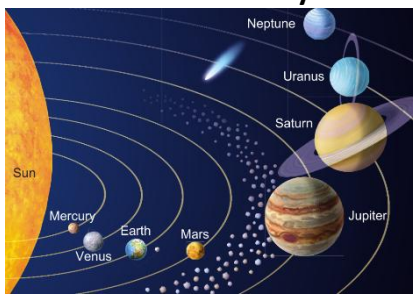
Kettering Science Academy	**8L Earth and Space**

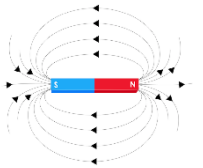
1. Gathering the Evidence	
Astronomer	A scientist that studies space.
Early Astronomers	Could only use their eyes to make observations.
Ptolemy	Egyptian astronomer (*90-168*) Proposed a model with the Earth in the centre and the Moon, Sun and planets orbiting the Earth.
Nicolaus Copernicus	Polish astronomer (*1473-1543*) Suggested the Earth and other planets move in circles around (orbit) the Sun.
Reaction to Copernicus' Model	It was not accepted straight away. However observation made by Galileo using one of the first telescopes provided more evidence to support it.

Johannes Kepler	German astronomer (*1571-1630*) Proposed the model used today. The Sun is at the centre with the planets moving around in elliptical orbits. Moons orbit planets.
The Model of the Solar System	
Phases of the Moon	The Moon appears different shapes at different times due to its position relative to the Earth and Sun. 

2. Seasons	
Summer	Longer days than nights, Sun high in the sky.
Winter	Longer nights than days, Sun not very high in the sky.

Cause of Seasons	Due to the tilt of the Earth's axis by 23.5°.
Causing Summer	When the northern hemisphere is tilted towards the Sun it is summer in the UK.
Causing Winter	When the northern hemisphere is tilted away from the Sun it is winter in the UK.
Summer Sun	Because the Sun is higher in the sky in summer the heat is more concentrated, making it feel warmer

3. Magnetic Earth	
Compass	A magnet that points north.
North-Seeking pole	The end of a bar magnet that points north- shortened to north pole.
South-Seeking pole	The end of a bar magnet that points south- shortened to south pole.
Attract	When two magnets are pulled together. Opposite poles will attract each other.
Repel	When two magnets are pushed apart. The same poles will repel each other.

Magnetic Field	The area around a magnet where it has an effect. Can be found using iron filings or a small compass.
Magnetic Field Diagram	
Magnetic Field Strength	Strongest closest to each pole, the field gets weaker as you get further from the magnet.
Magnetic Field Direction	The direction of a magnetic field is always from the north pole towards the south pole.

5. Beyond the Solar System	
Constellation	Pattern of stars
Stars	Huge balls of gas that give out large amounts of energy. The Sun is a star.
Stars At Night	Appear less bright than the Sun because they are further away.
Galaxies	Large groups of stars.
Milky Way	The galaxy our Sun is in.
Universe	Made up by all of the millions of galaxies.