

WEEK 2 Lesson 2

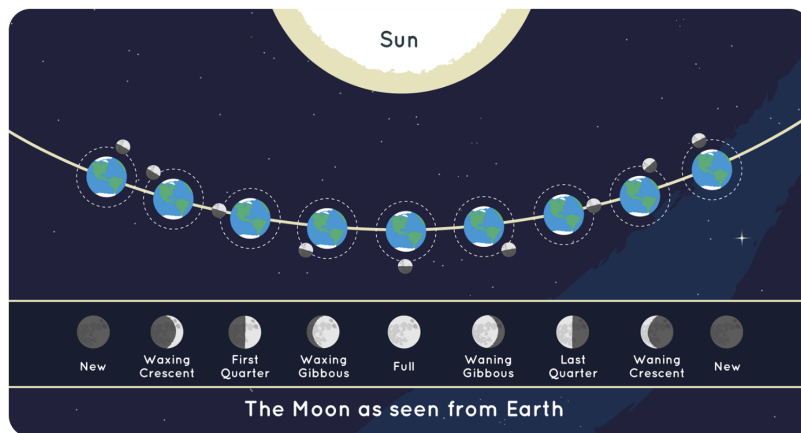
Science and Engineering: Moon Patterns

S & E Big Ideas	The Moon can be seen during the day and the night. The Moon seems to change shape throughout the month.
S & E Guiding Question	How does the Moon seem to change?
Content Objectives	I can make observations of the Moon from media. (1-ESS1-1) I can describe how the Moon moves across the sky. (1-ESS1-1)
Language Objective	I can describe what I see in my classmates' journals. (SL1.1)
Vocabulary	media: a way of communicating information that reaches a lot of people Moon: a natural object that travels around on a path around the Earth phase: a step or part in a series of events or actions time lapse: a video or images that are sped up to show action faster
Materials and Preparation	<ul style="list-style-type: none"> ● Week 2, journal prompt 2, copied and cut apart for each child and glued into each journal ● Teacher Science Journal ● yellow marker, crayon, or colored pencil, 1 per child ● NASA Kids Moon Phases website ● projector and screen or smartboard, to show website ● Phases of the Moon sheet
Opening 1 minute	<i>In our last lesson, we learned about a pattern that the Earth and Sun follow: day and night. Today, we will begin learning about another pattern in the sky, one related to the Moon. Let's review what we learned. We learned that as the Earth spins, the sun shines on different parts of the Earth. That causes day and night, which is a pattern. Our evidence was our demonstration with the globe and flashlight. Today, we will think about this more and consider the question, how does the moon appear to change?</i>

We are going to take some time to look at each other's work and talk about what we see. Then we will record some more observations to try to answer the question, how does the Moon seem to change?

Investigation
15 minutes

Show the Phases of the Moon from [NASA Kids](#)
Direct children's attention to the image of the phases of the moon. Ask them to make observations about how the view of the moon changes.



Use the following questions to guide the conversation with the whole class.

- *What's going on in this picture?*
- *What do you see that makes you say that?*
- *Do you think the Moon moves or stays still?*
- *How does the Moon appear to change shape?*
- *What do you notice about light and dark parts of the Moon?*
- *Why do you think some parts are bright while other parts are darker?*

In this picture, we can see the Sun, Earth, and the Moon. Just like the Earth travels around the Sun, the Moon travels around the Earth.

