

The Moon

Do you ever look at the Moon at night? Do you wonder what it would be like to visit the moon? Read on to find out more...

Moon and Sun

The Moon shines very brightly, but it does not make its own light. It reflects the light of the Sun. When the Sun comes up for our daytime we think that the Moon goes away 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 day.



Did you know?

- Day temperature: 107°C
- Night temperature: -153°C
- Distance from Earth: 238 857 miles
- Diameter (from one side to the other): 2160 miles
- Length of Day: 708 hours

Orbit

The Moon is the only thing that naturally goes round (orbits) the Earth – anything that does this is called a satellite. It takes the Moon about 28 days to go round the Earth once, we call this a lunar month.

Did you know we only ever see the same side of the Moon?

The phases of the Moon depend on its position in relation to the Sun and Earth. As the Moon makes its way around the Earth, we see the bright parts of the Moon's surface at different angles. These are called the 'phases' of the Moon.

Moonwalking

Only 12 people have ever walked on the Moon! The first person was Neil Armstrong on 20th July, 1969. There were two other men on the mission: Buzz Aldrin and Michael Collins. Their space shuttle was called Apollo 11. It took them just over 3 days to get there.

You may have seen a film of people walking on the Moon and they bounce along. This is because the Moon's gravity is not as strong as the Earth's so people take longer to come back down when they go up in the air.

Questions

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

2. Where does the Moon get its light from?

3. How wide is the Moon?

4. How cold is the Moon at night?

5. What causes the different phases of the Moon?

6. Where does the Moon go in the daytime?

7. How long is a lunar month?

8. What is the distance from us to the Moon?

9. It took the astronauts just over 3 days to get to the Moon – how far could you travel in 3 days?

Answers

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

Neil Armstrong

2. Where does the Moon get its light from?

It reflects the Sun's light/rays

3. How wide is the Moon?

2160 miles

4. How cold is the Moon at night?

- 153°C

5. What causes the different phases of the Moon?

The changing angle between the Sun, Earth and Moon.

6. Where does the Moon go in the daytime?

Nowhere – it stays in the daytime sky

7. How long is a lunar month?

About 28 days / 4 weeks / 27.3 days / 29-30 days

(The range is because it depends on the position of the Earth.)

8. What is the distance from us to the Moon?

238 857 miles

9. It took the astronauts just over 3 days to get to the Moon – how far could you travel in 3 days?

Open ended for discussion to put the journey into perspective and how fast they must have been travelling to get there in such a short time.

The Moon

Do you ever look up in the sky at night and see the Moon shining down and lighting up the night-time town? Do you sometimes wonder what it would be like to visit the Moon or wonder why it shines so bright? Well here's some information that might interest you...

Moon and Sun

The Moon shines very brightly, but is only reflecting the light of the Sun it can't make its own light. When the Sun comes back up for our day time we think that the Moon goes away but it doesn't, it's just harder to see because it is so bright. Sometimes, if you look carefully, you can see the Moon in the sky during the day time.



Did you know?

- Average temperature in the day: 107°C
- Average temperature at night: -153°C
- Distance from Earth: 238 857 miles
- Diameter: 2160 miles
- Length of Day: 708 hours
- Selenophobia is fear of the Moon

Orbit

The Moon is the Earth's only satellite (that means something that orbits a larger object). It takes the Moon about 28 days to orbit 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.

During its orbit, the angle between the Earth, Moon and Sun changes so the part of the Moon that is lit up can not 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.

Moonwalking

Only 12 people have ever walked on the Moon! The first person to do this was Neil Armstrong on 20th July 1969. There were two other men on the mission: Buzz Aldrin and Michael Collins and they all travelled on the Apollo 11 shuttle.

You may have seen a film of people walking on the Moon and it isn't quite the same as walking on the Earth...walking on the Moon looks bouncy because the Moon's gravity is not as strong as the Earth's, so people take longer to fall back down when they are up in the air.

Questions

1. How many people were on the first moon landing mission?

2. Why does the moon look like it lights up when it doesn't?

3. What is a satellite?

4. How much colder is the Moon at night than in the daytime?

5. What causes the different phases of the Moon?

6. Where does the Moon go in the daytime?

7. How long does it take the Moon to orbit the Earth?

8. How far did Neil Armstrong travel to get to the Moon?

9. Work out how long it would take a car travelling at 70mph to get to the Moon.

a. In whole hours

b. In whole days

Answers

1. How many people were on the first moon landing mission?

Three

2. Why does the moon look like it lights up when it doesn't?

It reflects the Sun's light/rays

3. What is a satellite?

2160 miles

4. How much colder is the Moon at night than in the daytime?

260°C (107 + 153)

5. What causes the different phases of the Moon?

The changing angle between the Sun, Earth and Moon.

6. Where does the Moon go in the daytime?

Nowhere – it stays in the daytime sky

7. How long does it take the Moon to orbit the Earth?

About 28 days / 4 weeks / 27.3 days / 29-30 days

(The range is because it depends on the position of the Earth.)

8. How far did Neil Armstrong travel to get to the Moon?

238 857 miles

Work out how long it would take a car travelling at 70mph to get to the Moon.

a. In whole hours

3412 hours (238857 ÷ 70)

b. In whole days

142 days (3412 ÷ 24)

The Moon

Do you ever look up in the sky at night and see the spherical Moon 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 facts and figures that might interest you...

Moon and Sun

The Moon shines extremely brightly but 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 we assume the Moon goes away but it doesn't, it's just harder to see because it is so bright. Sometimes, if you look carefully, you can see the Moon in the sky during the daytime.



Did you know?

- Average surface temperature in the day: 107°C
- Average surface temperature at night: -153°C
- Distance from Earth: 238 857 miles
- Diameter: 2160 miles
- Length of Day: 708 hours
- Selenophobia is fear of the Moon

Orbit

The Moon is the Earth's only natural satellite (an object that orbits a larger object). It takes the Moon approximately 28 days to orbit 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 whilst 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 can not always be seen from Earth. This is what gives us the phases of the Moon, when it is waxing (getting bigger) and waning (getting smaller) with shapes including crescent and gibbous.

Moonwalking

Only 12 people have ever walked on the Moon! The first person to do this was Neil Armstrong on 20th July 1969. There were two other astronauts on the mission: Buzz Aldrin and Michael Collins who travelled on the Apollo 11 shuttle.

You may have seen footage of astronauts walking on the moon and you will notice it looks bouncy. This is because the Moon's gravity is only that of one sixth of the Earth's so people take longer to return to the surface when they are up in the air.

Questions

1. Who was the second man to walk on the Moon? How do you think he felt?

2. How does the moon look like it lights up when it doesn't?

3. Explain how a satellite and an object work together?

4. How much colder is the Moon at night than in the daytime?

5. Why does the Moon have different phases during its cycle?

6. People refer to the 'dark side of the Moon'. What do you think this means?

7. What is the name of someone who has a fear of the Moon?

8. How far did Neil Armstrong travel to get to the Moon and back?

Work out how long it would take a car travelling at 70mph to get to the Moon.

a: In whole hours

b: In whole days

Answers

1. Who was the second man to walk on the Moon? How do you think he felt?
Buzz Aldrin
(Discuss: how he felt, jealous that he wasn't the first? Or excited as he was still the second person ever to walk on the Moon?)
2. How does the moon look like it lights up when it doesn't?
It reflects the Sun's light/rays.
3. Explain how a satellite and an object work together?
The satellite orbits a larger object
4. How much colder is the Moon at night than in the daytime?
260°C (107 + 153)
5. Why does the Moon have different phases during its cycle?
The angle between the Earth, Moon and Sun changes so the part of the Moon that is lit up can not always be seen from Earth.
6. People refer to the 'dark side of the Moon'. What do you think this means?
We always see the same side of the Moon (this is lit up) so there is always the same side of the Moon that gets no light around the back that we don't see. This is the dark side of the Moon. (Interesting fact: also the name of the seminal album by Pink Floyd).
7. What is the name of someone who has a fear of the Moon?
Selenophobic (Note: this is not 'selenophobia' as we are looking for the name of the person, not the fear).
8. How far did Neil Armstrong travel to get to the Moon and back?
477 714 miles (238 857×2)
9. Work out how long it would take a car travelling at 70mph to get to the Moon.
 - a. In whole hours
3412 hours (238857 ÷ 70)
 - b. In whole days
142 days (3412 ÷ 24)