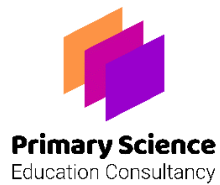





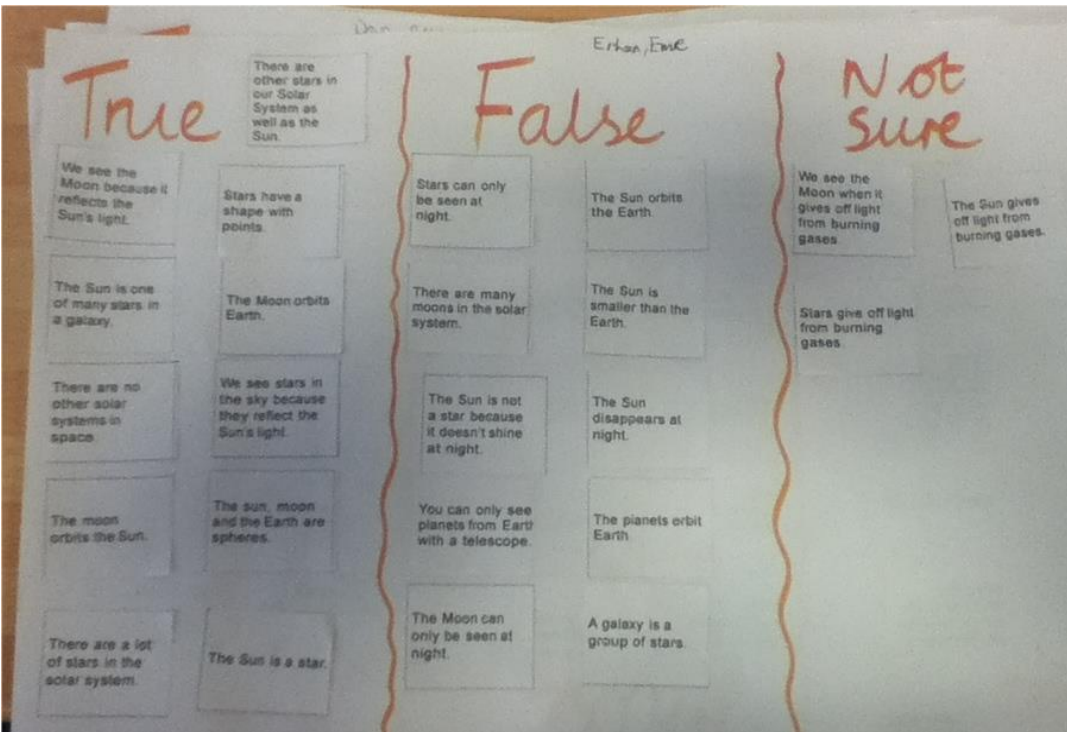
Examples of Work


Isabella


Earth and space - Year 5




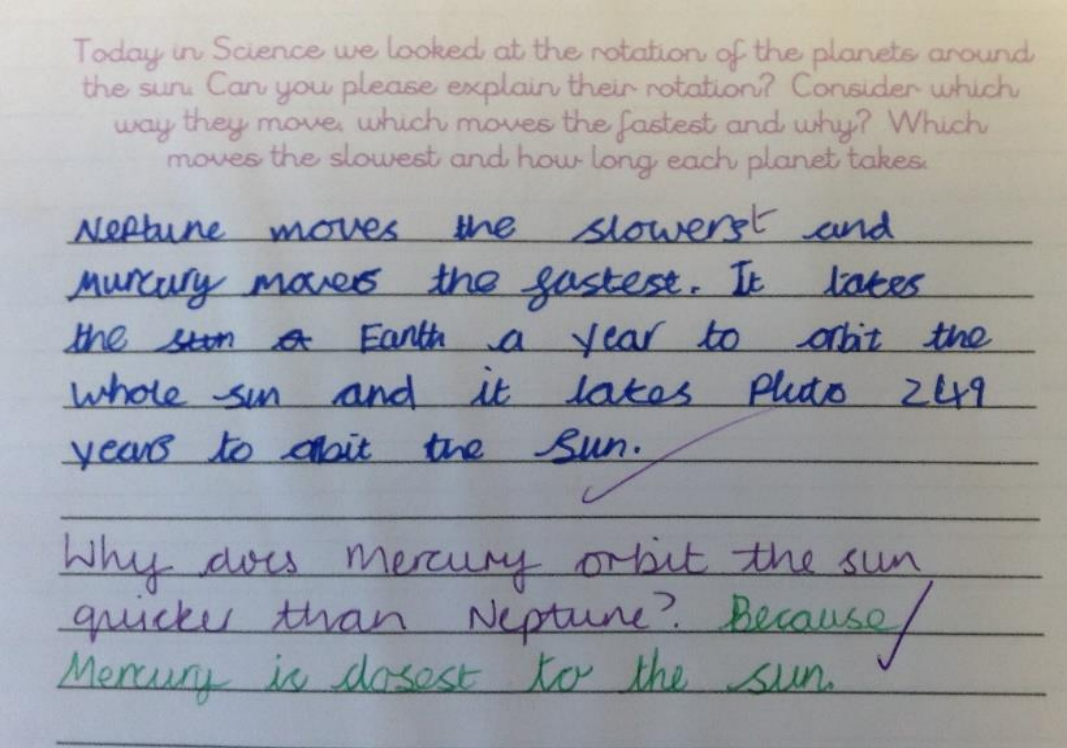
	Year	5	Topic	Earth and space
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and 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. 			
	Description of activity			
	<p>This lesson was used as an introduction to the topic and for AfL. Children were asked to sort a series of statements about the solar system into 'true', 'false' or 'not sure'. This provided the teacher with information about the children's starting points and misconceptions.</p>			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
Teacher observations	 <p>The image shows a student's handwritten work on a piece of paper. The paper is divided into three columns by wavy lines, labeled 'True', 'False', and 'Not Sure' in red ink. The 'True' column contains statements like 'There are other stars in our Solar System as well as the Sun', 'The Moon orbits Earth', and 'The Sun is a star'. The 'False' column contains statements like 'Stars can only be seen at night', 'The Sun is smaller than the Earth', and 'The Sun is not a star because it doesn't shine at night'. The 'Not Sure' column contains statements like 'We see the Moon when it gives off light from burning gases' and 'The Sun gives off light from burning gases'. The student's name 'Dan' and 'Erhan, Eric' are written at the top.</p>	Working scientifically

