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| Year 5 – Earth and Space |
| **National Curriculum Objectives:**\* 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 roughly 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. |
| **Prior Learning:**  | **Working Scientifically (NC) Links:** | **Opportunities for working Scientifically:** | **Story / Book Opportunities:** | **Maths Opportunities:** | **Vocabulary:** |
| **In Year 1:****Seasonal Changes:**\* Observe the changes across the 4 seasons.\* Observe and describe weather associated with the seasons and how day length varies. | \* Compare the time of day at different places on the Earth through internet links and direct communication.\* Create simple models of the solar system.\* Construct simple shadow clocks and sundials, calibrated to show midday and the start and end of the school day.\* Find out why some people think that structures such as Stonehenge might have been used as astronomical clocks. | \* Research information to enable you to make an orrery.\* What happens to a lego person’s shadow over the day?**\*** Are there any patterns in the way a shadow moves over the course of a day?\* If it is …… in the UK, what time is it in …..?\* How does the shape of the moon appear to change over a month?\* What is the effect of different size meteors hitting the moon? | **The Skies Above My Eyes**(Charlotte Guillain & Yuval Zommer)**George’s Secret Key to the Universe**(Lucy and Stephen Hawking with Christophe Galfard)**The Way Back Home**(Oliver Jeffers) | Ratios and scalesMeasuring angles – to make a sundialPlotting graphs to record daylight hours | Earth, Sun, Moon, Mercury, Jupiter, Venus, Saturn, Mars, Uranus, Neptune, spherical, solar system, rotates, star, orbits, planet |
| **Types of scientific Enquiry:**Fair & Comparative testingResearch using secondary sourcesIdentifying, classifying & groupingPattern seekingObserving over time | **Claudius Ptolemy and Nicolaus Copernicus**(Heliocentric vs Geocentric Universe)**Neil Armstrong** (First man on the Moon)**Helen Sharman** (First British astronaut)**Tim Peake** (First British ESA astronaut) |
| **In KS3:**\* Gravity force, weight = mass x gravitational field strength (g), on Earth g=10N/kg, different on other planets and stars; gravity forces between Earth and Moon, and between Earth and Sun\* Our sun as a star; other stars in our galaxy; other galaxies.\* The seasons and the Earth’s tilt, day length at different times of year, in different hemispheres.\* The light year as a unit of astronomical distance. |

