

Free Lunar Phases Interactive Organizer



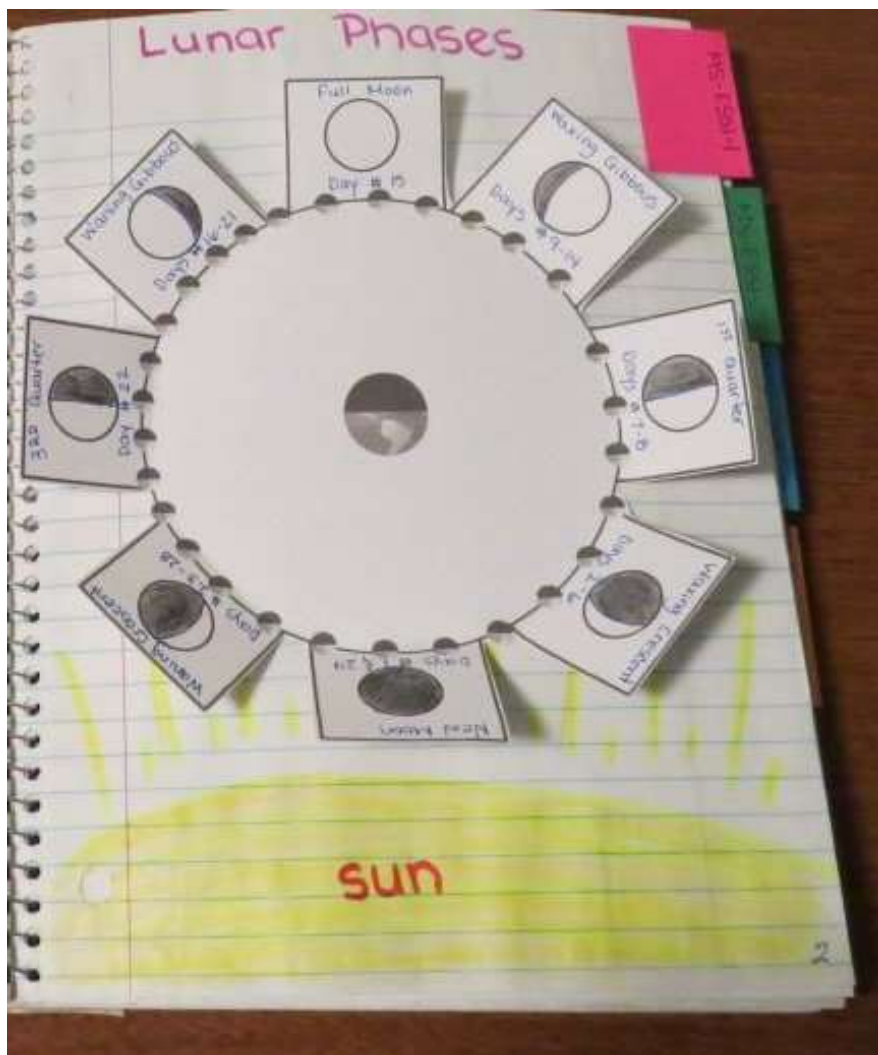
Created by Gay Miller

Lunar Phases

MS-ESS1-1. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.