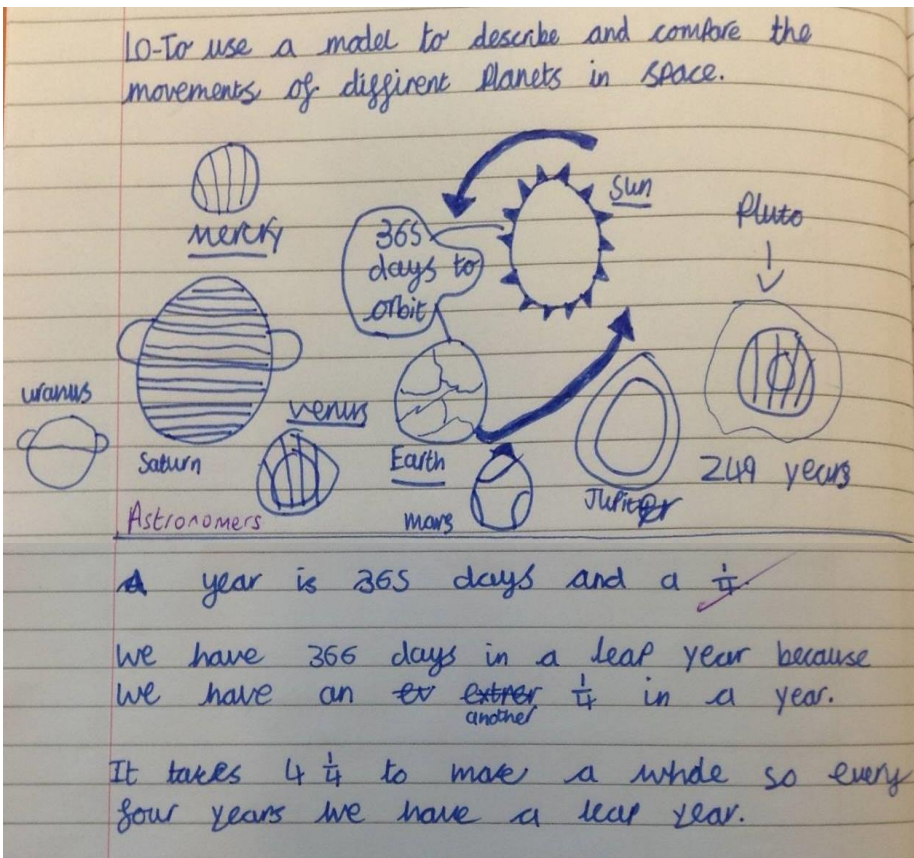
	Year	5	Topic	Earth and space
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. 			
	Description of activity			
	Through role play, the children were taught about the movement of the planets around the Sun.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
		Through the role play, Isabella gains an understanding of the movement of the planets around the Sun. She uses the word orbit to describe the movement.
Teacher observations		Working scientifically


	Year	5	Topic	Earth and space
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. 			
	Description of activity			
	Following the role play, Isabella explained what she had learnt.			

