



The Moon

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The Moon

About Space4alleducation

We are a small dedicated team who love space and wishes to share their love with anyone who wants to learn about space/astrometry and rockets and more.

I am Andy the owner and lead tutor for space4education.com a small company dedicated to improving the education for all learners who want to be involved in the developed of space.

Over the last 7 years we have been developing a program aimed helping and supporting leaners from 10 years and younger.

The Booklet that you are holding is the beginning of that journey, as it the beginning of your journey as you begin to explore the various regions of space.

This booklets is part of series booklets that will give you various information about space.

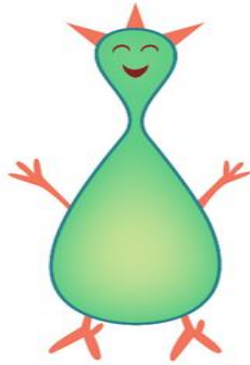
This booklet was created by

Andy (Content creator) and Steve (I.T Management).

Please check out our website

www.space4alleducation.com

The Moon



Quick Facts

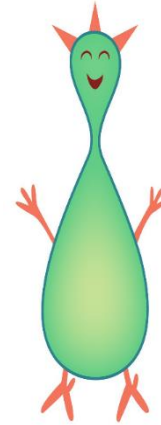
Most of the planets in our solar system – and some asteroids – have moons. Earth has one moon. We call it "the Moon" because for a long time it was the only one we knew about. Many languages have beautiful names for our Moon. It is "Luna" in Italian, Latin, and Spanish, "Lune" in French, "Mond" in German, and "Selene" in Greek.

Our Moon is like a desert with plains, mountains, and valleys. It also has many craters, holes created when space rocks hit the surface at a high speed. There is no air to breathe on the Moon.

The Moon travels around the Earth in an oval-shaped orbit. Scientists think the Moon was formed long, long ago when Earth crashed into a Mars-sized object.

We always see the same side of the Moon from Earth. You have to go into space to see the other side.

The Moon



Hi, I'm from the Moon,

The Moon is Earth's only natural satellite and is the fifth-largest moon in the solar system. It is a rocky body that orbits around our planet, and it is located about 384,400 kilometres away from Earth. The Moon has been a source of fascination for humans for thousands of years, and it continues to captivate both children and adults alike.

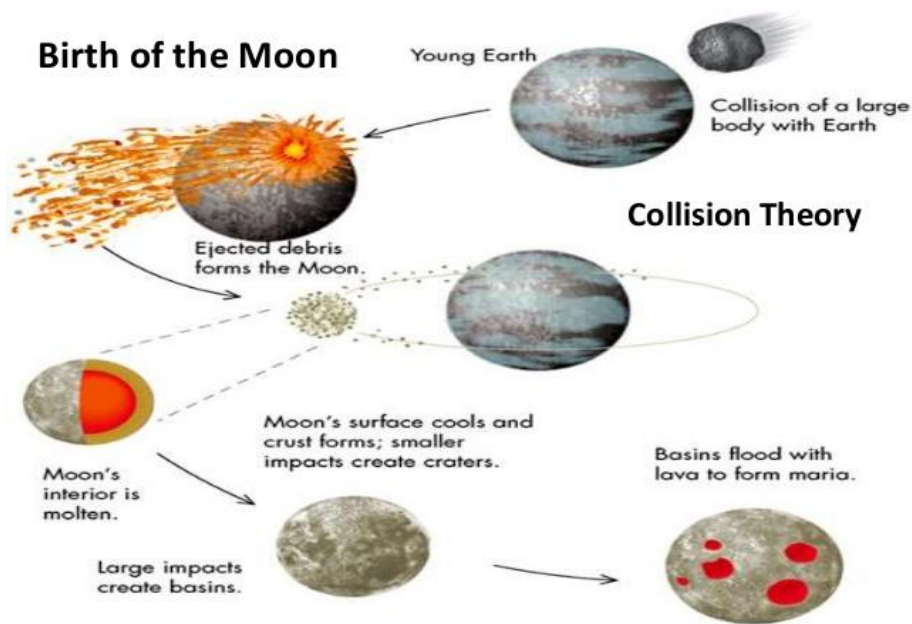
The Moon's surface is covered in craters, mountains, and plains. These features were formed by the impact of asteroids and comets over billions of years. The craters are circular depressions that vary in size, with some being as large as several hundred kilometres in diameter. The mountains on the Moon are not as tall as those on Earth, but they can still reach impressive heights. The plains, also known as Maria, are large, flat areas that were formed by ancient volcanic activity.



