

Read through the space knowledge organiser and use a revision technique to summarise the information:

- Flash cards
- Mind mapping
- Revision clocks

# Science- Space

## 1. Our solar system

- The **Sun**, a **star** at the centre of our **solar system**, is its only source of **visible light**.
- Our Solar System contains:
  - 8 planets
  - Dwarf planets
  - Moons
  - Asteroids
  - Comets.



## 2. The Earth's orbit

- The Earth moves around the Sun in an **orbit** which takes a **year (just over 365 days)**.
- Planets orbit the Sun in roughly circular orbits.
- The force of **gravity** keeps planets in orbit.



## 3. The Earth's rotation

- The Earth **rotates** about its north to south axis. This makes it appear that the Sun and stars are moving around the Earth.
- This rotation causes **day and night** as different parts of the Earth face towards or away from the Sun.
- It takes about 24 hours for the Earth to spin in its axis.

## 4. A tilted Earth

- The Earth's axis is **tilted** so that the length of the day varies depending on the position the Earth and the time of year.
- This causes the **seasons**.



## Glossary:

- **Asteroid**  
Small rock orbiting a star.
- **Comet**  
Orbits a star, made of ice and dust and may have a tail' of gas when near a star..
- **Earth's Axis**  
Imaginary line between the north and south poles.
- **Galaxy**  
A group of billions of stars.
- **Milky Way**  
Our galaxy.
- **Moon**  
Orbits a planet.
- **Orbit**  
The path of an object around a star, planet or moon.
- **Planet**  
Large object which orbits a star.
- **Satellite**  
Orbits a planet. Can be natural – moon or artificial.
- **Seasons**  
Spring, summer, autumn and winter.
- **Star**  
A large ball of gases which generates light and other energy.
- **Sun**  
The star at the centre of our solar system.
- **Universe**  
Everything in existence.
- **Year**  
Time taken for a planet to orbit the Sun once.

## 6. The planets

- The Earth is one of eight known planets in the Solar System: **Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune**.
- The planets are different distances from the Sun and have **different orbits**; they take different amounts of time to orbit the Sun.
- The distances between planets is huge – Neptune is 4.5 billion km from the Sun, 30 times further than the Earth.

## 7. Exploring the solar system

- Exploring the solar system is possible with **robot missions**, e.g. exploration of the planets by Voyager I and II.
- Exploring shorter distances from the Earth is possible by humans, e.g. the International Space Station (ISS) and the Moon.






## 8. The Universe

- The solar system is part of a **galaxy** of stars, dust and gas, called the **Milky Way**.
- Our galaxy is one of many billions in the **Universe**.
- These galaxies are enormous distances apart so the **light year** is used as a unit of distance. This is the distance light would travel in a year.
- Many other stars appear to have planets, some of which may be able to support life.



Next, choose challenges from the grid to complete. Each challenge completed is worth the corresponding number of points (1, 2 or 3). Show evidence of this to be awarded the point

## Challenges

		
Produce a labelled poster showing all the planets in our solar system. List some facts about each planet underneath each picture.	Research the life of Michael Collins, the least famous crew member of Apollo 11, and write a fact file about him	Research and explain the different types of satellites.
Write 10 questions and answers for a space 'zoom' quiz. Why don't you test it out on family/friends?	Create a model of the solar system using household items.	A star such as the sun goes through a life cycle. Draw a diagram of the life cycle of a star and explain what happens at each stage.