon phase. You will see me differently because as I travel around the earth, you see the light that I reflect differently. You can chart these phases to see how I change each day of the month. If you do this for a month or two, you will see a pattern of the changes or phases that I go through.

I do not have living creatures living on me. I do not hold any heat on my surface and I do not have liquid water for living creatures to drink. This makes me unsuitable for living things.

I do hope I have answered your questions, and I hope that you will take the time to write to me again soon.

Much love,

Luna

SCIENCE FACT #3

It takes the moon approximately 27.3 days to spin once on its axis and it takes the moon approximately the same amount of time to circle the earth. We only ever see one side of the moon. Because the moon moves and spins at the same time it goes around us, we only see the side we call the face as it circles the earth.

Victoria and her mother had so much fun writing these letters. Their next letter will be to our star, the sun. They have already started asking their questions. I wonder what their response will be.

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<p style="text-align: center;">Lesson Plan: Dear Luna Designed for students in Grades 2 and 3</p>
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Students will find answers to the following questions:

- What is on the surface of the moon;?
- What are moon phases?
- Does the moon create its own light?
- What are the movements of the moon, earth and sun in relation to each other?

Example: Student Task #1:

- Students read the story “Dear Luna” and answer questions on the worksheet included. Teachers can then demonstrate the movements of the moon and the sun using everyday items like coins, people, or flashlights and balls of different sizes.

Example: Student Task #2:

- Students read the story “Dear Luna” and answer questions on the worksheet included. Students can then chart and track the changes of the moon for a month and create a poster on which to post their results.

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Dear Luna

Directions: Use the story “Dear Luna” to answer the following reading questions. Try to answer as many questions as you can without looking back for the answers. Remember to answer in complete sentences and watch your spelling.

1. In the story, Victoria is writing a letter to the moon. What is meant by a moon phase in the story?

2. Where does the moon get its light from?

3. Would you weigh less or more on the moon? Check the box below with your answer.

LESS MORE

The story did not answer the following question. Try to answer it anyway, and see if you can match your teacher’s explanation.

Why would your weight be different on the moon than on the earth?

4. Is our moon the only moon in the solar system? How do you know this answer?

5. When does the moon rise and set? (2 or more sentences)

Dear Luna

ANSWER KEY

Directions: Use the story “Dear Luna” to answer the following reading questions. Try to answer as many questions as you can without looking back for the answers. Remember to answer in complete sentences and to watch your spelling.

1. In the story, Victoria is writing a letter to the moon. What is meant by a moon phase in the story?

A moon phase is a cycle or pattern that the moon goes through each month.

2. Where does the moon get its light from?

The moon gets all of its light from the sun. It has no natural light of its own.

3. Would you weigh less or more on the moon? Check the box below with your answer.

LESS MORE

The story did not answer the following question. Try to answer it anyway, and see if you can match your teacher’s explanation.

Why would your weight be different on the moon than the earth?

You would weigh less on the moon than you weigh on the earth because the moon’s mass is only about 1/6 of the earth’s mass. The force of gravity applied to an object is greater or lesser, depending on the size of the object. A larger object has a greater force of gravity applied to it.

4. Is our moon the only one in the solar system? How do you know this answer?

Our moon is not the only moon in our solar system. Other planets have moons circling them as well.

5. When does the moon rise and set? (2 or more sentences)

The moon rises and sets at different times each day. The moon does not always rise and set at opposite times to the earth, but it does follow a repeated pattern that is easy to chart.