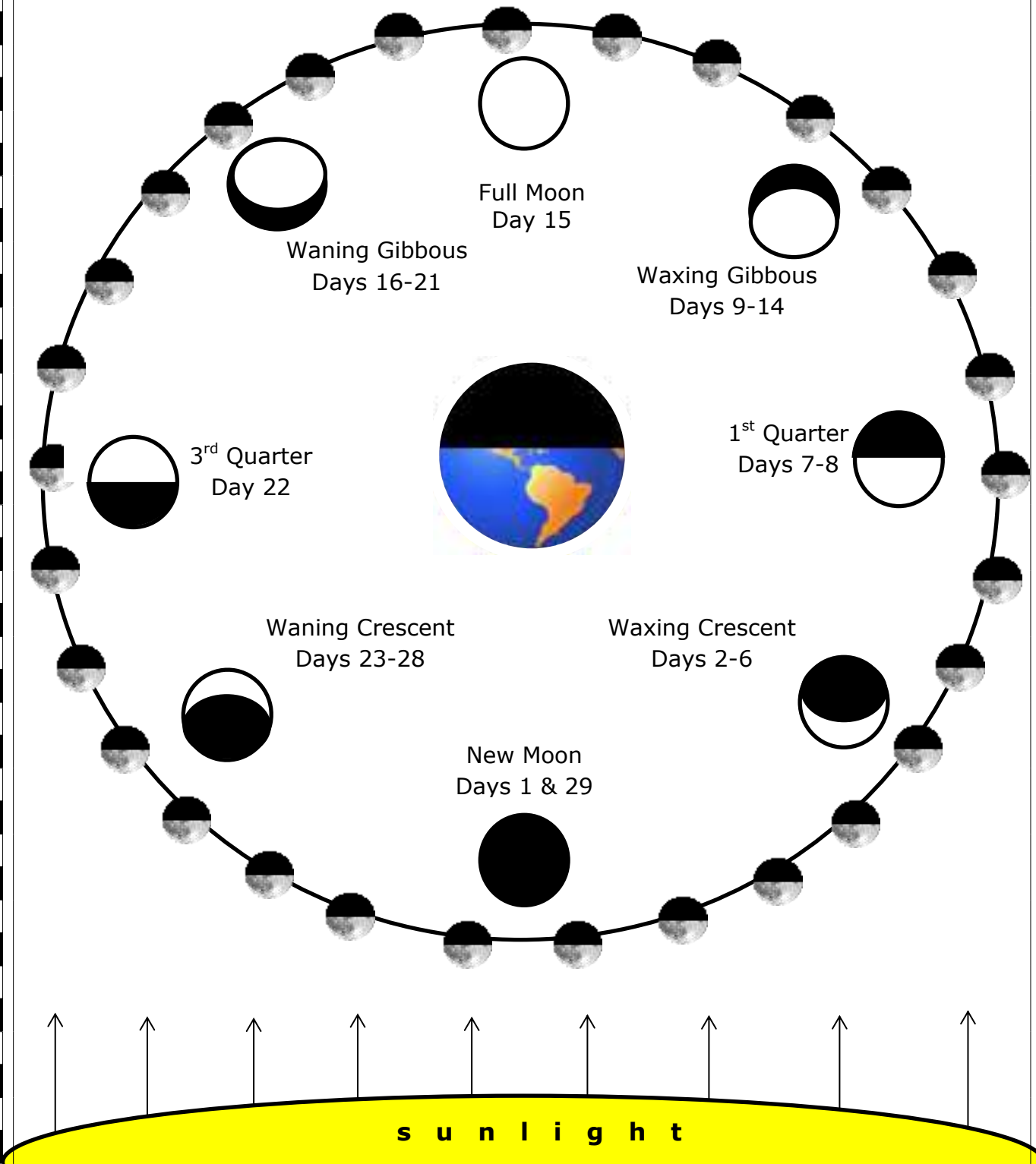
This is a sample from

