

***Our Intent is: To develop inquisitive children who are excited about investigating with curiosity, "How can scientific enquiry explain the world?" Exploring answers by gathering and analysing evidence.***



Forton Primary School  
Science

Pendle Class  
Autumn 1  
Year A

**Etymology:** planet - a celestial body moving in an elliptical orbit round a star.

**Key Concept:** Space

**Key Question:** How does the Earth's rotation explain day and night?



The Story Orchestra  
The Planets  
By Jessica Courtney-Tickle

**Unit Overview:**

**N.C. LINKS:**

Space Pupils should be taught to:

- 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.

**Vocabulary:**

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<p>The Earth relative to the moon, sun and other planets. Night and Day. Shadows in relation to the sun's movement.</p>	<p><b>Subject Specific:</b></p> <p>sun star planet moon satellite</p> <p>orbit geocentric model heliocentric model astronomer</p>	<p><b>Working Scientifically:</b></p> <p>Plan Variables Measurements Accuracy Precision Repeat reading Labels Classification Scatter Key graphs Predictions Bar graphs Line graphs Patterns Quantitative Interpret Measurements Systematic</p>
<p><b>New Knowledge Progression:</b></p> <ul style="list-style-type: none"><li>• . Describe the movement of the Earth, and other planets, relative to the Sun and each other in the solar system.</li><li>• Describe the movement of the Moon relative to the Earth.</li><li>• Describe Sun/Earth/Moon as approximately spherical bodies.</li></ul>	<p><b>Building on Prior learning when B follow A:</b></p> <ul style="list-style-type: none"><li>• Observe and describe changes across the four seasons.</li><li>• Observe and describe weather associated with the seasons and how day length and temperature varies.</li></ul>	

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- Use the idea of the Earth's rotation to explain day and night.
- The Earth spins once around its own axis in 24 hours, giving day and night.
- The Earth orbits the Sun in one year.
- We can see the Moon because the Sun's light reflects off it.
- The Moon orbits the Earth in approximately 28 days and changes to the appearance of the moon are evidence of this.
- Use the Earth's movement in space to explain the apparent movement of the sun across the sky.
- The Sun appears to move across the sky from East to West and this causes shadows to change during the day.
- Changes to shadow length over a day or changes to sunrise and sunset times over a year are evidence supporting the movement of the Earth.

#### **Key Skills (Disciplinary)**

- Use secondary sources of information to identify and classify.
- Recognise scientific questions that do not yet have definitive answers .
- Articulate and explain findings from their research using scientific knowledge and understanding.
- Make decisions about which information to use from a wide range of sources.
- Support, listen to and acknowledge others in the group *e.g. Yes. I prefer that one too.*

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- Check the clarity of each other's suggestions *e.g. are you saying you think this one is a herbivore?*
- Build on / add to someone else's idea to improve a plan or suggestion.  
Understand that it is okay to disagree with their peers and offer a reasons for their opinion.
- Use correct scientific knowledge and understanding and relevant scientific language to discuss their observations and explorations ).
- Identify changes that have occurred over a very long period of time (evolution) and discuss how changes have impacted the world.
- Use classification systems, keys and other information records [databases] to help classify or identify things.
- Recognise scientific questions that do not yet have definitive answers .  
i.e. ask a testable question which includes the change and measure variables, *e.g. what would happen to...if we changed...?*  
*e.g. What effect would we have on ... if we...?*  
*e.g. How would exercise affect the pulse rate?*
- Independently ask a variety of scientific questions and decide the type of enquiry needed to answer them.
- Research how scientific ideas have developed over time and had an impact on our lives.

#### **Sequence of Lessons:**

1. To explain how we know the Sun, Earth and Moon are spherical.
2. To name and describe features of the planets in our solar system.
3. To understand and explain how planets move.
4. To use scientific evidence to support an argument. (Night and day and the apparent movement of the sun across the sky)
5. To investigate night and day and present findings.
6. To understand and explain the movement of the moon.

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<b>Enhancements:</b>  Jodrell bank visit. Space dome visit to school.	<b>End of Unit Outcome:</b>  3D model showing how our solar system works.
<b>Oral Assessments:</b> How do we know the Sun, Earth and Moon are spherical? Name and describe the features of the planets in our solar system? How do planets move? Explain the movement of the moon.	