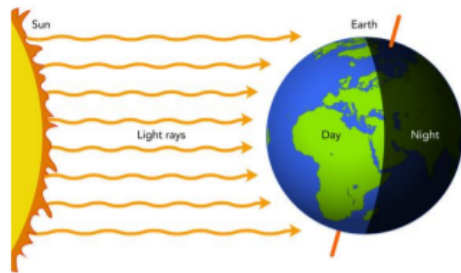


## Year 2 Knowledge Organiser: Introduction to Astronomy

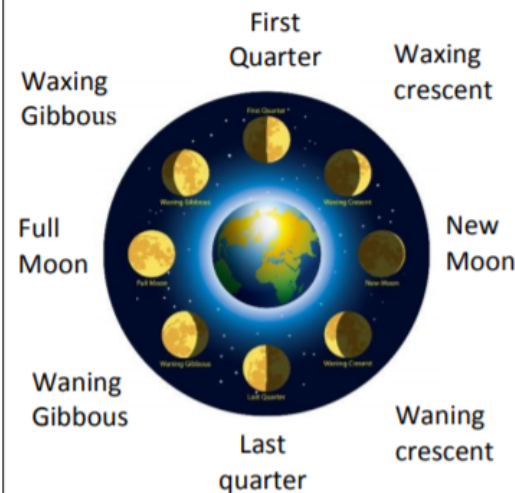
### Why do we have night and day?



- The Earth rotates on an axis.
- It orbits the sun.
- The part of the Earth which is hit by the sun's rays experiences daylight. The part of the earth on the other side experiences night.
- A day on Earth is 24 hours- that is how long it takes the Earth to spin once.
- A year is 365 days which is how long it takes to go around the sun once.

### What is the moon and why does it look different each night?

- The Moon is a satellite of the Earth – this means it orbits the Earth.
- The Moon does not make its own light – it reflects the light cast on it by the Sun.
- Although the Moon appears to change shape in the sky, it doesn't actually change.
- Depending on the position of the Moon and the Sun in relation to our location, we either see all, none, or part of the Moon. If the moon is on the opposite side of the Earth from the sun then we see a full moon.
- It takes 29 days for the Moon to orbit the Earth.
- The moon is made from rock and has no atmosphere - no air, no water, no clouds – so nothing will grow there.
- Humans visited the Moon and walked on the surface in 1969 but so far no humans have ever landed on another planet.



### What is a constellation?

A constellation is a group of visible stars that form a pattern when viewed from Earth. The pattern they form may take the shape of an animal, a mythological creature, a man, a woman, or an inanimate object such as a microscope, a compass, or a crown.

### How many constellations are there?

The sky was divided up into 88 different constellations in 1922. This included 48 ancient constellations listed by the Greek astronomer Ptolemy as well as 40 new constellations.

### Star Maps

The 88 different constellations divide up the entire night sky as seen from all around the Earth. Star maps are made of the brightest stars and the patterns that they make which give rise to the names of the constellations.

The maps of the stars represent the position of the stars as we see them from Earth. The stars in each constellation may not be close to each other at all. Some of them are bright because they are close to Earth while others are bright because they are

## What is the Sun?

- The Sun is a huge star that Earth and the other planets in our solar system orbit around.
- Unlike other stars, the Sun is close enough to us for us to feel its heat.
- Our Sun is just one star amongst billions of others!

### What are the planets of our solar system?

There are 8 planets in our solar system. There also some dwarf planets. They all orbit around the sun.

