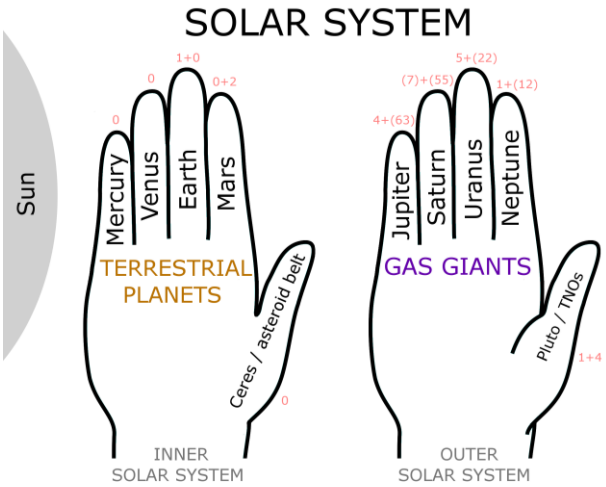
"OUT OF THIS WORLD" KNOWLEDGE ORGANISER

KEY PEOPLE	
Eratosthenes (276-194 BC)	Greek astronomer who calculated the Earth's circumference.
Nicolaus Copernicus (1473-1543)	German astronomer who established the concept of the Heliocentric model.
Galileo Galilei (1564-1642)	Italian astronomer, who improved the telescope so he could see planets.
Edwin Hubble (1889-1953)	American astronomer, who discovered other galaxies.
John Glenn (1921–2016)	First North American to orbit the Earth.
Arnaldo Tamayo Méndez (1942-)	First South American to orbit the Earth.

WHY DO WE NEED TO KNOW?

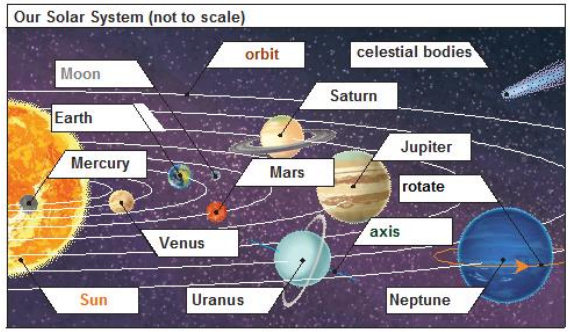
Understanding how Earth and space systems interact, how they affect us, and how we affect them is vital for our survival.

My Very Easy Method Just Speeds Up Names



DID YOU KNOW?

- There are 8 planets in the Solar System. (Pluto was reclassified as a Dwarf Planet in 2006).
- 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.



- The **Moon orbits** Earth in an oval- shaped path while spinning on its axis.
- The **Moon** appears to be different shapes because as the **Moon** rotates round Earth, the **Sun** lights up different parts of it.
- The Earth rotates on its axis.
- It takes 24 hours for the Earth to rotate 360°.
- It takes just over 365 days for the Earth to **orbit** the **Sun.**
- Daytime occurs when the side of Earth is facing towards the **Sun.**
- Night occurs when the side of Earth is facing away from the **Sun.**
- It appears to us that the **Sun** moves across the sky during the day but it is actually the Earth moving, not the **Sun.**

KEY VOCABULARY	
astronomer	Someone who studies or is an expert in astronomy (space science).
axis	An imaginary line that a body rotates around. E.g. Earth's axis runs from the North Pole to the South Pole.
celestial	An object positioned in the sky or outer space.
constellation	A group of stars which form a pattern.
geocentric model	A belief people had that other **planets** and the **Sun orbited** around Earth.
heliocentric model	The structure of the Solar System where the **planets orbit** around the **Sun.**
Milky Way	The galaxy that contains our Solar System.
moon	A natural **satellite,** which **orbits** Earth or other **planets.**
planet	A large object, round or nearly round, that orbits a star.
orbit	The curved path of a celestial object (eg. Earth) around a **star**, **planet** or **moon.**
rotation	The action of spinning around an axis or centre. The Earth rotates on its own **axis.**
satellite	Any object or body in space that **orbits** something else. Eg. the **Moon** is a **satellite** of Earth.
sphere	A round 3D shape like a ball.
spherical bodies	Astronomical objects shapes like **spheres.**
star	A giant ball of gas held together by its own gravity.
Sun	A huge star that Earth and the other **planets** in our solar system **orbit** around.
Waxing moon	Any phase of the **moon** between a new **moon** and a full **moon.**
Waning moon	Any phase of the **moon** between a full **moon** and a new **moon.**