

THE LUNAR CYCLE

Phases of the moon, also known as the lunar cycle, refers to the changing appearance of the moon as it orbits the earth. The sun always illuminates or shines on half of the moon! The moon itself does not emit light; we see the reflected light from the sun. We sometimes only see part of the reflected light based on the angle at which we view the moon during its month-long journey around the earth. The phases of the moon are named based upon how much of the illuminated side of the moon appears to us.

New Moon

During the new moon, the moon is directly between the earth and the sun. We don't see the illuminated side at all because it is facing completely away from us. The moon appears completely dark.

Waxing Crescent

The term "waxing" means to get larger. During this phase, the first sliver or crescent-shaped portion of the illuminated moon begins to be visible. The illumination grows or waxes from the right side to the left side. Approximately $\frac{1}{4}$ of the moon appears lit.

First Quarter

The first quarter moon is when the visible part is half illuminated on the right and dark on the left.

Waxing Gibbous

The word gibbous comes from a Latin word that means "hump". When looking at a gibbous moon, the shape looks like a semi-circle with a bit of rounded part on one side. A waxing gibbous moon means that the illuminated part is getting larger, it's more than half, but not quite full. Approximately $\frac{3}{4}$ appears lit.

Full Moon

A full moon occurs when the Earth is between the sun and the moon, and we can see the entire illuminated side.

Waning Gibbous

The term "waning" means to get smaller. As the moon continues in its orbit after the full moon, the illuminated part we can see begins to decrease. During a waning gibbous moon, the dark portion appears on the right and the illuminated portion appears on the left.

Third Quarter

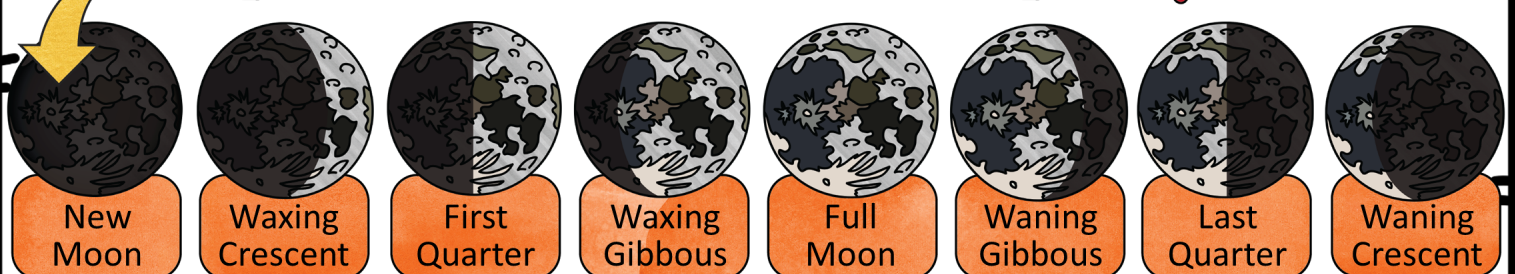
Just like the first quarter moon, the third quarter moon is half illuminated, but the illuminated part is on the left and the dark is increasing from the right.

Waning Crescent

During the waning crescent moon, the dark portion has increased to more than half, but not quite back to being a new moon.

It takes roughly one month (29.5 days) for the moon to complete one orbit of the earth and one lunar cycle.

WHAT YOU SEE DURING A LUNAR CYCLE!



THE LUNAR CYCLE

- The phases of the moon are also known as the _____.
 - New moon
 - Eclipse
 - Lunar Cycle
 - Waning Waxing
- How are we able to see parts of the moon?
 - Sunlight is reflected off of moon
 - The moon is a light source
 - The Earth lights up the moon
- During a new moon phase, how much of the moon is illuminated (lit up)?
 - None
 - One quarter
 - Half
 - All of it
- The term "waxing" means what?
 - Moons
 - Getting larger
 - Getting smaller
 - Lit up
- The term "waning" means what?
 - Moons
 - Getting larger
 - Getting smaller
 - Lit up
- How much of the moon is illuminated (lit up) during the first quarter and last quarter phases?
 - None
 - One quarter
 - Half
 - All of it
- It takes about _____ for the moon to complete one orbit of Earth (one lunar cycle).
 - 2 weeks
 - 1 year
 - 29.5 days
 - 1 month

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