

Under the MOON

THE MOON HAS ONE FACE

As the earth rotates, the moon also rotates. We only see 41% of the moon's face because the "dark side" is always pointed away from us. We do not see 50% because of the moon is oblong with the smallest end pointing toward earth.

BLUE MOON

The 1937 Maine Farmer's Almanac states that each season - winter, spring, summer and fall - have three moons, but occasionally a fourth moon will occur within a season. The THIRD moon in the season is dubbed the "blue moon." The fourth moon is not the blue moon because of its relationship to the equinox or solstice. This type of moon can only occur in February, May, August, and November. There are no historical references to a second moon in a month as a blue moon; it is simply a modern misinterpretation.



THE MOON'S FORMATION

The "giant impact" is the most popular theory of the moon's creation. According to this theory, the earth had no moon until a mass of rock the size of Mars collided with earth, sending vaporized and melted bits orbiting our planet. Eventually the rocks consolidated to form our single moon.



WATER ON THE MOON

The moon's surface is dry and dusty. It is believed the moon once had water but it evaporated because there is no atmosphere. Comets and meteoroids pelt the moon's surface, releasing water. Although most of the water escapes back to space, Clementine, a spacecraft, has photographed evidence of ice - at the south pole of the moon.

NOCTURNAL ANIMALS and their unique adaptations

Our eyes are comprised of rods, which help us see in the dark, and cones, which allow us to see color. Nocturnal animals, like the great horned owl pictured here, have more rods in their eyes. Consequently, they only see in black, white, and gray shades but see more than 10 times better in low light than humans. Also unlike our eyes, owls' eyes are fixed in their sockets. However, their ability to turn their head 180 degrees each direction compensates for that shortcoming. Owls' eyes are approximately 2.2 times larger than other birds of similar weight. Owls are excellent night hunters because of their unique eyes.

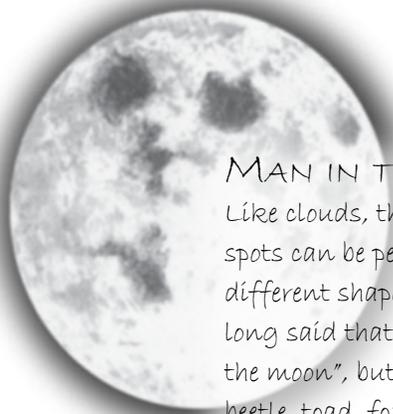


The firefly searches for a mate by flashing a signal. Other insects use light, but only the firefly can turn the light on and off. Males and females from all life stages are luminous. The light also serves as a predator repellent. Predators associate the flashing light with a bad-tasting meal. If you sit and watch fireflies you may be able to imitate their flash pattern with a flashlight and attract other fireflies.



The MOON's diameter is less than the width of the United States and Canada





MAN IN THE MOON

Like clouds, the moon's dark spots can be perceived as different shapes. It has been long said that there's a "man in the moon", but a rabbit, lady, beetle, toad, fox, cow and cat can also be seen.

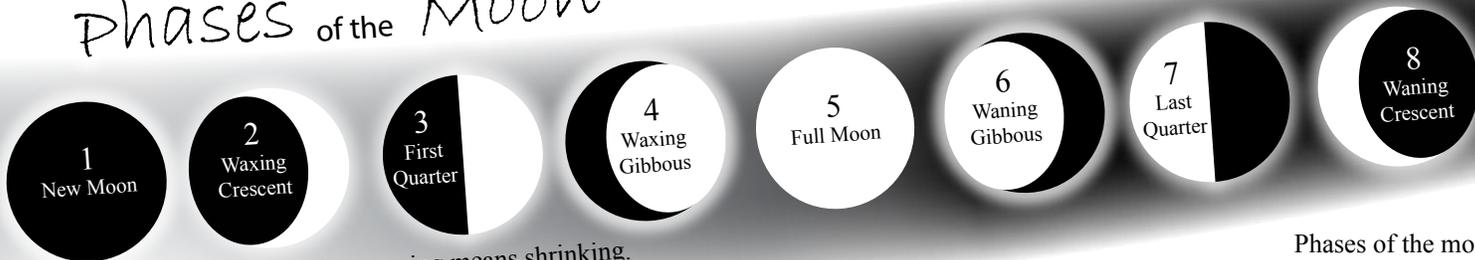
MOON FACTS

Age	4.5 billion years old
Temperature during day	273° F
Temperature during night	-244° F
Rotation speed	10 mph
Orbital speed	2,287 mph
Surface area	9.4 billion acres (1/4 earth)
Widest Crater	140 mile diameter
Deepest Crater	15,000 + feet
Highest Mountain	16,000 + feet
# who walked on surface	12 men
Shape	egg-shaped, smallest end pointing toward earth

The *full moon* occurs approximately once a month, or every 29 days. Each month's moon has been historically given a name by the Algonquian Native Americans.

Month	Moon name	Reason for name
January	Wolf Moon	Hungry wolf packs howl at night
February	Snow Moon	Heaviest snow falls in the middle of winter
March	Worm Moon	Start of spring, as earthworms and the robins that eat them appear
April	Pink Moon	An early spring flower called "moss pink" start to bloom
May	Flower Moon	Many types of flowers bloom
June	Strawberry Moon	Strawberries are ready to be picked
July	Buck Moon	New antlers of buck deer, coated with velvety fur, begin to form
August	Sturgeon Moon	Sturgeon, a large fish, are easily caught this time of year
September	Harvest Moon	Farmers continue harvesting until after sunset by the moonlight.
October	Hunter's Moon	Hunters track and kill prey by moonlight to stockpile food for winter
November	Beaver Moon	Beaver traps are set to supply warm winter furs
December	Cold Moon	The cold of winter sets in

Phases of the MOON



Waxing means growing, waning means shrinking.

Phases of the moon are not caused by the earth's shadow. They are due to a change in our viewing perspective as the moon orbits around us as it is lit by the sun.

Department of Environmental Protection New Jersey Forest Service Forest Resource Education Center



www.njforestrycenter.org forestrycenter@gmail.com
 370 East Veterans Highway, Jackson, NJ 08527
 (732) 928-2360 fax (732) 928-8472

