

## Learning Objective

We are learning to understand the phases of the moon and its orbit around the Earth.

I will be successful if:

- I can explain why the moon appears to change shape throughout a lunar month.
- I can describe some of the changes.
- I can label the different phases.

Last half term we learnt about Space, but it is such a HUGE topic that we need to continue some of this learning throughout some of our Science lessons this half term.

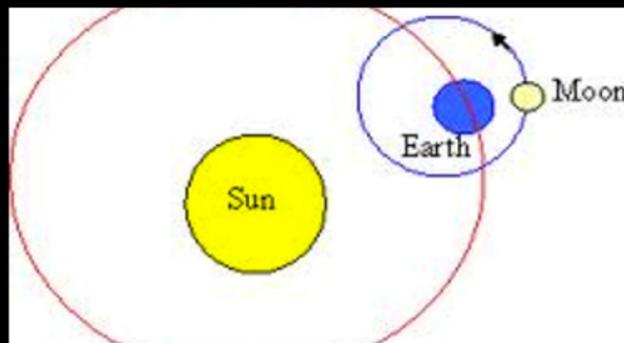


## The Moon's Size

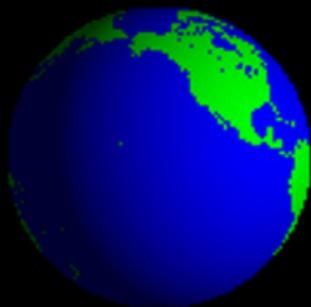
- The moon is a sphere, just like the earth
- It's diameter is 3, 476 km
- It is four times smaller than the Earth

## The Moon's Orbit

- The moon orbits around the Earth
- The only reason we can see it, is because of the sun
- How much of it we see also depends on the sun
- It takes 28 days for the moon to orbit the earth



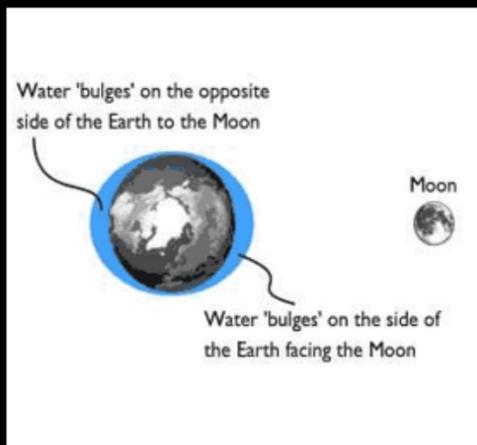
## The Moon



### **FACTFILE**

- It is Earth's biggest natural satellite.
- It takes around 28 days to orbit the Earth once. We call this a LUNAR MONTH.
- It rotates on its axis at the same speed as it orbits the Earth. We only ever see the same side of the moon.

## The Moon



### FACTFILE

- Temperature on the moon goes from 130°C in the light to -130°C in the dark.
- The moon's diameter is 27% that of the Earth.
- The moon has far less mass than Earth.
- The moon's gravity causes the tides.

## What is the surface of the moon like?

The surface of the moon is starkly different from that of the surface of Earth. Unlike our planet, which is dominated by oceans and continents, the surface of the moon is dominated by craters (circular pits which are formed as a result of impact of high speed interplanetary debris over billions of years ago). The craters of the moon are of different shapes depending upon angle of bombardment of the interplanetary debris on its surface. Scientists have found that the circular craters are formed as a result of overhead impact. On the moon there are even craters that are about 10 kilometers (6.2 miles) wide.

The moon's surface also includes central peaks which are mountains that are pushed upward by the pressure caused by impact blasts. Some of the largest impact features of the moon's surface are the enormous impact basins. They are great circular plains that lie about 300 to 1,000 kilometers (186.4 to 621.4 miles) across. There are about 2 to 3 dozens of these on the moon's surface. The greatest circular plain is found on the moon's "nearside" which is the hemisphere of the moon that faces Earth.