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
		This piece of writing shows that Isabella can express clearly in writing how the planets move, using the key vocabulary 'orbit'.
Teacher observations		Working scientifically
Isabella uses the key vocabulary 'orbit'.		

	Year	5	Topic	Earth and space
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. 			
	Description of activity			
During this lesson, the children returned to their role play model and used their understanding of the movement of the Earth to explain how many days there are in a year and how leap years occur.				

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
		<p>Isabella uses arrows to show the movement of the Earth around the Sun.</p>
Teacher observations		Working scientifically

	Year	5	Topic	Earth and space
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. 			
	Description of activity			
	The children made observations of shadows outside at different times of day. The children were then asked to demonstrate their understanding using a diagram.			

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
Teacher observations		Isabella is not able to show this understanding with any clarity using a diagram.
		Working scientifically



Year

5

Topic

Earth and space

Focus of assessment (National Curriculum statements)

- Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.

Description of activity

The children were provided with a series of questions about shadows caused by the Sun and how these can be used to tell the time.

EVIDENCE OF LEARNING

ASSESSMENT

Oral evidence

Examples of work

Knowledge

Wednesday 21st October 2015

LO: To understand how shadows are formed.

- At what time of the day are shadows at their shortest?
- In what ways do shadows change throughout the day?
- Why do shadows change their length?
- If we measured the length of shadows throughout the day, what would eventually happen to the shadows?
- Why?
- Where in the playground can you use a shadow clock?
- Would it work in a shady place?
- Why?
- Does it matter which way around you place it?
- How can you check that your clock faces the correct direction?
- How accurately can you tell the time with the shadow clock?
- Is it accurate to the hour, half hour, quarter hour, for example?

1) 12 noon / midday ✓

2) In the middle of the day it is the shortest because the sun is at its highest point. ✓

3) Because of the sun being at its highest point in the day. The sun changes positions. ✓

4) The shadows would start to fade away in time. I would be long and then it would turn short, and then longer. ✓

5) because of where the sun Earth is when it is rotating. ✓

6) In the middle of the playground / the field. ✓

7) No it would not. ✓

8) Because the shadow from the object will block it. We need a source of light. ✓

9) yes because the way the sun is facing. ✓

10) a compass ✓

11) not that accurate. ✓


12) No because it doesn't have half hour or minutes. ✓


Isabella demonstrates a sound understanding of how the position of the Sun affects the position and length of the shadow. However, this is not linked back to the movement of the Earth.


There is insufficient evidence that Isabella can securely explain how the Earth's rotation explains the apparent movement of the Sun across the sky.

