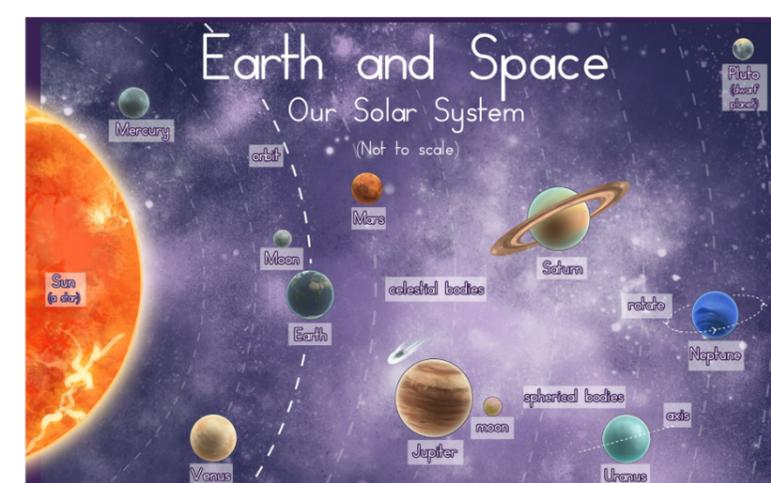
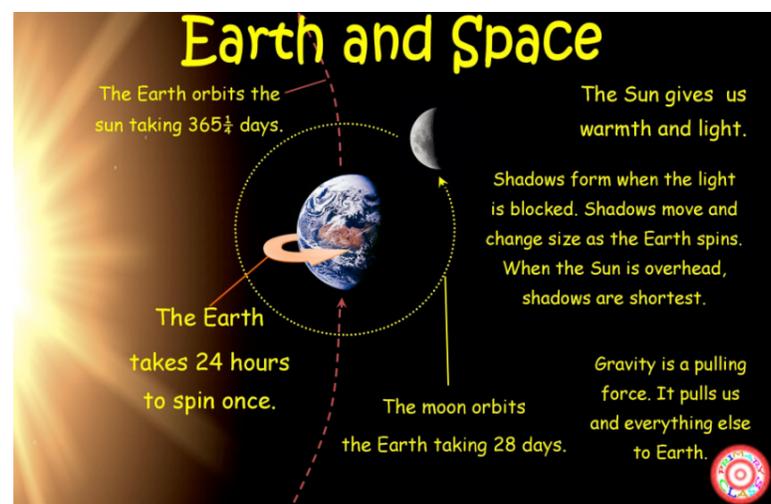


<b>Earth and Space</b>	<b>Year 5 Autumn 1</b>
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	Prior Knowledge	New Knowledge	Future Knowledge
<b>Science</b>	Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies. The lives of significant individuals in the past who have contributed to national and international achievements, e.g. Astronauts: Neil Armstrong & Tim Peake (Year 1)	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.	Gravity force, weight = mass x gravitational field strength (g), on Earth g=10 N/kg, different on other planets and stars; gravity forces between Earth and Moon, and between Earth and Sun (qualitative only) 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. (KS3)
	Compare how things move on different surfaces. Notice that some forces need contact between two objects, but magnetic forces can act at a distance Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing. (Year 3)	Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	Speed and the quantitative relationship between average speed, distance and time (speed = distance ÷ time) Forces: associated with deforming objects; Forces being needed to cause objects to stop or start moving, or to change their speed or direction of motion. (KS3)

Key Questions	Key Individuals	Key Vocabulary
Why is gravity important?  What would Earth be like if gravity was different or did not exist?  Why is there day and night?  What are the effects of forces that act between moving surfaces?	<b>Katherine Johnson</b> (1918-2020) was an American mathematician whose calculations, as a NASA employee, were critical to the success of the first and subsequent U.S. crewed spaceflights. <b>Nicholas Copernicus</b> (1473-1543) was a mathematician and astronomer who formulated a model of the universe that placed the Sun rather than Earth at its centre. <b>Aristotle</b> (384 BCE - 322 BCE) examined almost every subject possible at the time. In Science Aristotle studied anatomy, astronomy, geography, biology, physics, zoology, and meteorology (the weather).	<b>Star</b> - a fixed luminous point in the night sky which is a large, remote incandescent body like the sun.  <b>Axis</b> - an imaginary line about which a body rotates.  <b>Rotation</b> - the action of rotating about an axis or centre.  <b>Air resistance</b> - acts against gravity on falling objects  <b>Friction</b> - the resistance that one surface or object encounters when moving over another.



Curriculum Leaflet

Year 5 Autumn 1

Year 5 will be exploring the topic: 'Earth and Space'. This unit of work will have a specific focus on developing the children's knowledge, skills and understanding about our solar system.

Maths	English	Home
<p><b>Maths Unit</b></p> <p><b>Place Value (3 weeks)</b> Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 . Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 . Solve number problems and practical problems that involve all of the above. Read Roman numerals up to 1,000 (M) and recognise years written in Roman numerals.</p> <p><b>Addition and subtraction (2 weeks)</b> Add and subtract numbers mentally with increasingly large numbers. Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p> <p><b>Multiplication and Division ( 1 week)</b> To explore that multiple of a number is any number that is in its times-table. Explore further the relationship between multiplication and division and consolidate their understanding of the words “factor” and “multiple”</p>	<p>We will be studying:</p> <p><i>Hidden Figures</i>, Margot Lee Shetterly</p> <p><b>Writing Focus:</b></p> <p><b>Formal letter</b></p> <ul style="list-style-type: none"> <li>To use organisational and presentational devices to structure text.</li> <li>To use a wide range of devices to build cohesion within and across paragraphs (conjunctions, adverbs, prepositions, pronouns, synonyms within and across paragraph).</li> </ul> <p><b>Diary</b></p> <ul style="list-style-type: none"> <li>To use the perfect form of verbs to mark relationships of time and cause.</li> <li>To select appropriate grammar and vocabulary, understand how such choices can change and enhance meaning.</li> </ul> <p><b>Persuasive argument</b></p> <ul style="list-style-type: none"> <li>To use relative clauses beginning with who, which, where, when, whose, that or with an implied (i.e. omitted) relative pronoun.</li> <li>To use expanded noun phrases to convey complicated information concisely.</li> </ul> <p><b>Newspaper report</b></p> <ul style="list-style-type: none"> <li>To use inverted commas for quotations.</li> <li>To use subordinating conjunctions to expand on independent clauses, adding detail.</li> <li>To use commas for parenthesis.</li> </ul>	<p>Families can support learning in the following ways:</p> <ul style="list-style-type: none"> <li>Visit Greenwich Observatory</li> <li>Visit the Science Museum</li> <li>Learn about 'Earth and Space' at <a href="https://www.bbc.co.uk/bitesize/topics/zkbbkqt">https://www.bbc.co.uk/bitesize/topics/zkbbkqt</a></li> <li>Accessing weekly home learning tasks via Google Classroom</li> <li>Supporting the development of times tables skills via regular practice on Times Tables Rock Stars</li> <li>Reading daily at home</li> <li>Accessing MyMaths for weekly maths homework (KS2)</li> </ul>