

Moon Phase Viewer

Name: _____

Date: _____

Class: _____

My level: ☐ Explorer ☐ Investigator ☐ Legend

Mission: The observatory's moon calendar got scrambled. Move the Moon around Earth, compare the top view with the view from Earth, and rebuild the calendar in the right order.

Big question: Why does the Moon seem to change shape?

★ Warm-up: Fix the mistake

Each statement has a mistake. Rewrite it correctly.

The Moon makes its own light.

Earth's shadow causes the Moon's phases.

Key vocabulary	
Phase	The shape of the lit part of the Moon we see from Earth.
Waxing	The lit part we see is growing.
Waning	The lit part we see is shrinking.
Crescent / Gibbous	Less than half lit / more than half lit.

1 Box 1

Full moon

In the simulator: Move the Moon to make a **Full moon**.

Where is the Moon during a full moon?

☐ On the far side of Earth from the Sun ☐ Between Earth and the Sun ☐ Beside Earth, at a right angle

New moon

In the simulator: Move the Moon to make a **New moon**.

Why can't we see the new moon?

☐ Its lit half faces away from Earth ☐ Earth's shadow covers it ☐ It is too far away

2 Box 2

Rebuild the calendar

Record the phase name.

Day	Phase	Lit part we see (%)
About day 7		
About day 15		
About day 22		

3 Box 3

Put the phases in order

Order the phases starting at the new moon.

Put in order: First quarter · Full moon · New moon · Third quarter · Waning crescent · Waning gibbous · Waxing crescent · Waxing gibbous

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

4 Box 4

See every phase

In the simulator: Move the Moon through all 8 phases.

About how many days does it take to go from one full moon to the next?

Answer: _____ days

5 Box 5

Legend: which side? 🏆 Legend only

Tonight the RIGHT side of the Moon is lit and it is getting bigger each night. What phase comes next?

☐ First quarter, then waxing gibbous ☐ Waning crescent ☐ New moon ☐ Third quarter

6 Box 6

Bust the myth

Your friend says, "Phases happen because Earth's shadow covers part of the Moon." Explain what really causes phases.



Exit ticket: answer the big question in your own words

Why does the Moon seem to change shape?

Completion code:

Shown on the last screen of the simulator.