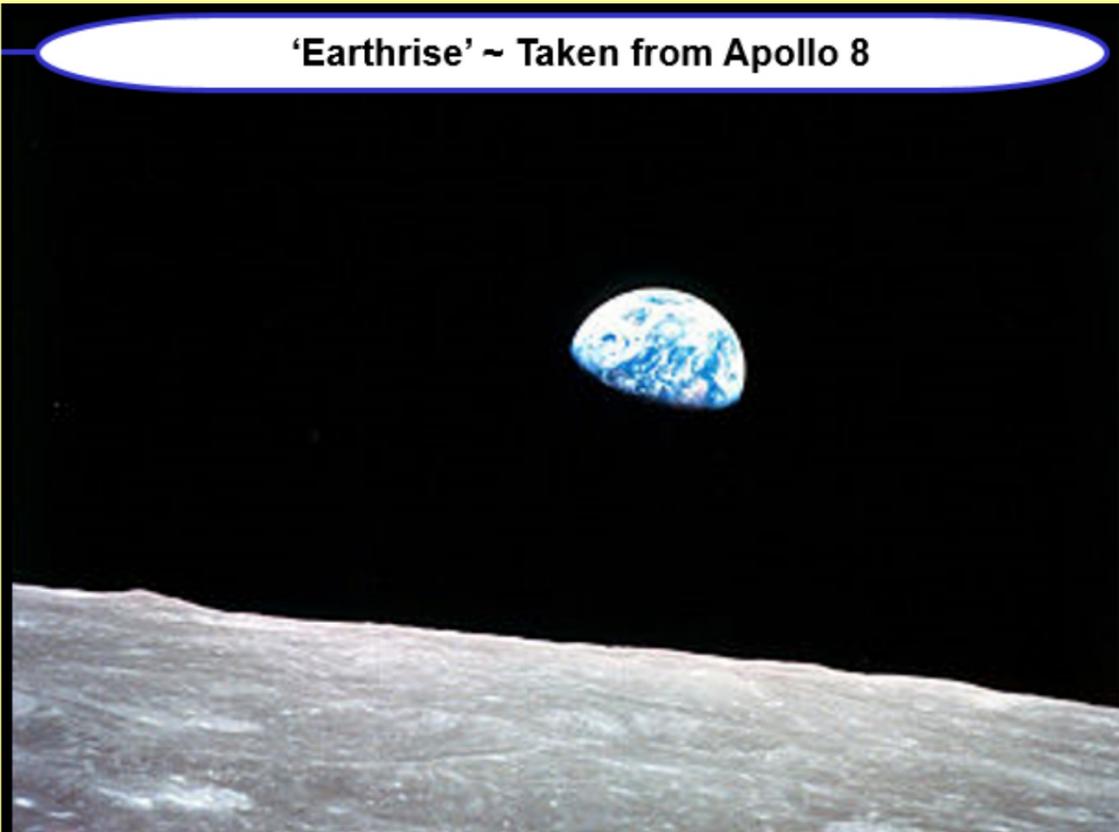
The floors of basins of the moon adjacent to "nearside" are covered by dark colored rocks. These areas are particularly smooth and possess larger craters and are commonly known by the name Maria or lowlands. The highland occupies about 80% of the moon's surface and includes a number of ancient impact craters.



*These are some of the Apollo Missions to the moon.*



'Earthrise' ~ Taken from Apollo 8



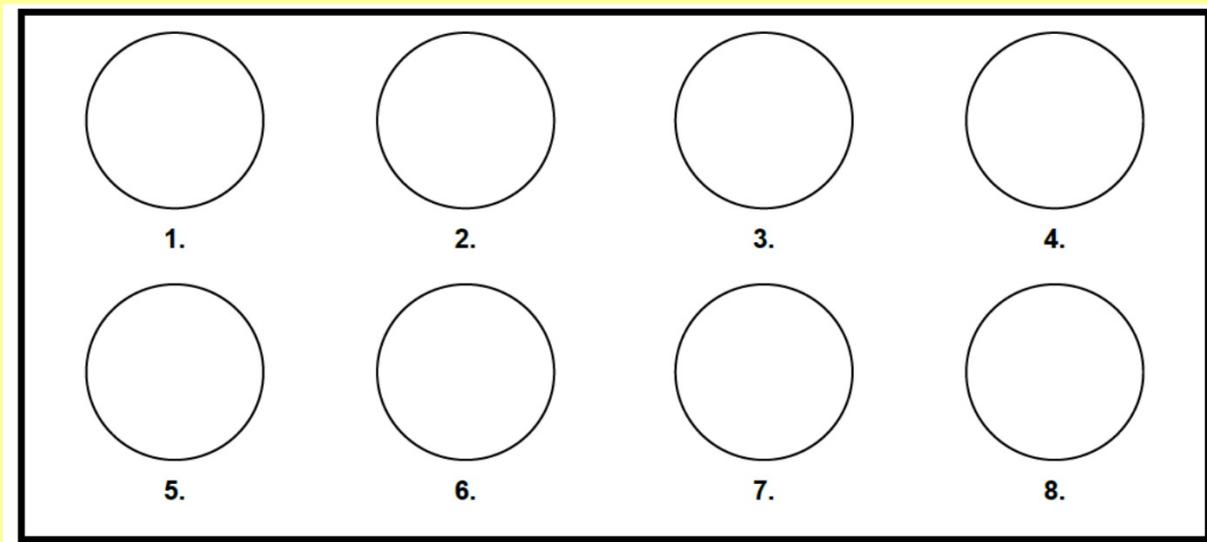
*What do you think it would be like to witness this?*

Why does the moon appear to be a different shape in the sky?

