



Curriculum Intent Statement for Science

At Chase Terrace Academy we aspire for all of our students to achieve greater things than they ever thought possible.

We pride ourselves on being a warm and welcoming school that places community at the heart of everything we do. Our ambitious curriculum is enriching and inclusive, providing challenge and breadth for all. This empowers our students to become compassionate, confident and creative individuals who are resilient, respectful and equipped with a desire to take up a fulfilling role in society and the wider world.

Through the study of science we want to encourage our students to understand and value different cultures, countries and people as well as having an appreciation of how the world works and science in the media which can often be misinterpreted.

We aspire for our students to retain a sense of wonder about our vast and complex Universe. Future generations should be aware of how scientific and technological progress is changing the world, and to help the wider public understand it. It is important to ensure that these changes are heading in the right direction. In a democratic society, this means that everyone needs to have a basic understanding of science to make informed, responsible decisions about the future.

We put student-teacher relationships at the heart of what we do and therefore we start our lessons promptly and greet students at the door when they arrive and when they leave.

We provide the opportunity for those students with a particular passion for science to study single sciences. This gives students the scope to further broaden and deepen their scientific knowledge in preparation for study at A-level and beyond.

Curriculum Implementation Plan

Science Overall Big Picture			
	Term 1	Term 2	Term 3
Year 7	<ul style="list-style-type: none"> • Cells • Particles & the Particle Model of Matter • Energy 	<ul style="list-style-type: none"> • Reproduction • Separating Mixtures • Electricity & Magnetism 	<ul style="list-style-type: none"> • Ecosystems • Acids & Bases • Space & Waves • End of year exam
Year 8	<ul style="list-style-type: none"> • Nutrition & Digestion • Atoms, Elements (including Periodic Table) & Compounds • Forces 	<ul style="list-style-type: none"> • Respiration • Chemical Reactions • Light & Sound 	<ul style="list-style-type: none"> • Plants & Photosynthesis • Chemical Quantities • Pressure & Speed • End of year exam
Year 9	<ul style="list-style-type: none"> • Maths skills & science skills 1 • Cells • Atomic structure & Periodic Table • Particle model of matter 	<ul style="list-style-type: none"> • Maths skills & science skills 2 • Transport in cells • Energy changes • Atomic structure & radiation (physics) • Practical investigations 	
Year 10	Biology <ul style="list-style-type: none"> • Organisation • Infection & Response Chemistry <ul style="list-style-type: none"> • Structure & bonding • Quantitative chemistry Physics <ul style="list-style-type: none"> • Particle model of matter • Atomic structure & radiation 	Biology <ul style="list-style-type: none"> • Bioenergetics • Homeostasis Chemistry <ul style="list-style-type: none"> • Chemical changes Physics <ul style="list-style-type: none"> • Energy 	Biology <ul style="list-style-type: none"> • Homeostasis Chemistry <ul style="list-style-type: none"> • Energy changes • Rate & extent of chemical change 2 (equilibria) Physics <ul style="list-style-type: none"> • Forces 1
Year 11	Biology <ul style="list-style-type: none"> • Inheritance • Ecology Chemistry	Biology <ul style="list-style-type: none"> • Ecology • Revision Chemistry	Revision and exam preparation



	<ul style="list-style-type: none"> • Extent of chemical change • Organic • Analysis • Using resources Physics <ul style="list-style-type: none"> • Forces (part 2) • Waves • Electromagnetism • Static electricity (single only) • Space (single only) 	<ul style="list-style-type: none"> • Using resources • Atmosphere revision Physics <ul style="list-style-type: none"> • Electromagnetism • Space (single science only) • Maths skills & science terms • Revision and exam preparation after half term 	
--	---	---	--

Curriculum Implementation Plan

Biology			
	Term 1	Term 2	Term 3
Year 7	<ul style="list-style-type: none"> • Intro into Science • Cells 	<ul style="list-style-type: none"> • Reproduction 	<ul style="list-style-type: none"> • Ecosystems
Year 8	<ul style="list-style-type: none"> • Nutrition & Digestion 	<ul style="list-style-type: none"> • Respiration 	<ul style="list-style-type: none"> • Plants & Photosynthesis
Year 9	<ul style="list-style-type: none"> • Maths skills & science skills 1 • Cells 	<ul style="list-style-type: none"> • Maths skills & science skills 2 • Transport in cells 	
Year 10	<ul style="list-style-type: none"> • Organisation • Infection & Response 	<ul style="list-style-type: none"> • Bioenergetics • Homeostasis 1 	<ul style="list-style-type: none"> • Homeostasis 2
Year 11	<ul style="list-style-type: none"> • Inheritance • Ecology 	<ul style="list-style-type: none"> • Ecology • Revision 	<ul style="list-style-type: none"> • Revision and exam preparation
Year 12	<ul style="list-style-type: none"> • Monomers and polymers • Carbohydrates • Lipids • Proteins and Enzymes • Nucleic acid • ATP, water and inorganic ions • Cell structure 	<ul style="list-style-type: none"> • Transport across cell membranes • Surface area: volume ratio • Gas exchange • Mass transport • Cell recognition and the immune system • DNA, gene and chromosomes 	<ul style="list-style-type: none"> • Mass transport • Species and taxonomy • Biodiversity within a community • Investigating diversity • Photosynthesis (A-Level)



	<ul style="list-style-type: none">• All cells arise from other cells• Transport across cell membranes	<ul style="list-style-type: none">• DNA and protein synthesis• Genetic diversity and adaptations• Species and taxonomy	
Year 13	<ul style="list-style-type: none">• Energy in ecosystems• Inheritance• Populations and evolution• Populations and ecosystems• Photosynthesis and respiration• Response to stimuli• Nervous coordination and muscles	<ul style="list-style-type: none">• Gene expression• DNA technology• Nervous coordination and muscles• Skeletal muscle• Homeostasis	<ul style="list-style-type: none">• Examination preparation• Essay writing