

Mulberry Academy Woodside

Science

Curriculum Overview 2025 - 2026

Curriculum intent statement:

Our Science curriculum is driven by **ambition** and the pursuit of **academic excellence** for all students. We provide a **challenging, inclusive, and knowledge-rich** learning experience that inspires curiosity and develops a deep understanding of biology, chemistry, and physics. Students are **empowered** to think critically, apply scientific principles to real-world contexts, and appreciate the role of science in society. Through practical skills, problem-solving, and analytical thinking, we prepare all learners to **achieve** their full **potential** and progress confidently to further study and STEM careers.

KS3		AUTUMN TERM		SPRING TERM		SUMMER TERM	
		TERM 1A	TERM 1B	TERM 2A	TERM 2B	TERM 3A	TERM 3B
YEAR 7	KNOWLEDGE	<ul style="list-style-type: none"> • Microscopes • Animal cells • Plant cells • States of matter • Changes of state • Heating and cooling curves • Contact and non-contact forces • Resultant forces • Balanced and unbalanced forces 	<ul style="list-style-type: none"> • Respiratory system • Digestive system • Aerobic and anaerobic respiration • Atoms, elements, compounds and mixtures • Naming compounds • Periodic table • Forces and impacts on objects • Squashing and stretching • Hooke's law • Transport processes 	<ul style="list-style-type: none"> • Blood and blood vessels • The heart • Gas exchange and diffusion • Pure and impure substances • Solute, solvents and solutions • Factors effecting solubility 	<ul style="list-style-type: none"> • Photosynthesis • Plant adaptations • Carbon cycle • Chromatography • Filtration and crystallisation • Distillation • Gravity and weight • The solar system • Astronomical cycles 	<ul style="list-style-type: none"> • Diet and nutrition • Digestion and enzymes • Specialised cells • Physical and chemical reactions • Metals and oxygen • Metals and acids • Magnetism • Earths magnetism • Electromagnetism 	<ul style="list-style-type: none"> • Muscles • Skeleton • Exercise and asthma • Metals and acids investigation • Reactivity series • Extracting metals • Moments • Pressure • Pressure in gases and liquids
	SKILLS	<p>Practical skills:</p> <ul style="list-style-type: none"> • Lab safety • Identifying risks and hazards • Identifying lab equipment • Writing Hypothesis <p>Mathematical skills:</p> <ul style="list-style-type: none"> • Reading thermometers • Converting units • Equations • Identifying anomalies • Plotting graphs • Identifying and describing trends <p>Literacy Skills:</p> <ul style="list-style-type: none"> • Correct meanings and use of words that are central to 	<p>Practical skills:</p> <ul style="list-style-type: none"> • identifying variables • Measuring lung capacity • Measuring heart rate and breathing rate <p>Mathematical skills:</p> <ul style="list-style-type: none"> • equations • Identifying anomalies • Plotting graphs • Identifying and describing trends <p>Literacy Skills:</p> <ul style="list-style-type: none"> • Correct meanings and use of words that are central to understanding scientific concepts 	<p>Practical skills:</p> <ul style="list-style-type: none"> • Identifying variables • Writing a conclusion <p>Mathematical skills:</p> <ul style="list-style-type: none"> • Calculations and rearranging equations • Identifying anomalies • Drawing graphs • Identifying and describing trends <p>Literacy Skills:</p> <ul style="list-style-type: none"> • Correct meanings and use of words that are central to understanding scientific concepts • Identifying common prefixes 	<p>Practical skills:</p> <ul style="list-style-type: none"> • Lab safety • Identifying risks and hazards • Identifying lab equipment • Writing Hypothesis, method and conclusion <p>Mathematical skills:</p> <ul style="list-style-type: none"> • Calculations • Tabulating results • Drawing graphs • Identifying and describing trends <p>Literacy Skills:</p> <ul style="list-style-type: none"> • Correct meanings and use of words that are central to understanding scientific concepts 	<p>Practical skills:</p> <ul style="list-style-type: none"> • Lab safety • Identifying risks and hazards • Identifying lab equipment • Identifying variables <p>Mathematical skills:</p> <ul style="list-style-type: none"> • collating data • making observations <p>Literacy Skills:</p> <ul style="list-style-type: none"> • Correct meanings and use of words that are central to understanding scientific concepts • Identifying common prefixes 	<p>Practical skills:</p> <ul style="list-style-type: none"> • taking measurements • reading scales <p>Mathematical skills:</p> <ul style="list-style-type: none"> • Calculations • Identifying and describing trends • Converting units <p>Literacy Skills:</p> <ul style="list-style-type: none"> • Correct meanings and use of words that are central to understanding scientific concepts • Identifying common prefixes and suffixes to decode keywords