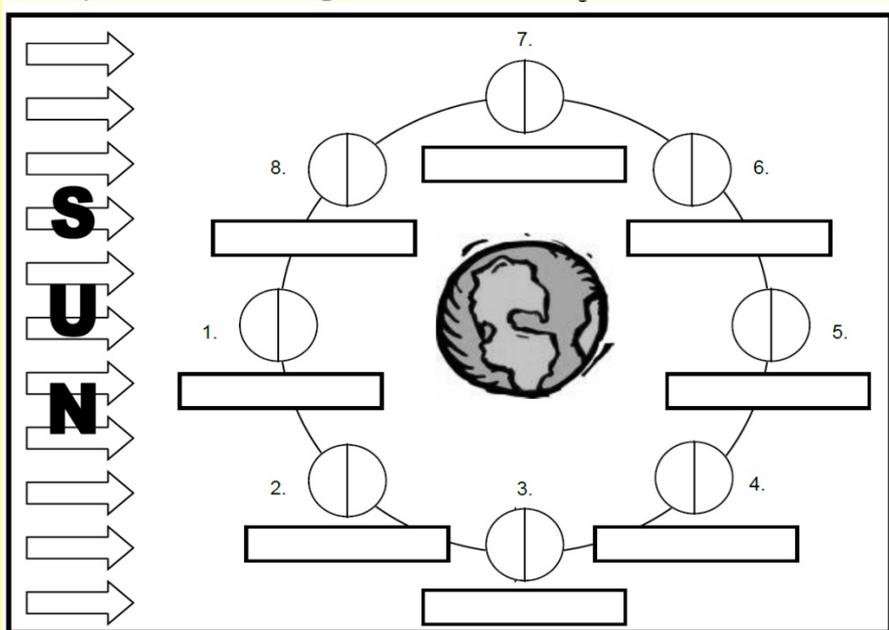
Watch the link below to learn more about the phases of the moon.  
<https://www.bbc.co.uk/programmes/p00n6zhl>



*Task 1: To draw the different phases of the moon.*



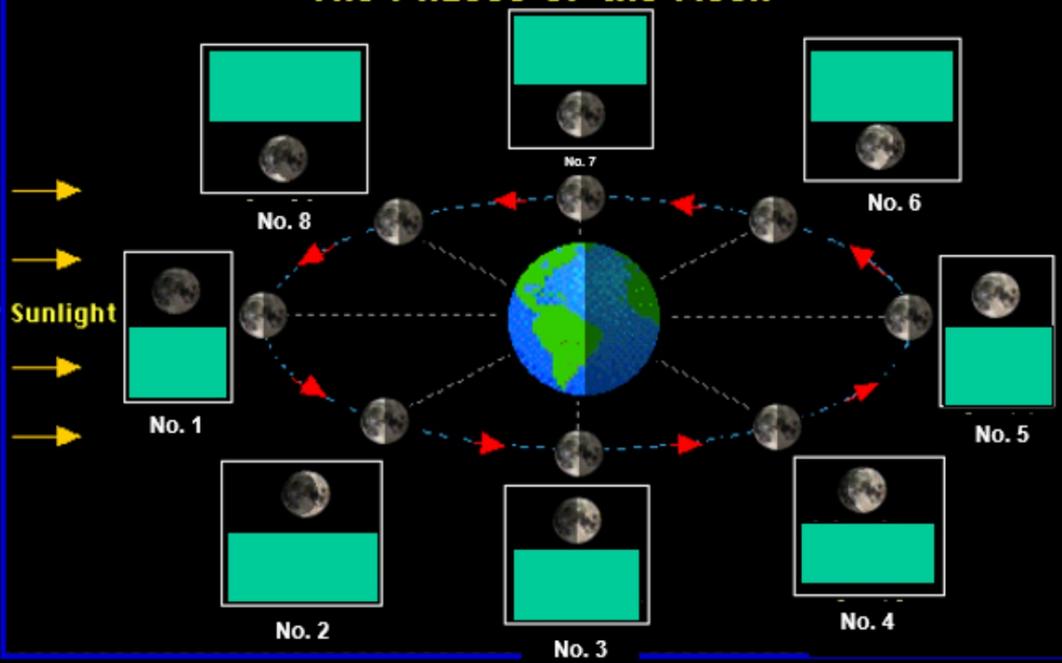
Task 2: Colour each of the moons in to show light and dark.  
Then label the phrases using the word bank.



<b><u>WORDBANK</u></b>	First Quarter	New Moon
Full Moon	Waxing Crescent	Waning Gibbous
Waxing Gibbous	Waning Crescent	Last Quarter

## Naming the Moon Phases

### The Phases of the Moon



## The Phases of the Moon