The Moon

Formation

The leading theory of the Moon's origin is that a Mars-sized body collided with Earth about 4.5 billion years ago. The resulting debris from both Earth and the impactor accumulated to form our natural satellite 239,000 miles (384,000 kilometres) away. The newly formed Moon was in a molten state, but within about 100 million years, most of the global "magma ocean" had crystallized, with less-dense rocks floating upward and eventually forming the lunar crust.



The Moon

The Moon's Orbit

The Moon moves in an orbit around the Earth. This orbit is not a perfect circle but rather an ellipse, with the Earth located at one of the foci. The Moon takes approximately 27.3 days to complete one orbit around the Earth, which is known as a lunar month. This is why we often refer to the Moon's phases as monthly cycles.

Rotation and Revolution

The Moon has two primary types of movement: rotation and revolution. Rotation refers to the Moon spinning on its axis, while revolution refers to its movement around the Earth. Interestingly, the Moon takes the same amount of time to complete one rotation on its axis as it does to complete one revolution around the Earth. This is why we always see the same side of the Moon facing us.

Synchronous Rotation

The phenomenon of the Moon always showing the same face to the Earth is known as synchronous rotation. Due to this synchronous rotation, we only see about 59% of the Moon's surface from Earth. The side that faces away from us is called the "far side" or "dark side" of the Moon, although it still receives sunlight.

The Moon

The brightest and largest object in our night sky, the Moon makes Earth a more liveable planet by moderating our home planet's wobble on its axis, leading to a relatively stable climate. It also causes tides, creating a rhythm that has guided humans for thousands of years.

The Moon was likely formed after a Mars-sized body collided with Earth several billion years ago.

Earth's Moon is the only place beyond Earth where humans have set foot, so far.

Earth's only natural satellite is simply called "the Moon" because people didn't know other moons existed until Galileo Galilei discovered four moons orbiting Jupiter in 1610.

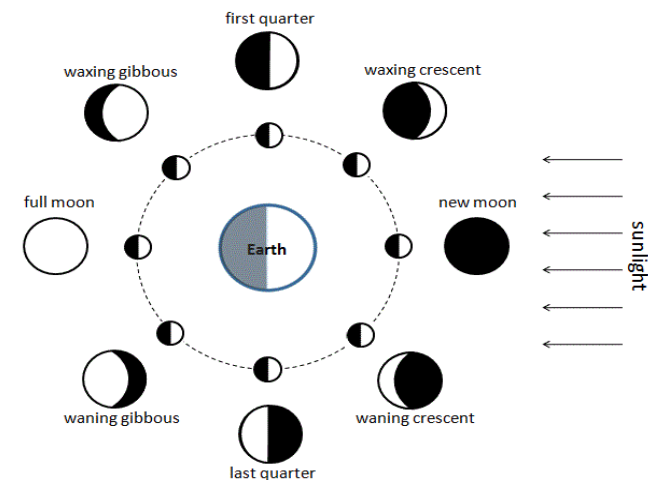
In Latin, the Moon is called Luna, which is the main adjective for all things Moon-related: lunar.