		understanding scientific concepts • Identifying common prefixes and suffixes to decode keywords	• Identifying common prefixes and suffixes to decode keywords	and suffixes to decode keywords	• Identifying common prefixes and suffixes to decode keywords	and suffixes to decode keywords	
YEAR 8	KNOWLEDGE	Effects of forces on objects: <ul style="list-style-type: none"> • Forces key concepts recap • Squashing and stretching • Hooke's law • Friction and uses • Gravity • Solar system and the moon • Astronomical cycles • Nuclear fusion and fission • Life cycle of a star 	Organisms- Body and function: <ul style="list-style-type: none"> • Diet and digestion • Recap cells and organisation • Digestion • Enzymes in digestion • Muscles • Skeleton • Aerobic and anaerobic respiration • Blood and blood vessels • The heart • Kidneys 	Particles and separating techniques: <ul style="list-style-type: none"> • Recap solubility and solutions • Paper chromatography • Crystallisation • Distillation • Identifying pure substances • Physical properties of metals and non-metals • Polymers • Ceramics and composites 	Energy and waves: <ul style="list-style-type: none"> • Transverse waves • Longitudinal waves • Reflection • Refraction • Lenses • Colour • Auditory range • Detecting sounds • Heat transfers • Thermal conductors and insulators 	Environment: <ul style="list-style-type: none"> • Photosynthesis recap • Specialised plant cells • Food chains and food webs • Energy transfers • Pyramids of biomass and pyramids of number • Natural selection • Biodiversity • Human impacts on biodiversity 	Reactions: <ul style="list-style-type: none"> • Physical and chemical reactions • Exothermic and endothermic reactions • Complete and incomplete combustion • Global warming • Recycling • Water cycle • Greenhouse gases
	SKILLS	Practical skills: <ul style="list-style-type: none"> • Lab safety • Identifying risks and hazards • Identifying lab equipment • Writing Hypothesis, method and conclusion Mathematical skills: <ul style="list-style-type: none"> • Calculations and rearranging equations • Identifying anomalies • Tabulating results • Unit conversions • Drawing graphs 	Practical skills: <ul style="list-style-type: none"> • Lab safety • Identifying risks and hazards • Identifying lab equipment • Writing Hypothesis, method and conclusion Mathematical skills: <ul style="list-style-type: none"> • Dissection • Calculations and rearranging equations • Identifying anomalies • Analysing graphs • Identifying and describing trends 	Practical skills: <ul style="list-style-type: none"> • Lab safety • Identifying risks and hazards • Identifying lab equipment • Writing Hypothesis, method and conclusion Mathematical skills: <ul style="list-style-type: none"> • Calculations and rearranging equations • Identifying anomalies • Drawing graphs • Identifying and describing trends Literacy Skills:	Practical skills: <ul style="list-style-type: none"> • Lab safety • Identifying risks and hazards • Identifying lab equipment • Writing Hypothesis, method and conclusion Mathematical skills: <ul style="list-style-type: none"> • Tabulating results • Identifying anomalies • Drawing graphs • Identifying and describing trends Literacy Skills: <ul style="list-style-type: none"> • Correct meanings and use of words 	Practical skills: <ul style="list-style-type: none"> • Lab safety • Using a microscope • Identifying lab equipment • Writing Hypothesis, method and conclusion Mathematical skills: <ul style="list-style-type: none"> • Calculations • Drawing pyramids graphs • Interpreting graphs • Identifying and describing trends Literacy Skills: <ul style="list-style-type: none"> • Correct meanings and use of words 	Practical skills: <ul style="list-style-type: none"> • Lab safety • Identifying risks and hazards • Identifying lab equipment • Writing Hypothesis, method and conclusion Mathematical skills: <ul style="list-style-type: none"> • word equations and symbol equations • Identifying and describing trends Literacy Skills: <ul style="list-style-type: none"> • Correct meanings and use of words that are central to

