


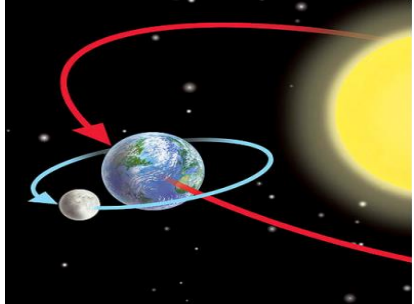
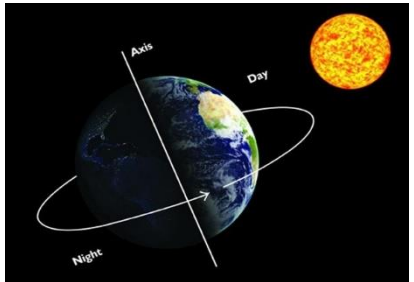
# Uplands Manor Primary School - Science Unit Organiser

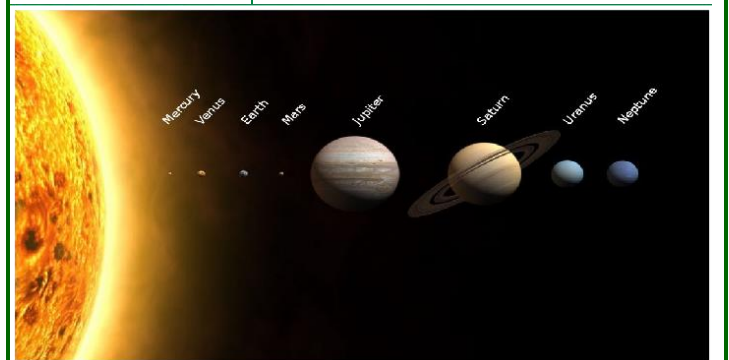
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|-----------------------|-----------------|--|---------------|--|
| <b>Science Topic:</b> | Earth and Space |  | <b>Year 5</b> |  |
|-----------------------|-----------------|--|---------------|--|

| What? (Key Vocabulary) |   |
|------------------------|---|
| Spelling               | Definition/Sentence                             |
| <b>Solar</b>           | Relating to the Sun                             |
| <b>Orbit</b>           | The curved path of an object around a star      |
| <b>Axis</b>            | An imaginary line round which something rotates |
| <b>Rotating</b>        | Moving in a circle around an axis               |
| <b>Gravitational</b>   | Moving towards a centre of gravity              |

| What? (Key Knowledge)                |  |
|--------------------------------------|--|
| The Earth and the Sun                |  |
| <b>WARNING</b>                       | <b>IT IS NOT SAFE TO EVER LOOK DIRECTLY AT THE SUN, EVEN WHEN WEARING SUNGLASSES.</b>  |
| What is the Sun?                     | <ul style="list-style-type: none"> <li>The sun is a star at the centre of our solar system</li> </ul>  |
| What is the solar system?            | <ul style="list-style-type: none"> <li>The solar system has eight planets; Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune</li> </ul>   |
| How is the Earth related to the Sun? | <ul style="list-style-type: none"> <li>The Earth orbits (goes around) the Sun</li> <li><b>The Earth takes one year to orbit the Sun</b></li> <li>The Earth is held in its orbit round the Sun by the Sun's gravitational pull</li> </ul> |




## Diagrams and Symbols

|   |   |
|---|---|
|    | <p style="text-align: center;">The Earth orbiting the Sun, which takes one year</p>       |
|   | <p style="text-align: center;">The Moon orbiting the Earth, which takes about 28 days</p> |
|  | <p style="text-align: center;">The Earth spinning on its axis, which takes 24 hours</p>   |



| The Moon and the Earth                |  |
|---------------------------------------|--|
| What is a moon?                       | <ul style="list-style-type: none"> <li>A moon is a celestial body that orbits a planet</li> <li>The Earth has one moon; Jupiter has four large moons and numerous small ones</li> </ul>  |
| How is the Moon related to the Earth? | <ul style="list-style-type: none"> <li>The Moon orbits the Earth</li> <li><b>It takes about 28 days for the Moon to orbit the Earth</b></li> <li>The Moon is held in its orbit round the Earth by the Earth's gravitational pull</li> </ul>            |
| Why does the Moon change shape?       | <ul style="list-style-type: none"> <li><b>It doesn't</b></li> <li>It appears to change shape because we cannot always see the side of the Moon that's in sunlight or we can only see part of the sunlit side of the Moon as it orbits Earth</li> </ul> |

A minimum of two experiments should take place during this unit of work with one final written outcome linked to the scientific enquiry skills and approaches used.

|   |  |
|---|--|
|  | Using balls as a model to investigate and describe the movement of the Earth in relation to the Sun                    |
|  | Investigate making shadow clocks and sundials<br>Children to question other group's designs based on subject knowledge |
|  | Using secondary resources to establish that the time of day is different in different places in the world              |

| The rotation of the Earth       |  |
|---------------------------------|--|
| How else does the Earth move?   | <ul style="list-style-type: none"> <li>The Earth spins on its own axis</li> <li><b>The Earth takes 24 hours (1 day) to completely rotate on its axis</b></li> </ul>  |
| What causes day and night?      | <ul style="list-style-type: none"> <li>The Earth spins once in a day</li> <li>The side of the Earth facing the Sun is in daytime</li> <li>The side of the Earth facing away from the Sun is in night time</li> </ul> |
| What causes Sunrise and Sunset? | <ul style="list-style-type: none"> <li>The Sun doesn't move - it is us that moves</li> <li>Because the Earth is rotating, the Sun appears to move across the sky as the day goes on</li> </ul>                       |