Year 7 Science Academic Year Curriculum

The study of science fires pupils' curiosity about phenomena in the world around them and offers opportunities to find explanations. It engages pupils at many levels, linking direct practical experience with scientific ideas. Experimentation and modelling are used to develop and evaluate explanations, encouraging critical and creative thought. Pupils learn how knowledge and understanding in science are rooted in evidence. They discover how scientific ideas contribute to technological change and lead to improving the quality of life. They trace the development of science worldwide and recognise its cultural significance. They learn to question and discuss issues that may affect their own life and the future of the World.

The principal focus of science teaching in Year7 is to develop a deeper understanding of a range of scientific ideas in Biology, Chemistry and Physics. Pupils will begin to see the connections between these subject areas and become aware of some of the key ideas underpinning scientific knowledge and understanding. The teaching programme consists of individual topics which will develop scientific knowledge and understanding and use scientific enquiry to help pupils answer specific questions about the world around them.

Term 1	Topic	Details
1	**Introduction – Working Scientifically - Biology Plants**	Plant Organs, Human Organ Systems
2	**Biology - Human Skeleton**	The Human Skeleton, Joints, Muscles, Studying the Human Body
3	**Chemistry – States of Matter**	States of Matter, Particle Theory
4	**Chemistry – States of Matter**	Changing State, Explaining Changes of State
5	**Physics - Forces**	Seeing Forces, Forces big and Small, Weight - the pull of Gravity
6	**Physics - Forces**	Friction - an important Force, Air Resistance, Patterns of falling
7	**Biology - Organisms**	Characteristics of living organisms, Micro-organisms - decay, food and disease
8	**Biology - Cells**	Plant and Animal Cells, cells tissues and organisms
9	**Test Week**	**TEST** Metals and non-Metals,
10	**Chemistry - Metals**	Comparing metals and non-metals, everyday materials and their properties
11	**Physics - Energy**	Using Energy, Chemical stores of energy, more energy stores
12	**Physics - Energy**	Thermal and Kinetic energy
13	**Physics - Energy**	Energy on the move, Energy changing form, Energy is conserved
14	**Biology - Adaptations**	Adaptation and Food Chains
15	**Biology - Pollution**	Human and Food Chains, Pollution and Ozone depletion, conservation and energy resources
16	**End of Term Test and Review**	Review lesson of topics covered so far

Term 2	Topic	Details
1	**Chemistry – Acids and Alkalis**	Acids and Alkalis, Is it an acid or an Alkali, The PH Scale
2	**Chemistry - Neutralisation**	Neutralisation, Neutralisation in action, Investigating acids and alkalis
3	**Biology - Variation**	What is a species, Variation in a species, Investigating variation
4	**Biology - Plants**	Classifying plants, vertebrates and invertebrates
5	**Physics - Space**	Day and Night, The starry skies
6	**Physics - Space**	The moving planets, seeing stars and planets
7	**Physics - Space**	The moon and its phase, A revolution in astronomy
8	**Physics - Space**	400 years in astronomy, Journey into space
9	**Chemistry - Geology**	Rocks, minerals and soils, Igneous rocks, Sedimentary rocks, metamorphic rocks
10	**Chemistry - Geology**	Weathering, moving rocks, Fossils
11	**Chemistry - Geology**	The fossil record, The Structure and age of the earth, The geological timescale
12	**Review**	Review Biology
13	**Review**	Review Chemistry
14	**Review**	Review Physics
15	**Review**	End of Academic Year Test
16	**Test Week**	Year 8 Taster Lesson