

The Moon

Do you ever look at the Moon at night and see the Moon shining down and lighting up the night-time town? Do you wonder what it would be like to visit the Moon or wonder why it shines so bright? Read on to find out all about our planet's moon.

Moon and Sun

The Moon shines very brightly, but it is only reflecting the light of the Sun because it cannot make its own light. When the Sun comes back up for our daytime, it appears as if the Moon has disappeared, but it doesn't, it's just harder to see because the sky is so bright. Sometimes, if you look carefully, you can see the Moon in the sky during the daytime.

Orbit

The Moon is the Earth's only natural satellite (that means something that orbits a larger object). It takes the Moon about 28 days to go around the Earth once; we call this a lunar month. During this time, we only ever see the same side of the Moon as it rotates slowly whilst it moves around us. The side we see is called the 'near side'.

During its orbit, the angle between the Earth, Moon and Sun changes so the part of the Moon that is lit up cannot always be seen from Earth. This is what gives us the phases of the moon, when it is waxing (growing bigger) and waning (getting smaller) with shapes including crescent and gibbous.

The eight phases of the Moon are:

			
First Quarter	Waxing Crescent	New Moon	Waning Crescent
			
Third Quarter	Waning Gibbous	Full Moon	Waxing Gibbous

The Moon



Moon Facts

- Average temperature in the day: 107°C
- Average temperature at night: -153°C
- Distance from Earth: 238 857 miles (384 403km)
- Diameter (distance from one side to the other): 2160 miles (3476km)
- Length of Day: 708 hours

What Is It Like on The Moon?

The Moon is extremely hot during the day but very cold at night. The surface of the Moon features a vast number of craters that have occurred after collisions with comets and asteroids. The Moon has many mountains, the tallest of which is Mons Huygens. It is 4700 metres tall; half the height of Mount Everest.

The Moon does not have an atmosphere like Earth does and therefore it is not possible to breathe on the moon without a special suit and tanks containing oxygen. The moon is also a very dry place and was thought to be completely without water. However, about a decade ago, traces of water were discovered. Some people now believe that humans may one day be able to live on the Moon.

Only 12 people have ever walked on the Moon. The first person to do this was Neil Armstrong on 20th July 1969. When he first walked on the Moon, he famously said, 'That's one small step for man, one giant leap for mankind'. There were two other men on the mission: Edwin 'Buzz' Aldrin and Michael Collins. Together, they formed the crew of the Apollo 11 mission. It took them just over three days to get there from Earth, blasting off in a Saturn V rocket from the Kennedy Space Centre, USA on July 16th 1969.

Did You Know...?

'Selenophobia' is the fear of the Moon.

You may have seen a film of people bouncing, rather than walking on the Moon. It isn't quite the same as walking on the Earth because the Moon's gravity is weaker than the Earth's gravitational force so people take longer to return to the surface when they go up in the air.

Questions

1. What word can be used to complete the sentence below:

The Moon cannot make its own... Tick **one**

- gravity
- water
- light
- heat

2. How far away is the Moon from the Earth in km? Tick **one**.

- 3476km
- 384 403km
- 2160km
- 238 857km

3. Explain what a lunar month is.

4. What word is used to describe when the Moon appears to be getting smaller?

5. What is selenophobia?

6. Why can humans not live on the Moon (at the moment)? Use evidence from the text to support your answer.

7. Who was the first man to walk on the Moon?

8. Explain in your own words what you think Neil Armstrong meant when he said, 'That's one small step for man, one giant leap for mankind.'

9. Would you like to visit the Moon? Explain your answer fully using evidence from the text to support your answer.

The Moon

Do you ever look at the Moon at night and see the glowing sphere lighting up the night-time town? Do you sometimes ponder what it would be like to visit the Moon or wonder why it shines so bright? Well here's some fact and figures that might interest you.

