



## **Moon - Why does the moon change its shape?**

### **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 but Jupiter has at least 16 and Saturn has at least 22!
- Most planets have moons 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 month. Draw a picture of what the Moon looks like every three or four nights. At the end of the month you will have a record of all the different ways the Moon can appear.

### **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. It 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 Osborn