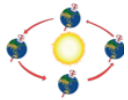
**Year 5 – Term 2: Space**

What is the solar system made up of and how is it arranged? How does the Earth's movement explain night and day? What causes the different phases of the moon? How would life be different if the earth rotated twice as fast?

## Key Vocabulary



**Orbit:** path an object follows as it travels around another object in space.



**Axis:** imaginary line through the centre of a planet that it spins around.

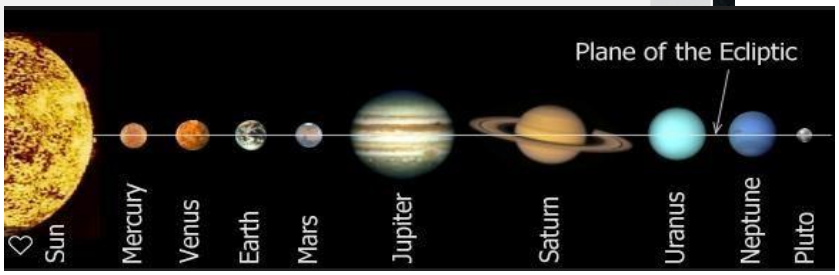


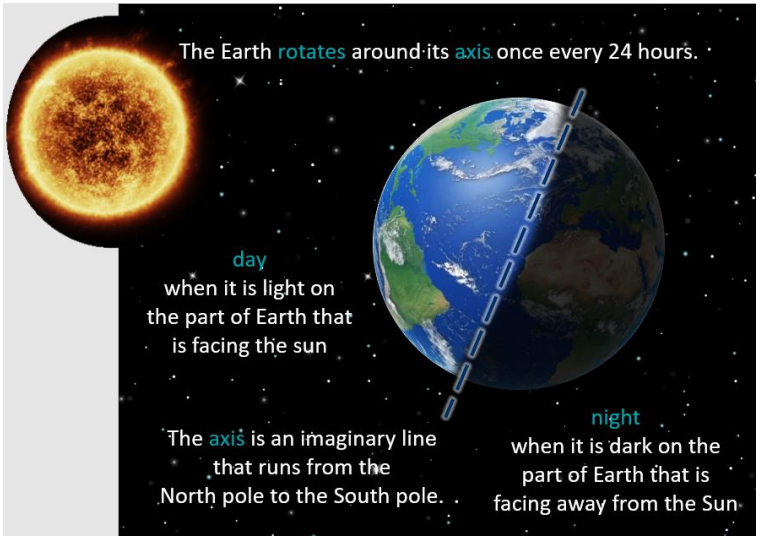

**Solar system:** The Sun and all the planets, moons and other objects that travel around it.

**Sun:** The star at the centre of our solar system that gives us light and heat.



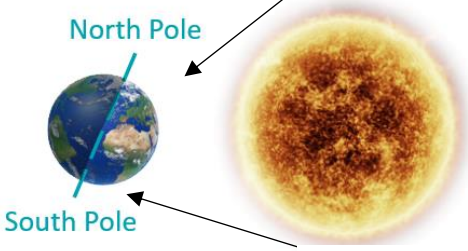
**Planets:** Large, nearly spherical objects in space that orbit a star. There are eight planets in our solar system.



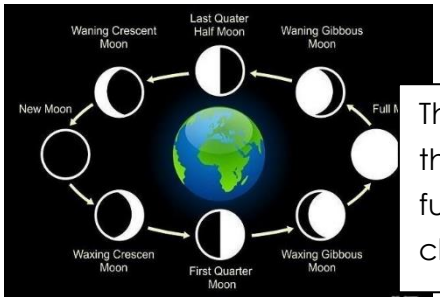




The **tilt** of the earth creates **seasons**

The North pole is closer to the sun: it is **summer**.




The south pole is further away from sun: it is **winter**.




The moon reflects the light from the sun. The part of the moon facing the sun is lit up. The part facing away from the sun is in darkness. One full cycle of the Moon's phases is approximately 28 days, which is very close to the amount of time we now know as one month.

## National Curriculum

**Y5 T2**

- describe and understand key aspects of human geography, including: … economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water.

### Rationale

**OFSTED 2021:** Teaching in some subjects is not based on secure subject knowledge. This means teachers cannot support pupils to acquire new knowledge well enough. Leaders need to support teachers to strengthen their subject knowledge further.

Subject leaders need to support teachers to identify the essential knowledge pupils must know and remember to fill the gaps in pupils' knowledge

**OFSTED 2024:** Teachers' teaching knowledge is not always sufficient to ensure that they teach the curriculum effectively. This means pupils do not learn as effectively as they could. The school should ensure that all teachers deliver the ambitious curriculum to the standard leaders expect.

**HMI 2025:** Furthermore, in the wider curriculum, the school has recognised that it has not narrowed down sufficiently the precise knowledge that pupils should know in some subjects. Some subjects identify an unrealistic amount of knowledge that pupils should learn. There is too much for pupils to learn in sufficient depth.

### What are different energy sources?

**Renewable energy sources** include things like:

- **Solar energy** – this comes from the Sun. Solar panels change sunlight into electricity.
- **Wind energy** – wind turbines use the wind to make energy.
- **Hydroelectric power** – this uses moving water, like rivers or dams, to turn turbines.
- **Geothermal energy** – heat from under the Earth's surface can make electricity.
- **Biomass** – this is energy made from plants or waste materials that can be burned for fuel.

**Non-renewable energy sources** are:

- **Coal, oil and natural gas** – these are fossil fuels made from plants and animals that died millions of years ago. We burn them to make energy, but they cause pollution and will eventually run out.
- **Nuclear energy** – this comes from splitting atoms in a special process inside a power station.

### What is the best way to generate energy?

I think the best way to generate energy is by using **renewable energy sources**, like the **Sun, wind and water**. These are the best because they **don't run out** and they **don't make as much pollution** as burning fossil fuels.

For example, **solar panels** can make electricity from sunlight, and **wind turbines** can use the power of the wind. **Hydroelectric power** from moving water is also very good because it's clean and reliable.

Fossil fuels like coal, oil and gas make lots of electricity, but they **damage the environment** by releasing carbon dioxide, which causes **climate change**.

### What is renewable energy?

Renewable energy is energy that comes from sources that **won't run out** and can be **used again and again**. It comes from **natural things** like the **Sun, wind, water, and the Earth's heat**.

Examples of renewable energy are:

- **Solar energy** – from the Sun.
- **Wind energy** – from the wind turning turbines.
- **Hydroelectric energy** – from moving water.
- **Geothermal energy** – from heat under the ground.
- **Biomass** – from plants and waste materials.

Renewable energy is good for the environment because it **doesn't make much pollution** and helps to **reduce climate**

### How can we make the world more sustainable?

We can make the world more sustainable by looking after the environment and using our resources carefully so that there is enough for everyone now and in the future. One way to do this is by using renewable energy, like solar and wind power, instead of fossil fuels that cause pollution. We can also recycle and reuse materials, save water, and plant more trees to help clean the air and provide homes for animals. Walking or cycling instead of using cars helps reduce pollution, and avoiding plastic by using reusable bags and bottles also helps protect the planet. If everyone makes small changes, together we can make the world a cleaner, greener, and fairer place for all living things.

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|---|---|---|
| | **change**. It's a cleaner and more sustainable way to power our world. | |