



TSS Primary Science MTP 2022-2023

Year 4 Block 5 – Earth & Space

Key Targets and Learning Objectives		Key Activities	Equipment
<ul style="list-style-type: none"> Describe the model of the structure of the Earth which includes a core, a mantle and a crust Describe common features of volcanoes and know they are found at breaks in the Earth's crust Know that the Earth's crust moves and when parts move suddenly this is called an earthquake Explain why the spinning of the Earth on its axis leads to the apparent movement of the Sun, night and day, and changes in shadows Name the planets in the Solar System Know that the Sun is at the centre of the Solar System Know that planetary systems can contain stars, planets, asteroids and comets Use models to show relationships, quantities or scale (WS) Draw a diagram to represent a real-world situation and/or scientific idea (WS) 		<ul style="list-style-type: none"> Lesson 1 – Pre-test. Walk through a scaled down version of our solar system. Talk about scale and proportion to give children a sense of the size of our solar system / galaxy / universe Lesson 2 – Use mnemonics to learn the names of the planets and research information about them (ready for ICT link) Lesson 3 – Using torches and balls, demonstrate why we have night and day. Extend to show the phases of the moon. Lesson 4 – Cut fruit to demonstrate the structure of the Earth. Label diagrams and represent diagrams proportionally between the size of crust, mantle and core. Lesson 5 – Create own mini volcanoes with playdough, baking soda and vinegar Lesson 6 - STEAM activity – Introduce earthquakes and recreate a small earthquake on tables, using sugar cubes to represent buildings. Main activity – make a seismograph. https://www.sciencebuddies.org/stem-activities/make-a-seismograph Lesson 7 – Finishing up and then end of block Assessment. + end of year quiz! 	<ul style="list-style-type: none"> Large ball (balance ball or basketball) Playdough Baking soda Vinegar Fruit (peaches or plums) Cups, pebbles and string for seismograph
Key vocabulary	Going Green Link	Integration of technology	
<ul style="list-style-type: none"> Planets – Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, asteroids, comets, solar system, volcano, earthquake, mantle, core, crust 	<ul style="list-style-type: none"> Include discussions about looking after our planet, how lucky we are that we are the only known habitable planet etc 	<ul style="list-style-type: none"> ICT link through powerpoint presentations on the 8 planets Research on iPads 	