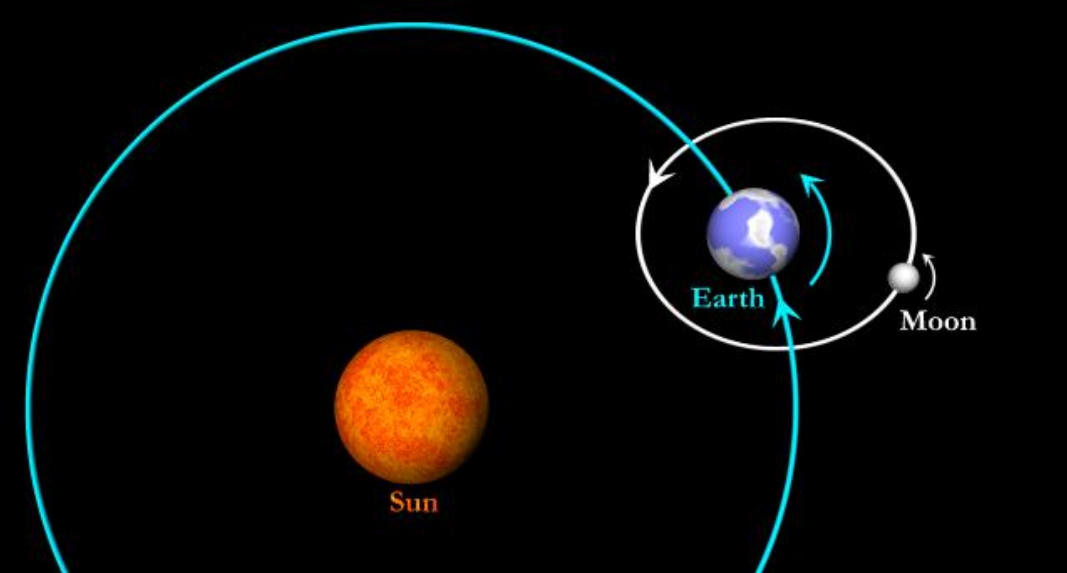
Working scientifically


Teacher observations

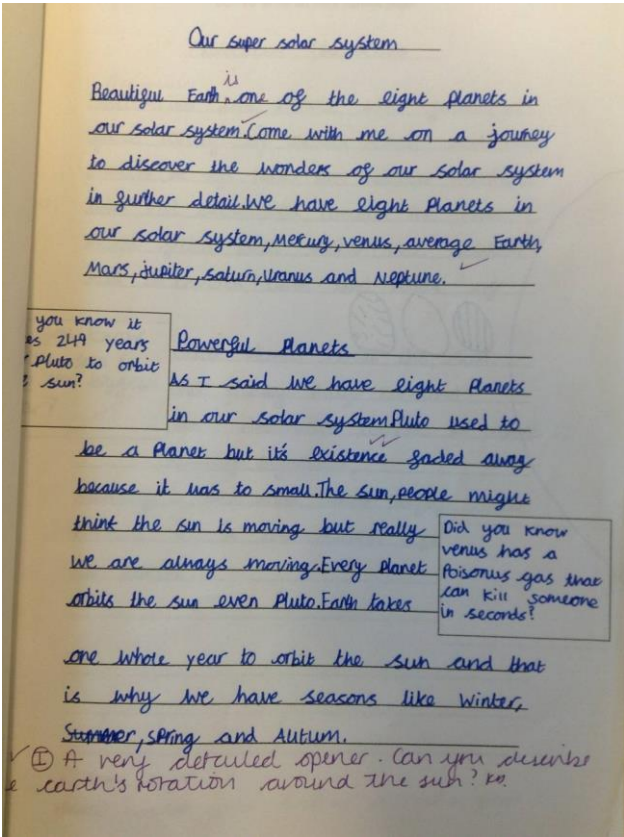
	Year	5	Topic	Earth and space
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. 			
	Description of activity			
	To confirm Isabella's understanding of day and night, she was asked to use a globe, a LEGO person and a torch to demonstrate how the rotation of the Earth causes day and night, the apparent movement of the Sun across the sky, and changes in shadows. Her understanding was captured verbally.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>"The Earth rotates on its axis. As the Earth rotates, while the Sun is shining on one part of the world, the other part of the world is in darkness. This is known as day and night. Shadows can be made by the Sun. It appears to move across the sky but really it is the Earth spinning."</p>		<p>Isabella's explanation shows that she is now secure in her understanding of day and night and can explain using the words 'axis' and 'rotate'.</p>
Teacher observations		Working scientifically

	Year	5	Topic	Earth and space
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Describe the movement of the Moon relative to the Earth. 			
	Description of activity			
	The children used role play to demonstrate the movement of the Moon around the Earth. Isabella's understanding was captured verbally.			

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>"Our Moon, which is about the same size as Pluto, orbits around the Earth. It takes roughly 28 days to do this. This is why a lunar month is 28 days."</p>		<p>This evidence shows she is secure with the movement of the Moon relative to the Earth.</p>
Teacher observations		<p>Isabella takes different roles within the role play and explains how she was moving.</p> <p>Isabella uses the key vocabulary 'orbit'.</p>

	Year	5	Topic	Earth and space
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. 			
	Description of activity			
	<p>The children were asked to plan and research their own information texts with the title 'Earth, Space and Beyond'. Children were asked to draw on what they had learnt in the sequence of lessons. They conducted additional research into areas of interest to themselves. They used this to create an information booklet for children of a similar age.</p>			

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
Teacher observations		<p>This writing provides additional evidence to show that Isabella is secure about the movement of the Earth and other planets relative to the Sun.</p>
		Working scientifically

	Year	5	Topic	Earth and space
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. 			
	Description of activity			
	Continued from the previous page.			

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
	<p>LO: To write an information page</p> <p><u>Marvellous Discoveries</u></p> <p>Astronomers Discoveries are people who found a great variety of planets Planets and also comets. One of them was William Herschel who had discovered Uranus the blue planet filled with water. Isaac Newton had discovered Earth and loads of</p>	
Teacher observations	<p>you know the sun is the biggest or?</p> <p>other planets circle the sun. And finally Holly Edmond had discovered comet in space</p> <p><u>Amazing information</u></p> <p>Mercury is nicknamed earth's ugly sister because it is the same size as earth.</p>	<p>Working scientifically</p> <p>Isabella independently researches relevant facts about the given topic to include in her writing.</p>



Overall summary

Secure

Isabella describes the movement of the Earth, and other planets, relative to the Sun in the solar system. Through role play, Isabella has developed an understanding of the different lengths of time orbits take, dependent on the planet's distance from the Sun. In addition, Isabella describes the movement of the Moon relative to the Earth. Isabella understand that the Sun, Earth and Moon are approximately spherical bodies and is able to explain day and night and the apparent movement of the Sun across the sky using understanding about the Earth's rotation. All relevant vocabulary has been used with confidence and in the appropriate context.