

Earth's Moon





A full moon rises
behind a mountain.

Earth's Satellite

Of the many bodies in our solar system, the Moon is the closest to Earth. It is almost 239,000 miles from our planet. On Earth, that distance is considered far away. However, in space it is considered extremely close.

The Moon appears in the night sky because it is a satellite to Earth. A satellite is a body that orbits a larger body. As Earth's satellite, the Moon orbits Earth. It also travels with Earth as our planet orbits the Sun.

While it travels with Earth, the Moon turns, too. Because both Earth and the Moon are always turning, one side of the Moon is never seen from Earth. This side is called the far side of the Moon.

Key Notes:

What is a satellite?



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The moon's gravity causes the ocean to rise and fall.

The Moon and Tides

If you've been to the ocean, you know that the water level at the beach changes during the day. At low tide, you see more sand. At high tide, you see more water.

Tides on Earth are largely caused by the Moon. The Moon's gravity pulls slightly on the oceans, causing the oceans to rise. In this way, the force of the moon's gravity causes the rising and falling of tides.

The height of the tides is affected by the shape of the coastline and the depth of the ocean. The highest tides on Earth occur in a bay in eastern Canada. During high tide, the height of the water in this bay increases by as much as 53 feet.

Key Notes:

What is the difference between high and low tides?



From Earth, we see four phases of the Moon.

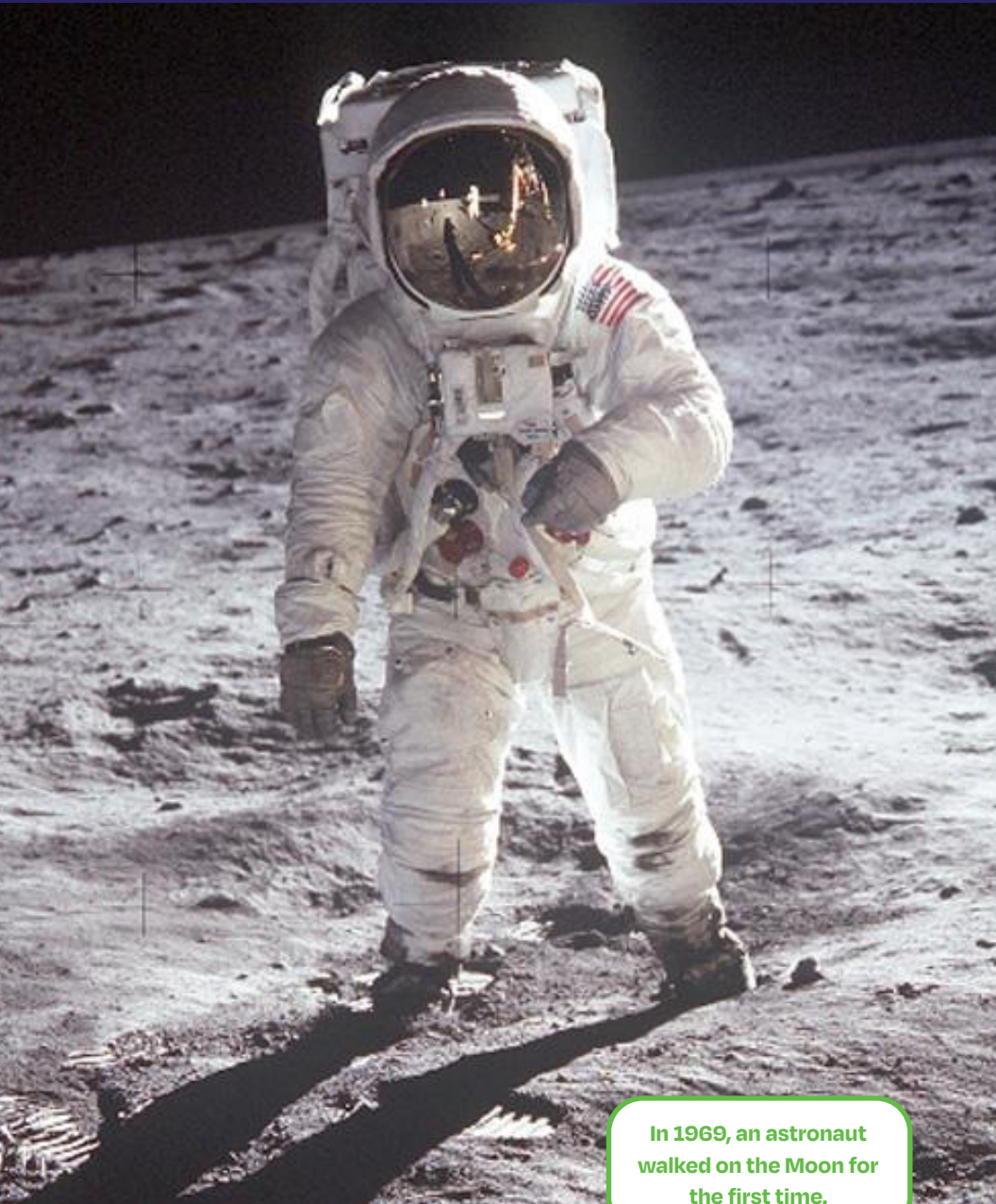
The Changing Moon

Although the Moon seems to give off light, its light really comes from the sun. The Moon also seems to change size, but what really changes is how much of the Moon we see.

The Moon orbits Earth about every 29 days. During this time, the Moon goes through several lunar phases. The first lunar phase is called a new moon. At this time, we see only a small part of the Moon. Over the next two weeks, more of the Moon becomes visible until we see an entire side of the Moon. This phase is called full moon. Over the next two weeks, less of the Moon becomes visible until there's another new moon. Then, a new lunar phase begins.

Key Notes:

What do we see during a full moon?



In 1969, an astronaut walked on the Moon for the first time.

Humans on the Moon

From 1969 to 1972, twelve American astronauts flew missions to the Moon. Before taking off, the astronauts had to carefully prepare for these missions.

Because the Moon does not have oxygen, food, or water, astronauts have to carry these things so they can survive. Astronauts also have to learn how to walk on the Moon because the Moon's gravity is only one-sixth that of Earth. This lower gravity makes people weigh less, so they bounce when they try to walk on the Moon.

When the Space Age began, some people were afraid that one country might try to rule space. Today, however, people from many countries fly missions together so that everyone can study the Moon and space.

Key Notes:

How easy would it be to live on the moon?

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