Year 5 – Space

UKS2 Autumn 2

Breadth	Concept	Milestone 3 (Years 5&6)	Knowledge	Vocabulary
Light • Look at sources, seeing, reflections and shadows. • Explain how light appears to travel in straight lines and how this affects seeing and shadows. Sound • Look at sources, vibration, volume and pitch. Electricity • Look at appliances, circuits, lamps, switches, insulators and conductors. • Look at circuits, the effect of the voltage in cells and the resistance and conductivity of materials.	Work scientifically This concept involves the learning the methodologies of the discipline of science Understand movement, forces and magnets This concept involves understanding what causes motion.	Plan enquiries, recognising and controlling variables where necessary Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work Take measurements, using a range of scientific equipment, with increasing accuracy and precision. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graph, and models. Report findings from enquiries, including oral and written explanations and of results, explanations involving causal relationships and conclusions. Present findings in written form, displays and presentations. Use test results to make predictions to set up further comparative and fair tests.	To know the order of the planets To know the Earth rotates to create night and day To know a day is 24hours long To know a year is 365.25 days long	Earth Sun Moon Mercury Venus Mars Earth Jupiter Saturn Neptune Rotate Orbit Year Length Day Night Distance Size Month Lunar Axis Tilt Rotation Autumn Winter spring Summer

Forces and magnets • Look at contact and distant forces, attraction and repulsion, comparing and grouping materials. • Look at poles, attraction and repulsion. • Look at the effect of gravity and drag forces. • Look at transference of forces in gears, pulleys, levers and springs. Earth and space • Look at the movement of the Earth and the Moon •Explain day and night		Use simple models to describe scientific evidence that has been used to support or refute ideas or arguments. Magnets • Describe magnets as having two poles. • Predict whether two magnets will attract or repel each other, depending on which poles are facing. Forces • Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. • Identify the effect of drag forces, such as air resistance, water resistance and friction that act between moving surfaces. • Describe, in terms of drag forces, why moving objects that are not driven tend to slow down. Understand that force and motion can be transferred through mechanical devices such as gears, pulleys, levers and springs. • Understand that some mechanisms including levers, pulleys and gears, allow a smaller force to have a greater effect.		Weather Phases Waxing Waning 28 days Full moon New moon Gibbous crescent
	Understand the Earth's movement in space	Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.		

	This concept involves understanding what causes seasonal changes, day and night.	• 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.		
	Understand electrical circuits This concept involves understanding circuits and their role in electrical applications.	Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. • Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. • Use recognised symbols when representing a simple circuit in a diagram.		