Science Scheme of Work

<table>
<tr><th colspan="2">Year 5 – Earth and Space</th></tr>
<tr><td>Links made with other subjects</td><td>Computing Data Handling (statistics of the planet)</td></tr>
<tr><td>The BIG Question</td><td>Sun, Earth and Moon: what is moving?</td></tr>
<tr><td>The BIG Outcome</td><td>Draw a diagram of the solar system with annotations explaining what happens</td></tr>
<tr><td>Science objectives (link to NC)</td><td>- describe the movement of the Earth, and other planets, relative to the Sun in the solar system
- describe the movement of the Moon relative to the Earth
- describe the Sun, Earth and Moon as approximately spherical bodies
-use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</td></tr>
<tr><td>Prior knowledge
What prior knowledge is needed for children to be successful in this unit?</td><td>Children already know:
EYFS – Understanding the world - Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.
Yr 1 - Changing Seasons
Yr 3 - Light - Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</td></tr>
<tr><td>Future learning
Consider the conceptual knowledge within a subject that pupils need for future learning not just the recall of facts but the importance of concepts</td><td>This unit gives prior knowledge to:
KS3 - The seasons and the Earth's tilt, day length at different times of year, in different hemispheres</td></tr>
<tr><td>Science strands</td><td><u>Related Enquiry Questions</u>
<table>
<tr><td>Classifying</td></tr>
<tr><td>Not relevant</td></tr>
<tr><td>Observing over time</td></tr>
<tr><td>- Measure shadows throughout the day.</td></tr>
<tr><td>Pattern Seeking</td></tr>
<tr><td>Not relevant</td></tr>
<tr><td>Comparative testing</td></tr>
<tr><td>Not relevant</td></tr>
<tr><td>Researching</td></tr>
<tr><td>- Generate questions to research about the Earth and space. (Children present what they've learned in different ways: create a model, write a song, write a story, create a PPT, etc.)</td></tr>
</table></td></tr>
<tr><td>Vocabulary/ Glossary</td><td>Earth, Sun, Moon, (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, solar system, rotates, star, orbit, planets</td></tr>
<tr><td>Knowledge
(see italics for knowledge to remember)</td><td>The knowledge that children will learn and remember:

1. The Sun is a star and It is at the centre of our solar system.
2. There are 8 planets: Earth, Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune
3. These travel around the Sun in fixed orbits.
4. Earth takes 365¼ days to complete its orbit around the Sun.
5. The Earth rotates (spins) on its axis every 24 hours.</td></tr>
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	6. *As Earth rotates half faces the Sun (day) and half is facing away from the Sun (night).* 7. *As the Earth rotates, the Sun appears to move across the sky.* 8. *The Moon orbits the Earth- It takes about 28 days to complete its orbit.* 9. *The Sun, Earth and Moon are approximately spherical*.
SEND expectations	1. *The Sun is a star.* 2. *There are 8 planets* 3. *These travel around the Sun in fixed orbits.* 4. *Earth takes 365¼ days to complete its orbit around the Sun.* 5. *The Earth rotates (spins) on its axis every 24 hours.* 6. *As the Earth rotates, the Sun appears to move across the sky.* 7. *The Sun, Earth and Moon are approximately spherical*.
Common misconceptions	-the Earth is flat - the Sun is a planet - the Sun rotates around the Earth - the Sun moves across the sky during the day - the Sun rises in the morning and sets in the evening -the Moon appears only at night - night is caused by the Moon getting in the way of the Sun or the Sun moving further away from the Earth.