Our Sotar System (not to scale)


| Key Vocabulary |  |
| :---: | :--- |
| Orbit | To move in a regular, repeating curved path <br> around another object - revolving. |
| Rotate | To spin. E.g. Earth rotates on its own axis. |
| Axis | An imaginary line that a body rotates around. <br> EG - Earth's axis (imaginary line) runs from the <br> North Pote to the South Pole. |
| Geocentric model | A belief people used to have that other planets <br> and the Sun orbited around Earth. |
| Heliocentric model | The structure of the Solar System where the plan- <br> ets orbit around the Sun. |
| Astronomer | Someone who studies or is an expert in astrono- <br> my (space science). |

## Year 5 - Term 2 - Earth and Space

In Term 2 we will be working Scientifically to plan an enquiry using a shadow stick.
We will take accurate measurements of shadows formed, deciding how best to record our data and present ourfindings.

## What should I know?

Year 5 should have an idea of planets names and atmospheres in the solar system with an understanding that we live on Earth - other planets aren't habitable.

Mercury, Venus, Earth and Mars are rocky planets. They are mostly made up of metal and rock.
Jupiter, Saturn, Uranus and Neptune are mostly made up of gases (helium and hydrogen) although they do have cores made up of rock and metal.

Daytime occurs when the side of Earth is facing towards the Sun.
Night occurs when the side of Earth is facing a way from the Sun.


Farth rotates on its axis. It does a full rotation once in every 24 hours. At the same time that Earth is rotating, it is also orbiting around the Sun. It takes a little more than 365 days to orbit the Sun.

## Year 5 - Term 2 - Art



In Term 2 we are taking inspiration from Christina Balit.
She is a well-known British illustrator of over 20 children's books.
We will be creating original pieces that display her influence and artistic techniques, doing so using a variety of mediums, including water-cotour painting and printing.


Inspiration.


We will be exploring different shading techniques, using these to add depth and a 3-Dimensional quality to our creations.


## EARTH @nd SPACE knowlege orcanssR

Overview


- The Earth (our planet) is a part of the Solar System. At the centre of the Solar System is the Sun. The Sun is a star.
- There are 8 planets and 5 dwarf planets in the Solar System, which orbit (go around) the Sun.
- It takes Earth just over 365 days to go around the Sun (one year).
- The Earth rotates on its axis once every 24 hours (one day). This causes day and night, as different parts of the planet face the Sun.
- The Moon orbits around the Earth. The Sun, Earth and Moon are all roughly spherical.


## The Solar System

- The Solar System includes the Sun and all of the objects that orbit around it due to gravity.
- The Earth is one of eight planets that orbit the Sun. It is the third closest to the Sun.
- The planets are (from closest to furthest away from the Sun) Mercury, Venus, Earth, Mars, Jupiter, Saturn Uranus and Neptune. Jupiter is the largest planet and Mercury is the smallest.
- There are also five dwarf planets: Haumea, Makemake, Ceres, Eris and Pluto.
- Earth is the only known planet in the Solar System where there are living things. The planets closer to the Sun are thought to be too hot, whilst some of those further away are too cold.
- You could fit about 1,321 Earths inside Jupiter. You could fit 1.3 million Earths into the Sun!
- Many of the planets (including Earth) have moons which orbit them. Jupiter has around 80 moons!
- The Sun is gigantic, but it is just one of billions of stars in our galaxy: The Milky Way. The Milky Way is just one of billions of galaxies in the Universe!


| Key vocabulary |  |
| :--- | :--- |
| Solar system | The objects orbiting the <br> Sun. |
| Orbit | Travelling around in a <br> curved path. |
| Gravity | A force which pulls, even <br> over great distances. |
| Rotation | Turning around on an axis. |
| Spherical | Round, like a football. <br> A body that orbits a star in path. |
| Planet | A moon or object that <br> orbits a planet. |
| Celestial body | The study of objects in <br> space. |
| Astronomy | Areas on Earth where the <br> time of day is different <br> because it rotates. |
| Time zone |  |

What do I already know? What will I know

- Life in space as an astronaut aboard the International Space Station. memory that are significant nationally or globally for example, the Great Fire of London.
- Significant historical events, people and places in their own locality.

World history in space.

- A timeline of events in space.
- Key events from the Apollo 11 moon landing.

| Planet Facts |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mercury | Venus | Earth | Mars | Jupiter | Saturn | Uranus | Neptune |
| Area: <br> 0.147 <br> Earths <br> $8^{\text {th }}$ Largest | Area: <br> 0.902 <br> Earths <br> $6^{\text {th }}$ Largest | Area: <br> 1 Earth! <br> $5^{\text {th }}$ Largest | Area: <br> 0.284 <br> Earths <br> $7^{\text {th }}$ Largest | Area: <br> 121.9 <br> Earths <br> $1^{\text {st }}$ Largest | Area: <br> 83.7 Earths <br> $2^{\text {nd }}$ Largest | Area: <br> 15.91 <br> Earths <br> $3^{\text {rd }}$ Largest | Area: <br> 14.98 <br> Earths <br> $4^{\text {th }}$ Largest |
| Moons: <br> None | Moons: <br> None | Moons: <br> 1 moon | Moons: <br> 2 moons | Moons: <br> Around 80 <br> moons | Moons: <br> Around 65 moons | Moons: <br> Around 30 moons | Moons: <br> Around 15 <br> moons |
| Length of Day: <br> 1,408 hours | Length of Day: <br> 5,832 hours | Length of Day: <br> 24 hours | Length of Day: 25 hours | Length of Day: <br> 10 hours | Length of Day: <br> 11 hours | Length of Day: <br> 17 hours | Length of Day: <br> 16 hours |
| Length of Year: <br> 88 days | Length of Year: <br> 225 days | Length of Year: <br> 365 days | Length of Year: <br> 687 days | Length of Year: <br> 12 Years | Length of Year: 29 Years | Length of Year: 84 Years | Length of Year: <br> 165 Years |

