Year 5 Science Curriculum Outline

The science department at Linslade School delivers a broad and diverse curriculum that instils awe and wonder, a sense of excitement and curiosity about natural phenomena and a window into the wider science world. We plan our schemes to provide a bridge from Lower to Upper School equipping them with knowledge to use across a range of subjects at GCSE and beyond, including how to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. Pupils will develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
Through the delivery of practical and theory lessons, we develop creative and curious learners and encourage aspirations and an understanding of the future careers that are open to them. Our learners today have an inspirational knowledge base to be our scientific leaders of tomorrow that is vital to the world's future prosperity.

5 Topics spaced out over the year, usually covering half a term each, except Life cycles, that takes more than a half term.

Topic/theme	Super scientists- Working scientifically	Separations of materials Materials, properties, Changing state	Life cycles of plants and animals	Space	Forces
Key Skills	Students are introduced to the new science labs and are instructed in safety, bunsen burners, scientific drawings and	Are able to demonstrate a clear understanding of states of matter To identify reversible changes accurately Are able to compare and group together	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life	Are able to describe the movement of the Earth, and other planets, relative to the Sun in the solar system Can describe the	Can explain that objects fall towards the Earth because of the force of gravity acting between

	equipment, microscopes, timers, pipettes and chemicals. Are able to identify and use scientific equipment accurately and appropriately in a given situation	everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.	process of reproduction in flowering plants and some animals Identify key parts of flowers and their role in reproduction Understand asexual reproduction in plants Describe the changes as humans develop to old age, including the changes during puberty	movement of the Moon relative to the Earth Are able to describe the Sun, Earth and Moon as approximately spherical bodies Can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	the Earth and the falling object Can correctly identify the effects of air resistance, water resistance and friction, that act between moving surfaces Can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect
Previous learning and next steps links	Students should know how to carry out experiments fairly. We develop their	Pupils will have had varying experiences at previous schools, but should know how to group materials and	In lower KS2,students begin to notice that animals, including humans, have	Students will last have encountered Space at Year 1-2, where they learn about seasons KS3 – space physics and	Students will have learnt about magnetic forces as non-contact forces

	understanding of what fair testing is and introduce the terms ‘variable’ and what they mean. At KS3, students will be expected to plan and carry out investigations independently, identifying all the variables in the investigations.	that materials appear in 3 different states of matter. Next steps – KS3 programme of study; Particle theory, mixtures and separations.	offspring which grow into adults. They will not have been taught about reproduction or puberty. Students may have looked at hatching chicks or germinating seeds, without any real depth of detail. KS3 – detailed reproduction	gravitational field strength	at LKS2. KS3 – Forces and Motion, pressure and balanced and unbalanced forces
Numeracy Opportunities	Data, tally, bar charts, pie charts, thermometers, line graphs, tables of results, timing, measuring etc.				
Literacy opportunities	Experimental write ups and recording of information. Key vocabulary, reading text linked to each topic				