



# The Mini Page

**Next Week:**  
Light Pollution

Issue 09, 2023

Founded by Betty Debnam

## Phenomenal Moon Phases



photo by Erik Drost

Have you ever looked up in the sky on different nights throughout a month and noticed the moon has a different shape each time? The moon itself doesn't change form. It's actually our view of the moon that causes us to see a different shape.

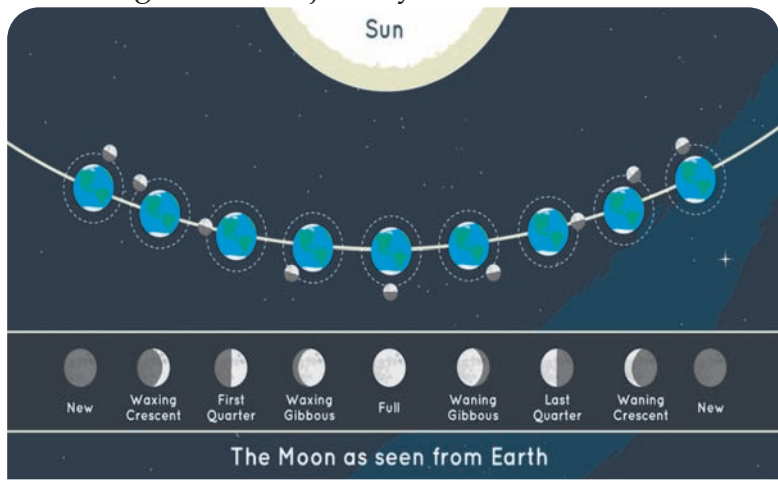
The Mini Page learns about the phases of the moon this week.

### Light

Our solar system has one source of light: the sun. The moon doesn't have any light of its own. The side of the moon that faces the sun reflects the sun's brightness, which is what we are able to see.

The moon's **orbit**, or the curved path it takes around the Earth, is what helps us see a different view of the moon each night. The part of the moon that is brightly lit is the part of the moon that we see changing.

During the moon's journey, we'll see



The Moon as seen from Earth

Courtesy of NASA/JPL-Caltech

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### Mini Fact:

The moon is much smaller than the sun, but it is also much closer to Earth, so to us, they appear similar in size.

eight moon phases: new, waxing crescent, first quarter, waxing gibbous, full, waning gibbous, third quarter and waning crescent.

### Moon phases

NASA gives helpful explanations of the eight moon phases and what we can expect to see during each one.

**New:** If the moon is in the new phase, we cannot see it from Earth because the side of the moon that is lit up is facing away from us.

**Waxing Crescent:** People in the **Northern Hemisphere**, or top half of the planet, view the waxing crescent phase of the moon as a sliver of light on the right side.

**First Quarter:** The first quarter phase appears as a half moon.

**Waxing Gibbous:** The waxing gibbous moon phase is between a half moon and full moon. **Waxing** means it is getting bigger.

**Full:** The side of the moon facing Earth is completely **illuminated**, or covered in light.

**Waning Gibbous:** The waning gibbous phase is between a full moon and a half moon. **Waning** means it is getting smaller.

**Third Quarter:** The third quarter moon also appears as a half moon, but it is the opposite half from the first quarter moon.

**Waning Crescent:** People in the Northern Hemisphere see the waning crescent phase as a sliver of light on the left side.

### Full supermoons

The moon moves from one of the eight phases to the next during its orbit each month. The lunar cycle, or the journey through all eight phases, takes 29 days.

You might have seen a **supermoon**, which is a full moon that looks much bigger than normal. This happens only a few times each year when the moon is full at the same time as its orbit brings it closest to Earth.

Full supermoons in 2023 will be July 3, Aug. 1, Aug. 30 and Sept. 29. You might have noticed August mentioned twice, and that's because the supermoon on Aug. 30 is also called a blue moon!



Have you ever heard the expression of something happening "once in a blue moon"? A **blue moon** is the second full moon happening in a calendar month, which doesn't happen often. The blue moon on Aug. 30 is special because it's the last blue moon we'll see until May 2026.

Full supermoons appear brighter because the size and brightness of a supermoon is about 15% more than a regular full moon. Because of this, if the sky is clear on the night of a supermoon, you'll likely experience a good view of it.

### Resources



#### On the Web:

- [bit.ly/MPmoonphases](https://bit.ly/MPmoonphases)
- [spaceplace.nasa.gov/oreo-moon/en/](https://spaceplace.nasa.gov/oreo-moon/en/)

#### At the library:

- "The Faces, or Phases, of the Moon" by Baby Professor

### Try 'n' Find

Words that remind us of the moon phases are hidden in this puzzle. Some words are hidden backward or diagonally, and some letters are used twice. See if you can find:



- BLUE, BRIGHT, CRESCENT,
- DARK, EARTH, FULL,
- GIBBOUS, HEMISPHERE,
- ILLUMINATE, MOON,
- NEW, ORBIT, PATH,
- PHASE, QUARTER, SHAPE,
- SKY, SUN, WANING,
- WAXING.

U K N U S I Q Q M S T U E H T  
 D A R K M F U Z U I K R A T N  
 S U O B B I G M B A E Y V R E  
 F P G F D W J R K H R I R A C  
 U A M N A A O G P T G T B E S  
 L T R X I E L S K M H L E K E  
 L H I X P N I I O C U G U R R  
 I N B A F M A O W E N B I E C  
 G C H R E U N W P H A S E R F  
 J S I H E T A N I M U L L I B

### Mini Spy Classics

Mini Spy and her friends are visiting a planetarium. See if you can find the hidden pictures. Then color the picture.



Mini Spy Classics appear in the first issue of each month.

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- word MINI
- shoe
- strawberry
- ring
- heart
- cherry
- number 7
- kite
- dog
- tooth
- letter C
- whale
- teapot
- bird
- apple
- number 3
- frog
- feather
- peapod

### Mini Jokes



**Martha:** How do you know when the moon has enough to eat?  
**Milton:** When it's full!

### Eco Note



Researchers say they have observed that Adélie penguins appear to recognize themselves in their mirror reflections, a trait that could indicate some degree of self-awareness. The mirror test was developed in the 1970s and includes placing a mark on a test animal's face or other parts of the body to see if it touches or investigates it when seen in a mirror. Very few animals have "passed" this test aside from some primates, dolphins and Asian elephants. Indian researchers say Adélie penguins study their images in the mirror and make movements as if to see if it is themselves.

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### For later:

Look in the newspaper for articles about the moon and planets.

**Teachers:** Follow and interact with The Mini Page on Facebook!



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