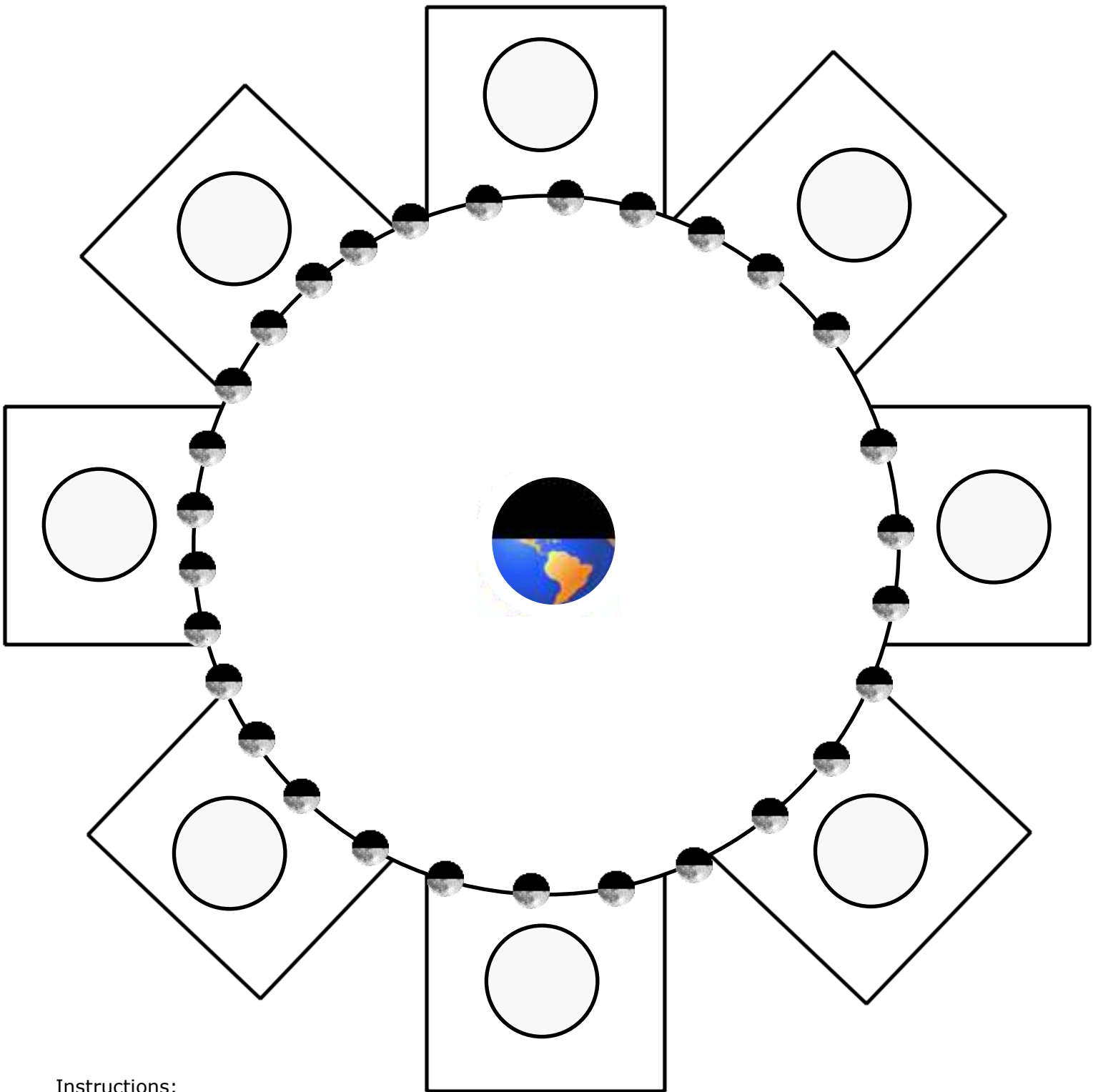
Earth's Place in the Universe Interactive Organizers



