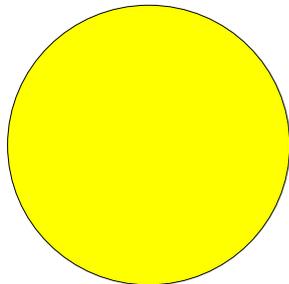


- 1 Point out the features of an explanation (using Think of a Number).
- 2 Develop our own success criteria for an explanation text.
- 3 In groups, write an explanation paragraph about how time relates to space.
  - Length of a day
  - Length of a month
  - Length of a year
- 4 Children to write an explanation about, "How space affects time."
- 5 Children to check criteria against what they have actually done.

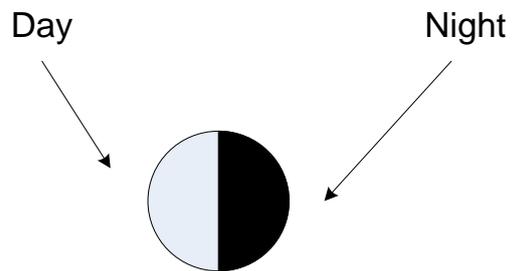
## Why does day and night happen?

A day occurs because the Earth is spinning.



The sun.

Source of light  
and energy.



The Earth is a  
satellite of the  
sun.

The light from the sun lights the half of the Earth that is facing the sun. That side is in daylight.

The side that is not facing the sun is in night as it is dark. Light cannot go round corners as it travels in straight lines.

It takes about 24 hours for the Earth to spin once on its own axis. This means that in order to finish in the apparent position where it started, it takes one day for the Earth to spin round. That is why the day lasts for about 24 hours.

## What is a month?

The Earth has a satellite called the moon. This satellite orbits the Earth about once every 29 days.

The moon goes through different phases. As the moon seems to get smaller, it is called the waning of the moon. As the moon seems to get bigger, it is called the waxing of the moon.

Full moon



Waxing moon.



The moon does not give off its own light. Instead, it reflects the light of the sun like a giant mirror.

There is always a position in space where there looks like there is a full moon, but as the moon moves round the Earth, sometimes this position is on Earth and sometimes it isn't. As a result, we see the moon apparently change shape even though it never does. It just looks like it does from where we are standing on the Earth.

New Moon	Waning Moon	Full Moon	Waxing Moon	New Moon
----------	-------------	-----------	-------------	----------

The time it takes for the moon to go through this cycle is called a month. The New Moon happens when the Moon is between the Earth and the sun, so the light side of the moon is on the opposite side to where we can see. A full moon happens when the Earth is between the sun and the moon.

Sometimes, either the moon blocks out the sun or the Earth's shadow falls onto the moon. These times are called eclipses.

### **What is a year?**

The Earth travels round the sun at about 60,000 miles per hour. To complete a whole orbit takes the Earth about 365¼ days. This is the length of a year.

Sometimes, the Earth is closer to the sun than it is at other times. The nearer to the sun that the Earth is, the faster it travels. It is always about 93 million miles away from the sun though.

### **Why do we have seasons?**

As the Earth goes round the sun, we experience different seasons. These are called spring, summer, autumn and winter. They are a result of the tilt of the Earth. (See the globe in the classroom).

The Earth is tilted at 23½° so it not straight up and down. This tilt means that sometimes more of the northern hemisphere is pointing towards the sun and at these times of year, Britain has summer. However, sometimes the tilt means that more of the southern hemisphere is pointing at the sun and at these times, places like Australia have their summer while Britain has a winter.

However

Although

Because

As a result