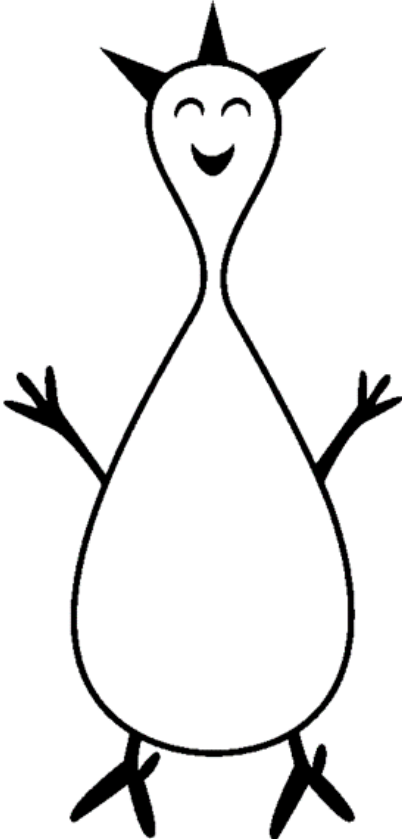
The Moon

The Moon is rotating at the same rate that it revolves around Earth (called synchronous rotation), so the same hemisphere faces Earth all the time. Some people call the far side – the hemisphere we never see from Earth – the "dark side" but that's misleading. As the Moon orbits Earth, different parts are in sunlight or darkness at different times. The changing illumination is why, from our perspective, the Moon goes through phases. During a "full moon," the hemisphere of the Moon we can see from Earth is fully illuminated by the Sun. And a "new moon" occurs when the far side of the Moon has full sunlight, and the side facing us is having its night.

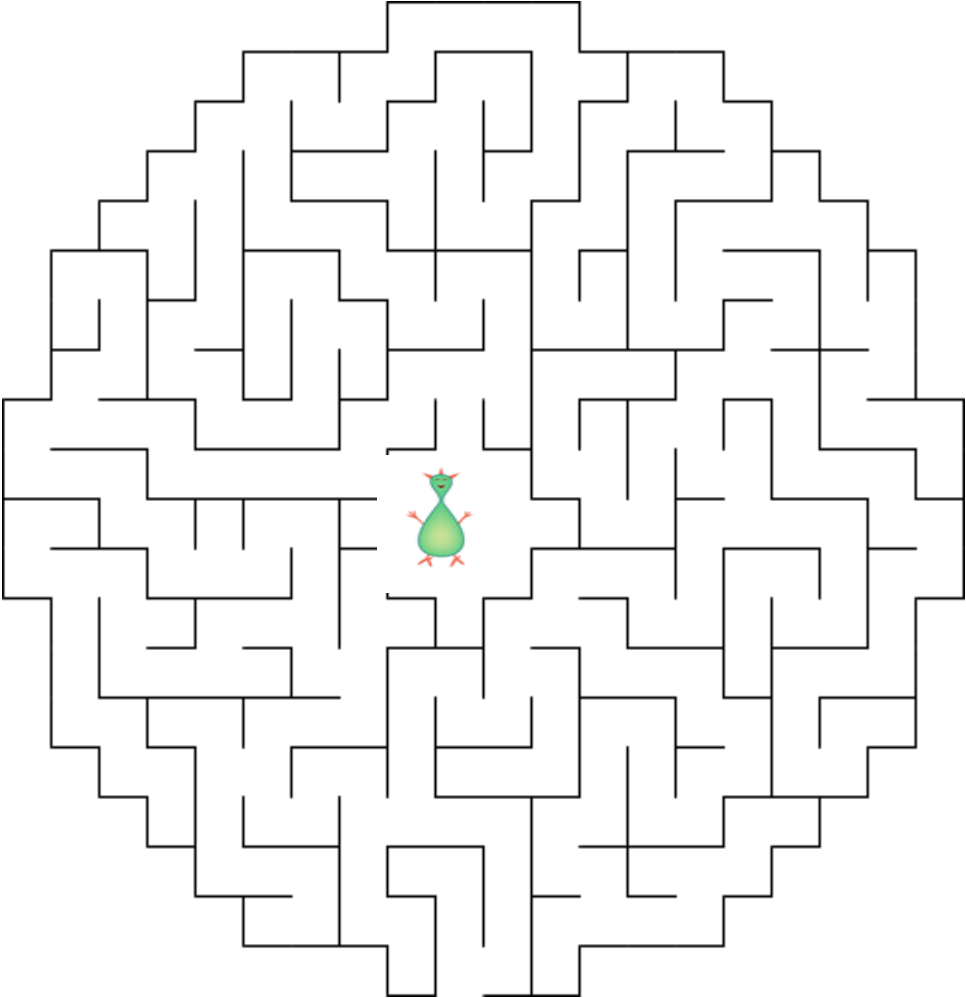
The Moon makes a complete orbit around Earth in 27 Earth days and rotates or spins at that same rate, or in that same amount of time. Because Earth is moving as well – rotating on its axis as it orbits the Sun – from our perspective, the Moon appears to orbit us every 29 days.



The Moon



The Moon



Finish