The Moon and The Sun

The Moon shines extremely brightly but it is only reflecting the rays of the Sun whilst it is round the other side of the Earth. The Moon cannot make its own light as it is not a star like the Sun. When we rotate back towards the Sun for our daytime, people used to believe that Moon had disappeared or moved. However, it's just harder to see because the sky is so bright. Sometimes, if you look carefully, you can see the Moon in the sky during the daytime.

Orbit

The Moon is the Earth's only natural satellite (that means something that orbits a larger object). It takes the Moon approximately 28 days to go around the Earth once; this is referred to as a lunar month. During this time, we only ever see the same side of the Moon as it rotates slowly while it moves around us. The Moon is not quite spherical and is slightly heavier on one side so gravity keeps the heavier side facing us.

During its orbit, the angle between the Earth, Moon and Sun changes so the part of the Moon that is lit up cannot always be seen from Earth. This is what gives us the phases of the moon, when it is waxing (growing bigger) and waning (getting smaller) with shapes including crescent and gibbous.

The eight phases of the Moon are:

			
First Quarter	Waxing Crescent	New Moon	Waning Crescent
			
Third Quarter	Waning Gibbous	Full Moon	Waxing Gibbous



Moon Facts

- The average temperature on the Moon in the day is 107°C and at night-time is -153°C.
- The distance between the Moon and the Earth is 238 857 miles (384 403km) and the distance from one side of the Moon to the other is 2160 miles (3476km).
- The length of one day on the Moon is 708 hours.

What Is It Like On The Moon?

Conditions on the Moon are extreme. It is desperately hot during the day but extremely cold at night. The surface of the Moon is covered in craters caused by collisions with comets and asteroids. The Moon has many mountains, the tallest of which is Mons Huygens that stands at 4700 metres tall; half the height of Mount Everest.

The Moon does not have an atmosphere like Earth does and therefore it is not possible to breathe on the moon without a suit and tanks containing oxygen. Scientists also once believed that the Moon was completely arid. However, about a decade ago, small traces of water were discovered. As a result, some people now believe that humans may one day be able to live on the Moon.

Did You Know...?

'Selenophobia' is the fear of the Moon.

Only 12 people have ever walked on the Moon! The first person to do this was Neil Armstrong on 20th July 1969. This record-breaking event was watched on television by an estimated 600 million people around the world. When he first walked on the Moon, Armstrong famously said, 'That's one small step for man, one giant leap for mankind.' On this mission, known as Apollo 11, there were two other crewmen: Edwin 'Buzz' Aldrin and Michael Collins. It took them just over three days to get there after blasting off from the Kennedy Space Centre on 16th July in a Saturn V rocket. When the astronauts returned to Earth, they had to be placed in quarantine for 21 days to make sure that they were not carrying any micro-organisms from the Moon that could be dangerous.

You may have seen a film of people bouncing, rather than walking on the Moon. It isn't quite the same as walking on the Earth because the Moon's gravity is weaker than the Earth's gravitational force so people take longer to return to the surface when they go up in the air. Astronauts are required to always be tethered, otherwise there is a risk of drifting off into space.

Questions

1. Why do you think the author chose to start the non-chronological report with rhetorical questions?

2. **Find** and **copy** a word that means **dry**.

3. How long does a day on the Moon last? Tick **one**.

- 107 hours
- 708 hours
- 153 hours
- 2016 hours

4. What does the word waxing mean?

5. How many days did Neil Armstrong and his colleagues have to spend in quarantine? Tick **one**.

- 11
- 600
- 28
- 21

6. Explain why the Moon has different phases during its cycle.

7. Read the following sentence:

'Only 12 people have ever walked on the Moon!'

Why do you think an exclamation mark has been used at the end of this sentence?

8. Name one way in which the Moon is similar to Earth and one way in which it is different.

9. Why do you think so many people tuned in to watch the Moon landing?

10. **Find** and **copy** a word that means '**attached**'.
