









Year 4/5 Science Knowledge Organiser – Earth and Space

Vocabulary

Key knowledge

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| 1 solar  | <i>from the Latin for sun</i> <i>The solar system means the sun system.</i> |
| 2 celestial object / body  | <i>an object (such as a star, planet or moon) in space</i> |
| 3 atmosphere  | <i>the layers of gases surrounding a planet or other celestial body</i> <i>Earth's atmosphere is composed of about 78% nitrogen, 21% oxygen and 1% other gases.</i> |
| 4 orbit  | <i>the curved path of a celestial object or spacecraft round a star, planet or moon</i> <i>You may also read or hear the words revolve / revolved.</i> |
| 5 satellite  | <i>a moon, planet or machine that orbits a planet or star</i> |
| 6 spherical  | <i>shaped like a sphere (a ball shape)</i> |
| 7 rotation  | <i>a complete circular movement around a fixed point or axis</i> |
| 8 axis  | <i>an imaginary line about which a body rotates</i> <i>The Earth revolves on its axis once every 24 hours.</i> |

geocentric – having the Earth at the centre
 Ptolemy was a Greek astronomer, geographer and mathematician of the ancient world. He lived from about 100 – 170 CE. Ptolemy proposed that the Earth was at the centre of the universe. In his model of the solar system, the sun, moon, and planets revolved around a stationary Earth. Many believed this theory . . . or parts of it. Alhazen, a Muslim mathematician, agreed with Ptolemy that the Earth was at the centre of the solar system but he did not agree with how the planets moved in this model. He said it was mathematically impossible.

heliocentric - having the sun at the centre with the Earth and other planets moving around it
 Copernicus proposed an alternative to the geocentric model: the heliocentric model. His model (published in 1543) had the Sun at its centre with the planets, including Earth, all orbiting around it. Our understanding of the Solar System continues to develop – we now know, for example, that the Sun is not stationary, it is moving.

The Solar System is made up of our Sun and the objects within the Sun's gravitational pull including 8 planets, moons, asteroids and comets. The planets in our solar system (in order from the Sun): Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune

