

1. BASIS

The content and activities in this unit focus on expanding and increasing the pupils' knowledge of the universe and the Earth. In order to do this, we will explore different elements and components of the universe and Solar System, as well as continue the study of the Earth and the way it moves, its different layers, its satellite, and its relief. This unit also includes two projects exploring the importance of water (and the possibility of extra-terrestrial life) as well as solar eclipses.

September October

2. METHODOLOGY

As pupils study this unit, they will gain a deeper understanding of the universe, and the Earth. They will also use basic competencies that will allow them to develop and enhance social and thinking skills.

CONTENTS	EVALUATION CRITERIA	LEARNING STANDARDS
<ul style="list-style-type: none"> The Universe: what it is made up of. 	<ol style="list-style-type: none"> 1. Explain what the universe is and its main components. 	<ol style="list-style-type: none"> 1.1. Explain what the universe is like and its main components. 1.2. Define terms related to the universe; identify similarities and differences between them. 1.3. Describe the relationship between meteors and shooting stars. 1.4. Describe the composition of comets and explain why they are visible.
<ul style="list-style-type: none"> The Solar System: the Sun, nebulae, stars, galaxies, satellites, comets, asteroids, planets and dwarf planets. 	<ol style="list-style-type: none"> 2. Describe the general characteristics of the Solar System. 	<ol style="list-style-type: none"> 2.1. Describe and interpret images of the Solar System and its components. 2.2. Explain the characteristics of the Sun and planets.
<ul style="list-style-type: none"> The planets, characteristics and movements. 	<ol style="list-style-type: none"> 3. Locate planet Earth and the Solar System. 	<ol style="list-style-type: none"> 3.1. Describe the shape of the Earth and some of its characteristics. 3.2. Identify, name and describe the layers of the Earth. 3.3. Use drawings and 3D models to describe orally the movements of the Earth and Moon.

<ul style="list-style-type: none"> • The Earth: general characteristics. • Shape and composition. • Orbit and rotation. • The Earth's axis and the Poles. • Day and night. • The movements of the Earth. • The seasons. • The layers of the Earth: general characteristics. 	4. Explain the movements of the Earth and their consequences, associating the seasons with the Earth's orbit around the Sun and the tilt of the Earth's axis, not with distance from the Sun.	<p>4.1 Define the orbit and rotation of the Earth, the axis and the Poles and associate the seasons with these factors.</p> <p>4.2. Identify the seasons and their effects on living beings.</p>
	5. Describe day and night as a consequence of the Earth's rotation, not as a consequence of the movement of the Sun.	<p>5.1. Explain day and night as effects of Earth's rotation and a way to measure time.</p> <p>5.2. Draw a diagram illustrating the Earth's orbit.</p>
	6. Explain the characteristics of the Moon and its movements, identifying phases.	<p>6.1. Define the orbit of the Moon and name the lunar phases.</p> <p>6.2. Understand how the Moon affects the tides.</p>
	7. Identify lunar phases and explain solar and lunar eclipses.	7.1. Explain and draw the lunar phases and understand how solar and lunar eclipses occur.
	8. Find, process and present information about the universe.	8.1. Use new technologies to learn more about the universe, the Solar System and the Earth.
	9. Recognise advances made in the study of the universe and the Earth, valuing the importance of scientific knowledge and how it can be applied to everyday life.	<p>9.1. Explain how a telescope works.</p> <p>9.2. Identify an observatory as a place where space is studied.</p> <p>9.3. Value human curiosity and the importance of scientific advances to discover more about the universe.</p>

3. COMPETENCIES

COMPETENCIES	CONTENTS AND ACTIVITIES BY COMPETENCY
Linguistic competency	<p>Using vocabulary and terminology correctly in English to complete activities associated with the universe, Solar System and the Earth.</p> <p>Reading and understanding the text 'Observatories' and answering comprehension questions.</p> <p>Using resources (textbook, dictionary, computer) to expand vocabulary.</p> <p>Clearly communicating and presenting knowledge and ideas in spoken or written form.</p> <p>Completing an experiment about solar eclipses and explaining the results orally.</p>
Mathematical competency and basic competencies in Science and Technology	<p>Working with large numbers.</p> <p>Working with size.</p> <p>Calculating average distances and diameters.</p> <p>Investigating eclipses, size and proximity.</p> <p>Learning about telescopes and how they work.</p>
Digital competency	<p>Using new technologies to search for information.</p> <p>Critically evaluating and selecting information.</p>
Learning to learn	<p>Using outlines, summaries, tables, digital resources, word lists, etc., to organise information and structure learning.</p> <p>Using skim-reading techniques to extract key information.</p> <p>Developing the ability to successfully ascertain the meaning of unknown words through context.</p>
Social and Civic competencies	<p>Participating in activities with a partner as well as in groups.</p> <p>Respecting the ideas of others.</p> <p>Being conscious of the importance of caring for the Earth.</p>
Sense of initiative and entrepreneurial spirit	<p>Participating in group activities in a leading and non-leading role.</p> <p>Thinking of creative solutions to proposed problems.</p> <p>Successfully completing lateral thinking activities.</p>
Culture awareness and expression	<p>Creating aesthetic drawings related to the universe and planet Earth.</p> <p>Appreciating the beauty of the universe.</p>