Science Year Planner Year 5

Term	Autumn 1	Spring 1	Spring 2	Summer 1	Summer 2
Topic or Stand-Alone?	Topic **Inc. 1xSLD + STEM day**	Stand Alone link to History – WW2	Stand alone **2xSLDs**	Stand Alone	Stand Alone links to PSHE
Enquiry Questions:	***What is Space?***	***What is a force?*** ***Can I make a safer parachute?***	***Are all changes permanent?*** ***Which cup will keep Miss Goatman's coffee warmest the longest?***	***Do all living things have the same Life cycle?***	
Science Knowledge	Earth and Space	Forces	Properties of materials	Living things and their habitats Unit Animals inc. humans Unit	

NC Focus				
Working Scientifically NC Focus:	• identifying scientific evidence that has been used to support or refute ideas or arguments. 	• planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary  • taking measurements (Newtons), using a range of scientific equipment (stopwatch, Newton meter), with increasing accuracy and precision, taking repeat readings when appropriate  • recording data and results of increasing complexity using scientific diagrams and	• planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary  • taking measurements (temp), using a range of scientific equipment (thermometer), with increasing accuracy and precision.  • recording data and results of increasing complexity using classification keys, tables line graphs	• recording data and results of increasing complexity using scientific diagrams and labels. 

		labels, tables, bar graphs + scatter graphs  • using test results to make predictions to set up further comparative and fair tests  • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of written forms 	 • reporting and presenting findings from enquiries, including conclusions, in written forms such as displays and other presentations  •	
Sequence of lessons	L1 What is at the centre of the Solar System? The Earth orbits the sun and rotates on an axis.	L1 What do you already know about forces? What is a force? Push or Pull Activity.	L1 Grouping everyday items based on their properties – solid, liquid, transparent, magnetic,	L1 What is a lifecycle? L2 Are all lifecycles the same? L3 Do all living things reproduce in the same way? Bird vs mammal vs insect vs amphibian

	L2 are all planets the same? I know there are rocky planets and gas giants. I know the order of the planets (homework) L3 Why does the moon change shape? The moon DOES not emit light; the orbit of the moon means that different amounts are lit up creating phases. L4 I know that the Earth is spherical L5 What if the sun rotated but the Earth didn't? How day and night are made.	L2 Using a Newton meter, completing a table and drawing a bar chart. L3 Friction: which surfaces have more/less friction? Can I change friction? How does friction impact movement? L4 The effects of air resistance – can I make a safer parachute? L5 The effects of water resistance. L6 What are levers, pulleys and gears and where can I find them?	soft, soluble. Intro. Classification keys. L2 Knowing why certain materials are used for certain jobs – waterproof, flexible, durable, strong etc L3 Thermal conductors/insulators – Which cup will keep Miss Goatman's coffee warmest the longest? L4 Separating mixtures using sieving, magnets and filters L5 Solutions vs mixtures. What things are soluble? L6 Reversible and irreversible changes.	L4+5 Presenting findings
Vocabulary:	universe axis planets crescent day orbit heliocentric phases spherical night	pull push Newton meter friction force fulcrum mass gravity aerodynamic levers pulleys	solid sieve soluble liquid magnet/magnetism insoluble gas mixture solution flexible separate	life cycle infant teenager offspring changes reproduce child adult mating embryo

	spin	air resistance	heat	baby
	geocentric		material	adolescent
	gibbous		thermal conductor	elderly
	constellation		evaporation	egg
			change	sexual/asexual
			thermal insulator	reproduction
			reversible	pollination
			filter	fertilisation
			dissolve	germination
			irreversible	biodiversity