

DAGENHAM PARK SUBJECT CURRICULUM

Subject	Combined Science (2 GCSEs)
Year Group	10
Overview	<p>GCSE Combined Science offers students the chance to gain a good understanding of:</p> <ul style="list-style-type: none"> • The structure and replication of cells. • The response of the body to infectious disease. • How the body maintains conditions inside it • Genetic engineering. • Inheritance in animals and plants. • The nature of substances and how they react together. • The ways that atoms bond. • The rate of chemical change. • How chemistry is used in business and industry. • How our use of raw materials in fuels and manufacturing can affect the global and local environment. • The use and transfer of energy. • Electricity and its uses. • Forces and their effects. • The particle model of matter. • Waves and electromagnetic radiation. <p>The specification is designed to give students the tools and concepts they need to be able to construct a scientific approach to solving problems. Students will learn to ask and answer questions about the fundamental laws that govern natural phenomena. This is done by integrating the 'How Science Works' approach throughout the specification. The students need to carry out required practicals during class time to show that they can manipulate equipment, process results, formulate conclusions and evaluate their work.</p>
Autumn Half term 1	<p>Biology Unit 2: Organisation 4.2.1 Principles of organisation 4.2.2 Animal tissues, organs and organ systems 4.2.3 Plant tissues, organs and systems</p> <p>Chemistry Unit 3: Quantitative chemistry 5.3.1 Chemical measurements 5.3.2 Use of amount of substance in relation to masses of pure substances</p> <p>Physics Unit 2: Electricity 6.2.1 Current, potential difference and resistance</p>

	<p>6.2.2 Series and parallel circuits 6.2.3 Domestic uses and safety</p>
<p>Autumn Half term 2</p>	<p>Biology Unit 3 – Infection and response 4.3.1 Communicable diseases</p> <p>Chemistry unit 4: Chemical Changes 5.4.1 Reactivity of metals 5.4.2 Reactions of acids 5.4.3 Electrolysis</p> <p>Physics Unit 3: Particle model of matter 6.3.1 Changes of state and the particle model 6.3.2 Internal energy and energy transfers 6.3.3 Particle model and pressure</p>
<p>Spring Half term 1</p>	<p>Biology Unit 4: Bioenergetics 4.4.1 Photosynthesis 4.4.2 Respiration</p> <p>Chemistry Unit 5: Energy changes 5.5.1 Exothermic and endothermic reactions</p> <p>Physics Unit 4: Atomic Structure 6.4.1 Atoms and Isotopes 6.4.2 Atoms and nuclear radiation</p>
<p>Spring Half term 2</p>	<p>Biology Unit 5: Homeostasis and response 4.5.1 Homeostasis 4.5.2 The human nervous system 4.5.3 Human endocrine system</p> <p>Chemistry Unit 6: The rate and extent of chemical change 5.6.1 Rate of reaction 5.6.2 Reversible reactions and dynamic equilibrium</p> <p>Physics Unit 5: Forces 6.5.1 Forces and their interactions 6.5.2 Work done and energy transfer 6.5.3 Forces and elasticity 6.5.4 Forces and motion 6.5.5 Momentum</p>

<p>Summer Half term 1</p>	<p>Biology Unit 5: Homeostasis and response 4.5.1 Homeostasis 4.5.2 The human nervous system 4.5.3 Human endocrine system</p> <p>Chemistry Unit 7: Organic Chemistry 5.7.1 Carbon compounds as fuels and feedstock</p>
<p>Summer Half term 2</p>	<p>Biology Unit 6: Inheritance, variation and evolution 4.6.1 Reproduction 4.6.2 Variation and evolution 4.6.3 The development of understanding of genetics and evolution 4.6.4 Classification of living organisms</p> <p>Chemistry Unit 8: Chemical analysis 5.8.1 Purity, formulations and chromatography 5.8.2 Identification of common gases</p>
<p>Homework</p>	<p>Homework Graded tasks. Revision packs. Exam booklets.</p>
<p>Useful Resources</p>	<p>Useful Resources/websites Study packs on every section are on the learning platform. CGP Revision guides. School's Share point. BBC Bitesize. Seneca</p>