		<ul style="list-style-type: none"> Identifying and describing trends Literacy Skills: <ul style="list-style-type: none"> Correct meanings and use of words that are central to understanding scientific concepts Identifying common prefixes and suffixes to decode keywords 	Literacy Skills: <ul style="list-style-type: none"> Correct meanings and use of words that are central to understanding scientific concepts Identifying common prefixes and suffixes to decode keywords 	<ul style="list-style-type: none"> Correct meanings and use of words that are central to understanding scientific concepts Identifying common prefixes and suffixes to decode keywords 	that are central to understanding scientific concepts <ul style="list-style-type: none"> Identifying common prefixes and suffixes to decode keywords 	that are central to understanding scientific concepts <ul style="list-style-type: none"> Identifying common prefixes and suffixes to decode keywords 	understanding scientific concepts <ul style="list-style-type: none"> Identifying common prefixes and suffixes to decode keywords
YEAR 9	KNOWLEDGE	<ul style="list-style-type: none"> Metals and non-metals Atoms and the periodic table Mendeleev and atomic structure 		Key concepts in science <ul style="list-style-type: none"> Microscopes and magnification Plant and animal cells 		Key concepts in science <ul style="list-style-type: none"> Vectors and scalars Speed and velocity 	

	<ul style="list-style-type: none"> • Patterns and predictions in the periodic table • ionic compounds • Reactivity • Displacement • Combustion • Thermal decomposition • Catalysts • Static electricity • Circuits and symbols • Current and potential difference • Resistance • Generating electricity • Magnetism • Reproduction • Adaptations • Biodiversity 	<ul style="list-style-type: none"> • Specialised cells • Enzymes and digestion • Enzyme activity • Transport processes • States of matter • Changes of state • History of the atom • Isotopes • Electron configurations • Ionic bonding • Covalent bonding • Allotropes of carbon • Metallic bonding 	<ul style="list-style-type: none"> • Distance-time graphs • Velocity- time graphs • Newtons laws of motion • Investigating acceleration • Mass and weight • Momentum • Stopping distances
SKILLS	<p>Practical skills:</p> <ul style="list-style-type: none"> • Lab safety • Identifying risks and hazards • Use of a Bunsen burner • Manipulating lab equipment • Planning an experiment • Writing conclusions • Evaluating results <p>Mathematical skills:</p> <ul style="list-style-type: none"> • Calculations and rearranging equations • Using standard form • Significant figures and decimal places • Identifying anomalies • Drawing graphs • Identifying and describing trends <p>Literacy Skills:</p> <ul style="list-style-type: none"> • Correct meanings and use of words that are central to understanding scientific concepts • Identifying common prefixes and suffixes to decode keywords <p>Career Links: Understanding how science is linked to various</p>	<p>Practical skills:</p> <ul style="list-style-type: none"> • Lab safety • Identifying and managing biological hazards • Use of a microscope • Manipulating lab equipment <p>Mathematical skills:</p> <ul style="list-style-type: none"> • Calculations and rearranging equations • Using standard form • Significant figures and decimal places • Identifying anomalies • Drawing graphs • Identifying and describing trends <p>Literacy Skills:</p> <ul style="list-style-type: none"> • Correct meanings and use of words that are central to understanding scientific concepts • Identifying common prefixes and suffixes to decode keywords <p>Career Links: Understanding how science is linked to various</p>	<p>Practical skills:</p> <ul style="list-style-type: none"> • Lab safety • Identifying risks and hazards • Manipulating lab equipment- including building electrical circuits • Planning an experiment • Writing conclusions <p>Mathematical skills:</p> <ul style="list-style-type: none"> • Calculations and rearranging equations • Using standard form • Significant figures and decimal places • Identifying anomalies • Drawing graphs • Identifying and describing trends <p>Literacy Skills:</p> <ul style="list-style-type: none"> • Correct meanings and use of words that are central to understanding scientific concepts • Identifying common prefixes and suffixes to decode keywords <p>Career Links: Understanding how science is linked to various careers now and in the future</p>