Science Virtual Learning

7th Grade Science
Reviewing Lunar Phases

April 21, 2020

7/Science
Lesson: April 21, 2020

Objective/Learning Target:
I can identify and explain lunar phases.

Warmup

On a sheet of paper, answer these questions from yesterday's learning about seasons.

1. How much of a tilt does the Earth have on its imaginary axis?
2. How long does it take for the Earth to orbit the Sun?
3. If it is summertime in Florida, what season is it in Texas?
4. If the northern hemisphere is leaning toward the sun, what is the season?
5. If Kansas City is entering spring, Argentina in South America is entering _____.

Warmup--Correct Answers

On a sheet of paper, answer these questions from yesterday's learning about seasons.

1. How much of a tilt does the Earth have on its imaginary axis? 23.5
2. How long does it take for the Earth to orbit the Sun? 365.25 days
3. If it is summertime in Florida, what season is it in Texas? Summer
4. If the northern hemisphere is leaning toward the sun, what is the season? Summer
5. If Kansas City is entering spring, Argentina in South America is entering __Fall____.

Lesson

On a piece of paper, draw and label all the moon phases you remember from lessons earlier this year. Use the lunar vocabulary below to help you. <u>You can check your answers after the lesson.</u>

<u>Lunar Phases Vocabulary</u>

Waxing Waning Crescent Gibbous Full New

First Last Third Quarter

Lesson-Lunar Phases

Click on this link to complete the following tasks. (Answer on your paper of moon phases you made earlier in the lesson.)

1. Play the video. Why do we have lunar, or moon, phases?
2. Scroll down past the video to the 2020 Lunar Calendar to answer the following questions.

a. What moon phase will we see on June 5? July 27? October 9? November 15?
b. How many times will we see a full moon in 2020?
c. How many times will we see a last, or third, quarter moon in 2020?
d. Why can scientists predict when we will see certain moon phases?

Lesson-Answers to Lunar Phases

1. Play the video. Why do we have lunar, or moon, phases?
   Lunar phases are how much of the moon's disk is illuminated, or lit, from our perspective.
2. Scroll down past the video to the 2020 Lunar Calendar to answer the following questions.

a. What moon phase will we see on June 5? July 27? October 9? November 15?
   June 5=full moon, July 27=first quarter, October 9=last quarter, November 15=new moon

b. How many times will we see a full moon in 2020? We will see a full moon 13 times in 2020.

c. How many times will we see a last, or third, quarter moon in 2020? We will see a last quarter moon 12 times in 2020.

d. Why can scientists predict when we will see certain moon phases? Scientists can predict moon phases because the moon has a consistent orbit around the Earth.

Lesson

Using the same link as before, (scroll down past the lunar calendar), define the following lunar words on your paper:

New moon:
Waxing crescent:
First Quarter:
Waxing Gibbous:
Full Moon:
Waning Gibbous:
Last Quarter:
Waning Crescent:

Lesson

Using the same link as before, (scroll down past the lunar calendar), define the following lunar words on your paper:

New Moon: The side of the moon facing toward us receives no direct sunlight.
Waxing Crescent: The moon gradually becomes more illuminated by direct sunlight.
First Quarter: Half-illuminated from our point of view, the moon has traveled about a quarter of the way around Earth since the new moon.
Waxing Gibbous: More than half of the moon's face appears to be getting sunlight.
Full Moon: The moon is fully illuminated by the sun from our perspective.
Waning Gibbous: More than half of the moon's face appears to be getting sunlight, but the amount is decreasing.
Last Quarter: The moon has moved another quarter of the way around Earth, to the third quarter position. The sun's light is now shining on the other half of the visible face of the moon.
Waning Crescent: Less than half of the moon's face appears to be getting sunlight, and the amount is decreasing.

Practice

Use this simulation to observe lunar phases in motion.

Click on the < or > 1 hour to move the moon ahead or back by 1 hour.
Click on the < or > 1 day to move the moon ahead or back by 1 day.
Click the play button to watch the moon cycle through its' phases.

Answer the following questions on your paper you used before in this lesson:
Does the moon show more or less light when it is closer to the sun?
Does the moon show more or less light when it is farther from the sun?

Practice ANSWERS

Use this simulation to observe lunar phases in motion.

Click on the < or > 1 hour to move the moon ahead or back by 1 hour.
Click on the < or > 1 day to move the moon ahead or back by 1 day.
Click the play button to watch the moon cycle through its' phases.

Answer the following questions on your paper you used before in this lesson:
Does the moon show more or less light when it is closer to the sun? The moon shows less light when it is closer to the sun.
Does the moon show more or less light when it is farther from the sun? The moon shows more light when it is farther from the sun.

Practice

When you think you have had enough practice, take this quiz to see how much you know. Read the following directions before starting the quiz.

- Click on your answer and then click ‘check answer’ to see if you were right.
- When you have finished answering the last question, click ‘see score’.
- If you want to try again to improve your score, click ‘start again’.

Check your answers to the moon phases drawing from slide 5, on the next slide.


FULL
WANING GIBBOUS
WAXING GIBBOUS
THIRD QUARTER
FIRTS QUARTER
WANING CRECENT
WAXING CRESCENT
MOON PHASES
Designed by Vecteezy

Resources

Quizizz Flashcards
Quizizz Practice Quiz
Ducksters Quiz
Moon information beyond just phases of the moon.