

KS3 Science Curriculum Plan 2017-18

Science at KS3 aims to allow pupils to:

- develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them
- be equipped with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.

Year 7 – 5 lessons/fortnight	Contents summary
Cells & Reproduction	An overview of the structure and functions of plant & animal cells and the processes involved in reproduction of plants and animals.
Particles, Atoms & Elements	Particle theory, what is an element and what are atoms?
Forces	Different types of forces, what happens when forces are balanced and unbalanced?
Space	Why do we have day & night? What causes the seasons? What is in our solar system? Satellites & Space Exploration.
Variation & Inheritance	Variation within species, the basics of genetics and how characteristics are inherited from parents.
Rocks	An overview of igneous, sedimentary and metamorphic rocks, fossils, transportation & erosion and the rock cycle.
Human Body & Health	What is fitness? The role of the skeleton and muscles, deficiency diseases and staying healthy. Food groups, balanced diet and the processes involved in digestion.
Acids & Alkalis	What are acids and alkalis? What are they used for? What chemical reactions do they undergo?
Electricity & Generation	Building electrical circuits, what are the main components of circuitry and how is electricity generated?
Year 8 – 6 lessons/fortnight	Contents summary
Heat	What is heat and how can it be transferred?
Light and Sound	The properties and behaviour of light and sound waves.
Ecological Relationships	Interactions of organisms, food chains and food webs, adaptations of organisms.
Metals & Metal Reactions	The properties of metals and their relative reactivities. An overview of the chemical reactions of metals.
Photosynthesis & Respiration	An overview of how plants photosynthesise, what respiration is and how the two processes are linked.
Simple Chemical Reactions	An overview of some fundamental chemical reactions including how to test for presence of gases.
Pressure & Moments	The pressure equation, calculating pressure and balancing turning forces.
Compounds & Mixtures	Making & naming compounds, conservation of mass and separation techniques.
Environmental Chemistry	An overview of the chemical processes that are affecting the

and Energy Resources	environment around us as well as an introduction to some alternative methods of energy production.
Sex Education	An introduction to contraceptive methods and sexually transmitted infections.