

Earth and Space: Science : Year 5

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To describe the movements of the Sun, Earth and Moon.	Children will learn about the celestial bodies of the Sun, Moon and Earth and how they are related to one another. They will learn that each of them are a roughly spherical shape and investigate and define the word 'orbit'. They will use these scientific words in a brief description of the Sun, Earth and Moon's movements around each other.	<ul style="list-style-type: none"> • Can children describe the Sun, Earth and Moon's shape as roughly spherical? • Are children able to clearly define the word orbit? • Can children describe the Sun, Earth and Moon's movements in relation to one another? 	<ul style="list-style-type: none"> • Slides • Teacher Notes 1A • Worksheet 1A/1B/1C • Fact Cards 1A • Worksheet 1D/1E (FSD? Activity only) • Template 1A (FSD? activity only) • Split pins (FSD? Activity only)
Lesson 2	To explore how the rotation of Earth creates day and night.	Children will learn that the rotation of Earth on its axis is what creates day and night. They will conduct an investigation using sundials and make observations on what they record throughout the experiment. Alternatively, they will explore time zones using the internet and how, and why, locations have different time zones.	<ul style="list-style-type: none"> • Can children explain how the rotation of Earth on its axis creates day and night? • Can children explain the apparent movement of the sun across the sky? • Can children identify how long it takes Earth to make a full rotation? 	<ul style="list-style-type: none"> • Slides • Worksheet 2A/2B/2C • Pencils • Sticky-tac • Time Zone Cards 2A (FSD? activity only) • Access to the internet (FSD? activity only) • Question Cards 2A (FSD? activity only) • City Cards 2A (FSD? activity only)
Lesson 3	To learn about how Earth's tilt creates seasons.	Children will learn about how the seasons are created because of the tilt of Earth's axis. They will learn how Earth is split into its Northern and Southern Hemispheres and how the seasons are different for the two halves of the planet. They will identify the seasons for the Northern Hemisphere based on the location of Earth in its orbit. Alternatively the children will investigate day length and how it changes seasonally using data and graphs.	<ul style="list-style-type: none"> • Can children describe the different changes that happen between seasons? • Can children use Earth's tilted axis to explain how seasons are created? • Can children describe the differences in seasons between two locations in opposite hemispheres? 	<ul style="list-style-type: none"> • Slides • Worksheet 3A/3B • Season Labels 3A/3B • Statistics Cards 3A/3B (FSD? Activity only) • Graph Paper 3A (FSD? Activity only) • Worksheet 3C (FSD? Activity only) • Question Cards 3A/3B (FSD? Activity only)
Lesson 4	To learn about the phases of the Moon.	Children will be guided through the lunar month and the eight phases of the Moon that can be seen as the Moon orbits Earth. They will learn to identify the shapes of each phase and the names of these shapes, including if the phase is waxing or waning. They will create their own spinning diagram of each of these phases.	<ul style="list-style-type: none"> • Can children name the different phases of the moon? • Are children able to order the phases of the moon? • Can children describe how the phases of the moon are created? 	<ul style="list-style-type: none"> • Slides • Teacher Notes • Worksheet 4A/4B • Split pins • Template 4A • Moon Cards 4A • Moon Cards 4B (FSD? activity only)
Lesson 5	To discover how theories about our solar system have changed.	Children will learn about and discuss how the ideas about the solar system developed and changed over the years until we arrived at the model we have today. The children will compare the similarities and differences between a geocentric and heliocentric model of the solar system.	<ul style="list-style-type: none"> • Are children able to define what a solar system is? • Can children explain what the differences between geo- and heliocentric models of the solar system are? • Can children compare the ideas of the solar system we know now, with those held by Ptolemy and Copernicus? 	<ul style="list-style-type: none"> • Slides • Solar System Fact Cards 5A/5B • Worksheet 5A/5B/5C • Access to the internet (FSD? activity only) • Worksheet 5D (FSD? activity only)
Lesson 6	To investigate the planets in the solar system.	Children will conduct their own research into the planets within our solar system. They will discuss the objects in our solar system as a class, including natural satellites, comets, asteroids (and the asteroid belt), planets and dwarf planets. They will work to create their own fact book or model of the solar system.	<ul style="list-style-type: none"> • Can children name the eight planets in our solar system? • Are children able to name the eight planets in order from nearest to farthest from the Sun? • Can children use researching skills to find relevant information on a topic? 	<ul style="list-style-type: none"> • Slides • Mnemonic Strip 6A • Templates 6A/6B/6C • End of Unit Quiz • Flag Template 6A (FSD? activity only) • Polystyrene balls (FSD? activity only) • Skewer sticks (FSD? activity only)