The pattern and directions for creating the Lunar Phases organizer may be found on page 4 with the answer key on page 5. Notice that each flap lifts up so students can visualize how the moon would look from the angle of Earth.

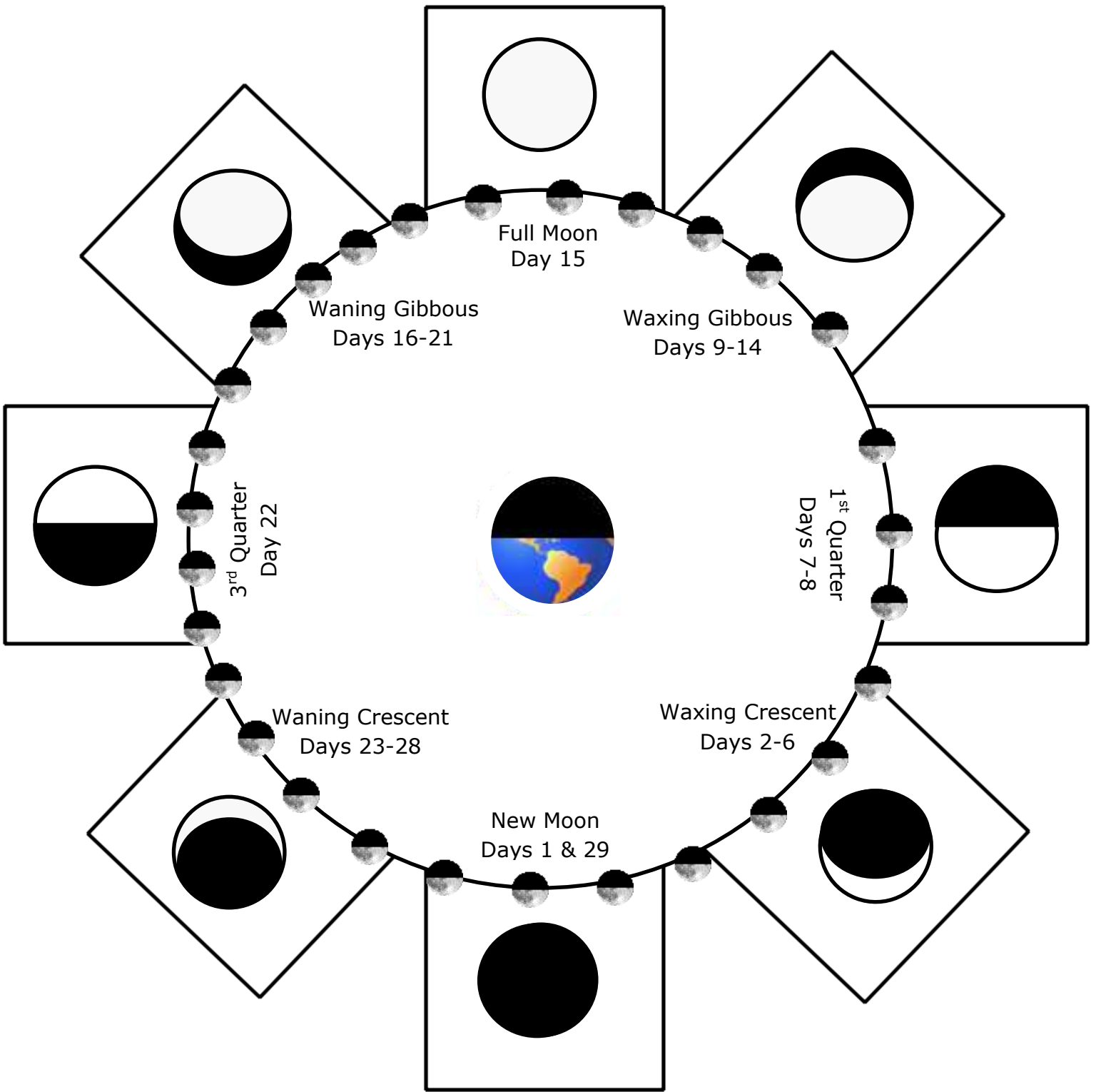
Lunar Phases





Instructions:

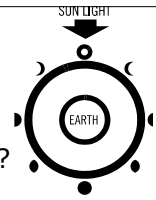
- 1) On each of the eight tabs, write the moon phase above the circle shape and the days this phase takes place in the lunar cycle under the circle shape. Using a black crayon, shade each circle so that it accurately shows the amount of the moon visible from Earth during its phase.
- 2) Cut out the organizer and glue the middle portion only onto your organizer notebook so that the tabs may be lifted up to view the moon. On your organizer notebook page, draw the sun and write a title for your page.



On this answer key words could not be typed onto the tabs without losing clarity. Encourage students to write answers on the tabs as in the photo example, as it will encourage them to view the moon phases at the correct angle.

Lunar Phases

Check for Understanding



1. How long does it take for the moon to make one complete orbit around the Earth?

2. What is a lunar month?

3. How long is a lunar month? _____
4. Explain why there is a difference between the time it takes for the moon to orbit Earth and the length of the lunar month.

5. How many phases does the moon have? _____
6. Draw a series of three pictures illustrating a waning moon.

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7. Draw a series of three pictures illustrating a waxing moon.

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8. Draw a picture of a crescent moon, and then write a sentence explaining what a crescent moon is.

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9. Draw a picture of gibbous moon, and then write a sentence explaining what a gibbous moon is.

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10. Draw a picture of the Earth, moon, and sun illustrating the new moon phase.

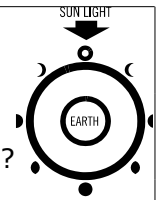
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11. Explain why there is not a solar eclipse each month when the moon passes between the Earth and sun.

12. Explain why people on Earth always see the same side of the moon.

Lunar Phases

Check for Understanding



- How long does it take for the moon to make one complete orbit around the Earth?
The moon takes approximately 27.3 days to orbit around the Earth.
- What is a lunar month?
A lunar month is the time from one new moon to the next new moon.
- How long is a lunar month? A lunar month is about 29.5 days.
- Explain why there is a difference between the time it takes for the moon to orbit Earth and the length of the lunar month.
Because the Earth moves while the moon orbits, it takes the moon about 2 extra days to get into new moon position. On Earth we see a crescent moon during this time.
- How many phases does the moon have? The moon goes through eight phases.
- Draw a series of three pictures illustrating a waning moon.



- Draw a series of three pictures illustrating a waxing moon.



- Draw a picture of a crescent moon, and then write a sentence explaining what a crescent moon is.
- Draw a picture of a gibbous moon, and then write a sentence explaining what a gibbous moon is.



Phases where you can see less than half of the bright side of the moon are called crescent moons.



Phases where you can see more than half of the bright side of the moon are called gibbous moons.

- Draw a picture of the Earth, moon, and sun illustrating the new moon phase.



During the new moon phase the moon is between the Earth and sun.

- Explain why there is not a solar eclipse each month when the moon passes between the Earth and sun.
The moon's orbit around the Earth is tilted about five degrees from the Earth's orbit around the sun making most shadows cast by the Earth and moon miss each other.
- Explain why people on Earth always see the same side of the moon.
The moon's rotation takes the same amount of time as its revolution around the Earth. Because of this people on Earth always see the same side of the moon.

Edible Lunar Phases Made with Moon Pies



This moon phase model was created using a combination of vanilla and chocolate Moon Pies.



Mnemonic Device

beginning



First
Quarter

descending



Last
Quarter



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Interactive Organizers