Y7 Science

SCIENCE AT YARDLEYS
INTENT: Science helps students gain an understanding of the world around them, from the micro-level of particles and atoms to the macro-level of our expanding universe. It encourages students to question and enquire in order to learn more. We want our students to acquire the scientific knowledge and skills to meet their academic, practical and "real life" challenges of the future.
KS3 SCIENCE
KS3 Science will build on the foundations laid down in KS2 Science. By the end of the year students will know more about world around them. They will do this with a mix of practical and theory-based lessons that focus on 'everyday' and interesting phenomena.

YEAR 7

	Forces	Energy	Particles	Chemical Reactions	Inside Cells	Building Blocks of Life
SUBSTANTIVE KNOWLEDGE	This unit is themed around a mission to Mars. Students will learn about - • Forces, measuring forces and interacting forces • Motion and measuring speed	This unit is based around climate change and energy resources. Students will learn about - • Energy Stores and Transfers • Renewable and Non-renewable Energy	In this unit students will learn about – • The Particle Model • States of Matter and Changes of State • Elements, Compounds and Mixtures • Separating Mixtures	In this unit students will learn about – • The Periodic table • Reactants and Products in Chemical Reactions • Examples of reactions including combustion, oxidation and neutralisation	In this unit students will learn about – • Cells and their organelles • Respiration and photosynthesis • Discovery of DNA • Inheritance, variation and natural selection	In this unit students will learn about - • Specialised cells • Discovery of the Microscope • How to use a Microscope • The structure and function of organs • Reproduction
DISCIPLINARY KNOWLEDGE	• Identifying Variables • Testing Hypotheses • Recording and displaying data • Interpreting data • Deriving and using equations • Identify possible errors in investigations • Suggesting improvements to scientific methods	• Identifying Variables • Testing Hypotheses • Recording and displaying data • Interpreting data • Deriving and using equations • Identify possible errors in investigations • Suggesting improvements to scientific methods	• Making Observations • Identifying Variables • Testing Hypotheses • Recording and displaying data • Interpreting data • Identify possible errors in investigations • Suggesting improvements to scientific methods	• Development of Scientific Theories • Making Observations • Identifying Variables • Recording and displaying data • Interpreting data • Identify possible errors in investigations • Suggesting improvements to scientific methods	• Making Observations • Identifying Variables • Recording and displaying data • Interpreting data • Identify possible errors in investigations • Suggesting improvements to scientific methods • Development of Scientific Theories	• Making Observations • Identifying Variables • Recording data • Interpreting data • Identify possible errors in investigations Suggesting improvements to scientific methods

We aim to provide students with a curriculum that educates the whole child, creating responsible and respectful citizens. Through the development of substantive and disciplinary knowledge students are given the tools that allow them to achieve excellence and be ready for life.