



<b>Subject</b>	Science	<b>Theme</b>	Earth & Space	<b>Term</b>	Spring 2
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Working Scientifically
<ul style="list-style-type: none"> <li>- identify scientific evidence that has been used to support or refute ideas or arguments (<i>Ptolemy &amp; Copernicus</i>)</li> <li>- plan different types of scientific enquiries to answer questions</li> <li>- take measurements with increasing accuracy and precision (<i>e.g. metre sticks and trundle wheels – creating a scale model of the solar system, measuring shadows</i>)</li> <li>- record data and results using a line graph (<i>e.g. lengths of shadows</i>)</li> <li>- report and present findings from enquiries including causal relationships (<i>e.g. what causes the change in lengths of shadow?</i>)</li> </ul>

Enquiries & Investigations
<ul style="list-style-type: none"> <li>- How much space is there in space? Make a scale model of the solar system, and use it to investigate the movement of planets relative to the sun</li> <li>- Can we prove the Earth rotates? Sundial experiment to investigate the Earth's rotation</li> <li>- Why does the moon change shape? Investigate the movement and phases of the moon</li> <li>- What's in the solar system? Research different planets in our solar system</li> <li>- Investigate planetary orbits, using scientific evidence to explain heliocentric versus geocentric theories (<i>investigate Ptolemy and Copernicus' theories</i>)</li> </ul>

What should I know by the end of the unit?
<ul style="list-style-type: none"> <li>- Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</li> <li>- Describe the movement of the Moon relative to the Earth.</li> <li>- Describe the Sun, Earth and Moon as approximately spherical bodies.</li> <li>- Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.</li> </ul> <p><b>Silver Threads:</b>  <b>Changes</b> – Why does the moon change?  <b>Structure</b> – What is the structure of the solar system? What structure did humans believe in the past?  <b>Energy</b> – The sun is the provider of all energy on Earth</p>

Significant Scientists
<p><b>Views of the universe</b></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><b>Ptolemy</b></p> </div> <div style="text-align: center;"> <p><b>Copernicus</b></p> </div> </div>

Key Vocabulary	
<b>Sun</b>	A huge star at the centre of our solar system.
<b>Moon</b>	A natural satellite of a planet. The Earth has one moon but other planets have more or none at all.
<b>Planet</b>	A spherical body that orbits a star. A planet must be big enough that its gravity clears away any objects of a similar size near its orbit.
<b>Solar System</b>	A group of planets that orbits a star. In our solar system the star the planets orbit is called the Sun.
<b>Star</b>	A giant ball of gas held together by its own gravity. A star produces its own energy.
<b>Sphere</b>	A round 3D shape, like a ball.
<b>Spherical Bodies</b>	Astronomical objects shaped like spheres.
<b>Satellite</b>	Any object or body in space that orbits something else, e.g. the Moon is a satellite of Earth.
<b>Galaxy</b>	A huge collection of gas, dust, and billions of stars and their solar systems. Our star, the Sun, exists in a spiral-shaped galaxy called the Milky Way.
<b>Axis</b>	An imaginary line that a body rotates around, e.g. Earth's axis runs from the North Pole to the South Pole.
<b>Rotate</b>	To spin, e.g. the Earth rotates on its own axis around the Sun.
<b>Orbit</b>	The curved path of an object in space around a star, planet or moon.