



Moon - Why does the moon change its shape?

Updated v2

Fact

- The moon doesn't really change shape at all – it's how much of it you can see that changes.
- As the moon orbits once around the Earth it rotates on its own axis so that the same side of the Moon always ends up facing us one Earth.
- The moon is made of rock. It doesn't produce any light itself. The only way we can see the Moon is when the Sun is shining on it. So the moon has it's own day and night just like planet Earth.
- We see different Moon shapes depending on whether it's day or night on the side of the Moon that's facing us.
- When the Sun is setting behind the Moon in the late afternoon sky, we will only see a sliver of the Moon in the West. But if the Moon is rising in the East in the early evening, we will see all of the setting sun shining on its face and the Moon will have a full round shape.

Do you know

- Planets are satellites of the sun and moons are orbiting satellites of the planets.
- Earth has only one moon
- Jupiter has at least 16 moons
- Saturn has at least 22 moons!
- Most planets have moons that are much smaller than the planet itself.
- Earth's moon is large in comparison – around one quarter of the diameter of the Earth.
- We get eclipses or shadows blocking the sunlight from lighting up the moon when the Sun, Earth and Moon are in a straight line.
- When the Moon's small shadow blocks sunlight on Earth we get a solar eclipse in that part of the World.
- When the Earth's big shadow is blocking the sunlight to a full Moon then there's a total lunar eclipse.

Experiments you can do

Create a chart of what the Moon looks like over a period of time, like a month.

What you need:

Use a calendar

Or create a grid of at least 4 rows of 7 squares on a piece of paper.

Pen or pencil

What you do:

Draw a picture of what the Moon looks like every three or four nights.

At the end of around 4.5 weeks (a month) you will have a record of all the different ways the Moon can appear.

If you can't see the moon, see if you can work out why.

Has the moon disappeared?

Is the sky cloudy?

Is it raining?

What shape was the moon a couple of days earlier?

Other Investigations

You can check that it's the sunny side of the Moon we see, if you can see both the Sun and the Moon during the day.

Have a look at which side of the Moon is lit up. Is it the side facing towards the sun or away from the sun?

What's happening to the side of the moon that's facing away from the Sun?

(The sunny side of the moon will always be the side that is facing the Sun).

Jokes

Why did the moon do lots of exercise? To keep in good shape.

Why did the cow jump over the moon? Because he wanted exercise
From Alysha Osborne