

Name: _____

The Moon's Phases



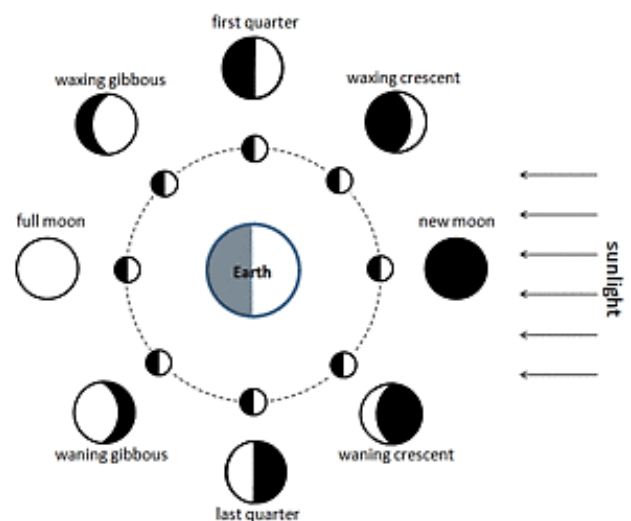
Phases of the Moon

The moon appears to take on different shapes depending upon when we look at it. But does it really change shape? No, it just looks that way. We know that the moon is round like a sphere (almost) and that it keeps its spherical shape as it travels around the earth.

We also know that "moonlight" isn't made by the moon. Stars are the only bodies in space that make their own light, and the sun is the only source of light in our solar system. The light we see when we look at the moon is just sunlight that shines on the moon and is reflected (bounced back) so that it reaches us on earth.

The sun always (except during an eclipse) lights up one half of the moon's surface—the half facing the sun. But we can't always see the whole lit-up side from earth. As the moon circles the earth, the amount of the lit-up side we can see changes. We call the different amounts of the lit-up moon we see, the moon's *phases*.

When the moon is between us and the sun, we can't see any of the moon's lit-up side. We call this the *new moon* or a *dark moon* phase. As the moon circles the earth (counterclockwise), we can see more and more of its lit-up side. When the moon reaches the opposite side of the earth from the sun, we see the entire sun-lit side of the moon. This is the *full moon* phase. Then, as the moon continues to circle the earth, we see less and less of the lit-up side. Finally, the moon has come full circle, and we have another *new (dark) moon*.



In ancient times, people used to use the phases of the moon as a calendar to tell time. It takes the moon about 28 days to go through all its phases, from new moon back to new moon. During the first half of its cycle, when the moon looks like it's getting bigger, we say that it is *waxing*. During the last half of its cycle, when it seems to be getting smaller, we say that it is *waning*.

Name: _____

The Moon's Phases

full moon half new moon stars sun waning waxing

Fill in the blanks with the words above:

1. Except during an eclipse, the sun always lights up _____ of the moon's surface.
2. When the moon is between earth and the sun, we can't see any of the moon's lit-up side. This is called a _____.
3. When the sun and moon are on opposite sides of the earth, we see the entire lit-up side of the moon. We call this a _____.
4. Moonlight is NOT made by the moon; it is light from the _____ that is reflected by from the moon's surface.
5. _____ are the only bodies in space that make their own light.
6. During the first half of the moon's cycle, when it looks like the moon is getting bigger, we say that it is _____.
7. During the last half of its cycle, when the moon seems to be getting smaller, we say that it is _____.
8. There will be a full moon Friday night. How long will it be before the next full moon?