

Leamington Primary Science Knowledge Organiser Year 5 – Space – Strand - Physics

What I should already know	What I will learn	Important words to help me. (vocabulary)		Ideas for Scientific enquiry																										
<p>Planets, moons and the sun make up our solar system.</p> <p>The sun is made of gas.</p> <p>Earth is not too hot or not too cold. This is why we have life.</p>	<p>Earth is spherical: There is lots of historical evidence/opinions that scientists made many years ago about whether the Earth was flat or spherical. There is a group called 'flat Earthers' who are convinced the Earth is flat.</p> <p>Heliocentric /geocentric: The church believed that the Earth was the centre of the solar system (geocentric), whereas scientists Copernicus was convinced that the sun was the centre of the solar system (heliocentric). Copernicus was scared to voice his opinion so many years later Galileo used Copernicus' work and actually proved it to be correct.</p> <p>Planets: Order of planets from the sun; Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune all orbit the sun (some take a bit longer than others!). Saturn's ring is made up of rocks. Jupiter has a huge red spot on it, which is actually a storm.</p> <p>Sun/Earth/Moon: The Earth takes 365 ¼ days to orbit the sun. The moon takes around 28 days to orbit the Earth. The sun is the centre of our solar system. The Earth spins on its axis. We only ever see one side of the moon.</p> <p>Phases of the moon: The 8 phases of the moon; New moon, waxing crescent, first quarter, waxing gibbous, full moon, waning gibbous, third quarter and waning crescent. The moon looks like it is changing shape, but it is just reflecting the sun's light. Solar eclipse: An eclipse in which the sun is obscured by the moon. Lunar eclipse: An eclipse in which the moon appears darkened as it passes into the earth's shadow.</p> <p>Seasons: We have different seasons because of our tilt (axis). When the northern hemisphere is tilting towards the sun we are in summer and when it is tilting away from the sun we are in winter.</p> <p>Day/night: We have day and night because we spin on our axis, which takes 24 hours. As we spin we turn away from the sun, making it look like the sun is moving, but it is actually us! The sun appears to rise in the East and sets in the west.</p>	<table border="1"> <tr> <td data-bbox="943 384 1131 443">Astronomical clocks</td> <td data-bbox="1131 384 1883 443">A clock indicating or representing the movements of the sun or planets, the phases of the moon, or the sky visible at a given time</td> </tr> <tr> <td data-bbox="943 443 1131 502">Axis</td> <td data-bbox="1131 443 1883 502">An imaginary line about which a body rotates.</td> </tr> <tr> <td data-bbox="943 502 1131 561">Galileo Galilei</td> <td data-bbox="1131 502 1883 561">A scientist, who proved that the sun was the centre of our solar system.</td> </tr> <tr> <td data-bbox="943 561 1131 620">Geocentric</td> <td data-bbox="1131 561 1883 620">The church believed our solar system was geocentric, meaning the Earth was the centre of our solar system.</td> </tr> <tr> <td data-bbox="943 620 1131 679">Heliocentric</td> <td data-bbox="1131 620 1883 679">Galileo and Copernicus believed that the solar system was heliocentric, meaning the sun is the centre of our solar system.</td> </tr> <tr> <td data-bbox="943 679 1131 770">Hemisphere</td> <td data-bbox="1131 679 1883 770">A half of the earth, usually as divided into northern and southern halves by the equator, or into western and eastern halves by an imaginary line passing through the poles.</td> </tr> <tr> <td data-bbox="943 770 1131 829">Lunar eclipse</td> <td data-bbox="1131 770 1883 829">An eclipse in which the moon appears darkened as it passes into the earth's shadow.</td> </tr> <tr> <td data-bbox="943 829 1131 888">Nicolas Copernicus</td> <td data-bbox="1131 829 1883 888">A scientist, who thought that the sun was the centre of our solar system.</td> </tr> <tr> <td data-bbox="943 888 1131 948">Orbit</td> <td data-bbox="1131 888 1883 948">The curved path of a celestial object or spacecraft round a star, planet, or moon, especially a periodic elliptical revolution.</td> </tr> <tr> <td data-bbox="943 948 1131 1007">Phases of the moon</td> <td data-bbox="1131 948 1883 1007">The way in which parts of the moon are lit up by the sun's light.</td> </tr> <tr> <td data-bbox="943 1007 1131 1066">Solar eclipse</td> <td data-bbox="1131 1007 1883 1066">An eclipse in which the sun is obscured by the moon.</td> </tr> <tr> <td data-bbox="943 1066 1131 1157">Our solar system</td> <td data-bbox="1131 1066 1883 1157">The collection of eight planets and their moons in orbit round the sun, together with smaller bodies in the form of asteroids, meteoroids, and comets.</td> </tr> <tr> <td data-bbox="943 1157 1131 1206">Spherical</td> <td data-bbox="1131 1157 1883 1206">Shaped like a sphere.</td> </tr> </table>		Astronomical clocks	A clock indicating or representing the movements of the sun or planets, the phases of the moon, or the sky visible at a given time	Axis	An imaginary line about which a body rotates.	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<p>Interesting Facts</p> <p>Venus is the hottest planet, even though it is the second closest to the sun. Venus has an atmosphere, whereas Mercury does not, meaning it traps heat.</p> <p>It takes Earth 365 ¼ days to orbit the sun, this is where we get our leap year from. Four 1/4's make a new day.</p> 	 																													