Show Waning Crescent from the website:

[Here's what the Moon looks like right now from Earth:](#)



Use this tool to see the current Moon phase and to plan ahead for other Moon views. Credit: NASA

Science and Engineering U1 W2 L2

Adapted with permission for Maine Public Schools

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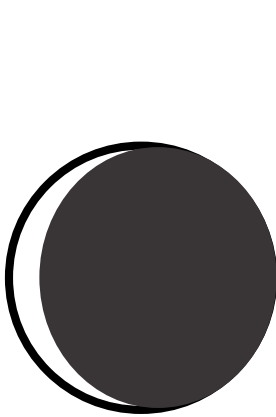
	<p>Slide the blue circle on the time lapse bar all the way to the left. Click the right arrow to show the children the time lapse of the phases of the moon up to today's date.</p> <p>Keep the phases of the moon displayed as children color their phases of the moon page. Children should color the exposed part of the moon yellow on their page. Point out the pattern of change and the cycle of these changes.</p>
<p>Closing 5 minutes</p>	<p>Think-Pair-Share</p> <p><i>What did we learn about how the Moon appears to change?</i></p> <p><i>Now that you've had a chance to talk with a partner, who can share what they learned about how the Moon appears to change?</i></p> <p><i>Over the next several weeks, we will continue to make observations about how the moon appears to change its shape. During your Science and Engineering Studio this week, you will get to explore why the moon appears to change shape and record your observations and thoughts in your science journal!</i></p>
<p>Standards</p>	<p>1-ESS1-1 Use observations of the sun, moon, and stars to describe patterns that can be predicted.</p> <p>S.L.1.1: Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.</p>
<p>Ongoing assessment</p>	<p>During whole group and partner conversations, listen to determine if kids understand that the Moon appears to change shape and that it can be seen during the day.</p> <p>Watch for the misconceptions that the Moon can only be seen at night, that the Moon physically changes shape, and that the Moon moves across the sky.</p> <p>Review children's new journal entries. Do they include details that help reveal specific information about how the Moon appears to change?</p>
<p>Additional Resource</p>	<p>To observe the moon during the day, the moonrise and moonset times can be found on this website: Moonrise and Moonset Times</p>

<p>Notes</p>

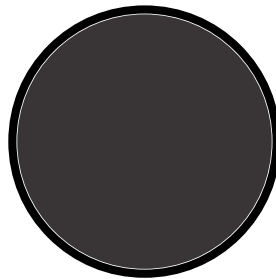
Name _____

PHASES OF THE MOON

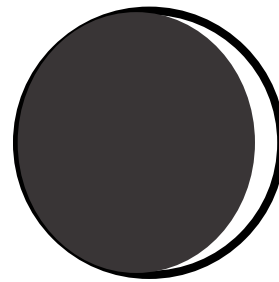
INSTRUCTIONS: COLOR EACH PHASE OF THE MOON



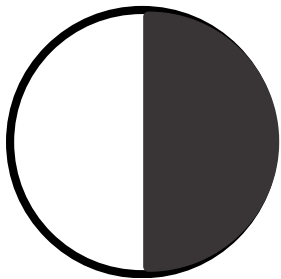
WANING CRESCENT



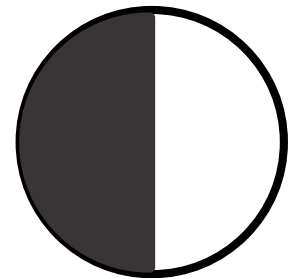
NEW MOON



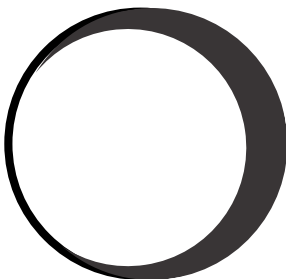
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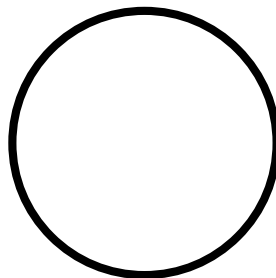
LAST QUARTER



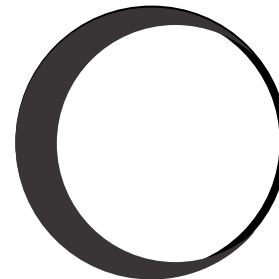
FIRST QUARTER



WANING GIBBOUS



FULL MOON



WAXING GIBBOUS