



CHORLTON HIGH SCHOOL: CURRICULUM

CHS Curriculum Intent

SUCCESSFUL: Learners who gain deep and powerful knowledge in preparation for life; combining academic rigour, curiosity and creative flair.

CREATIVE: Learners who are imaginative, optimistic and inventive; finding their voice to become effective communicators prepared for lifelong adaptability

HAPPY: Learners who are confident, resilient, well-rounded citizens; they understand the world's communities and are ready to discover their place in it.

CHS Curriculum Area Framework for Learning – Year 11

SUBJECT	Science
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Year Group	11 JSA 201920					
Rationale/ Narrative	<p>In their final year of study, Year 11 students will develop a deep understanding of scientific ideas making explicit links between topics studied. They will develop independence and gain confidence in working and thinking scientifically. This includes reading scientific content from a range of sources, writing up practical investigations as well as working safely to collect data. Throughout this year, students will be exposed and introduced to the expectations of further study of science so that they can make informed decisions linked to career choices for the future.</p>					
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
KNOWLEDGE (Combined Science)	<p>Combined Biology –</p> <p>Homeostasis Blood sugar Control and Co-ordination Nervous system Diffusion Endocrine system Hormones in reproduction Infertility treatment EOT Contraception Variation Inheritance Genetic cross diagrams Sec determination Inherited disorders Meiosis Mitosis</p>	<p>Selective breeding Genetic engineering Factors affecting health Lifestyle choices Cancer EOT</p> <p>Combined Chemistry –</p> <p>Reversible reactions Energy changes in reversible reactions Equilibrium Rates of reaction 1 Rates of reaction 2 Rates of reaction 3 Rates of reaction graph skills College Entry Exams</p>	<p>Combined Physics</p> <p>Permanent and induced magnets Electromagnet investigation Electromagnetic induction The motor effect Fleming’s left hand rule Properties of waves Transverse and longitudinal Types and uses of EM waves Speed of EM waves EOT</p>	<p>Students will complete focused revision on a class-by class basis.</p> <p>This will involve: - Revisiting content from Biology, Chemistry and Physics units - Reflecting on college entry exams using personal learning checklists - Regular completion of past papers either individually, in pairs or through teacher modelling - Revision skills and exam technique will be explicitly taught</p>	<p>Students will complete focused revision on a class-by class basis.</p> <p>This will involve: - Revisiting content from Biology, Chemistry and Physics units - Reflecting on college entry exams using personal learning checklists - Regular completion of past papers either individually, in pairs or through teacher modelling - Revision skills and exam technique will be explicitly taught</p>	
SKILLS	<p>Evaluate information around the relationship between obesity and diabetes, and make recommendations taking into account social and ethical issues.</p> <p>Interpret and explain simple diagrams of negative</p>	<p>Interpret information about genetic engineering techniques and to make informed judgements about issues concerning cloning and genetic engineering, including GM crops.</p> <p>Drawing and interpreting</p>	<p>Application of the equations: Force = magnetic flux density × current × length</p> <p>Period= 1/frequency</p> <p>(both on Physics equations sheet)</p>	<p>Alongside revision of key content, the following scientific skills will be consolidated:</p> <p>- Use of scientific models - Evaluation of ethical, environmental, economic and social issues linked to scientific developments</p>	<p>Alongside revision of key content, the following scientific skills will be consolidated:</p> <p>- Use of scientific models - Evaluation of ethical, environmental, economic and social issues linked to scientific developments</p>	



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	<p>feedback control.</p> <p>Show why issues around contraception cannot be answered by science alone.</p> <p>Model behaviour of chromosomes</p> <p>Use probability, proportion and ratios in relation to inheritance</p>	<p>appropriate graphs from data to determine rate of reaction.</p> <p>Plot two variables from experimental or other data.</p> <p>Determine the slope and intercept of a linear graph.</p> <p>Draw and use the slope of a tangent to a curve as a measure of rate of change.</p>	<p>Recall and application of the equation: Wave speed= frequency x wavelength</p>	<ul style="list-style-type: none"> - Plan and devise scientific experiments to test hypotheses - Make and record observations and measurements - Present data using appropriate methods - Carry out statistical analysis - Use scientific terminology, vocabulary and definitions - Use standard SI units - Interconvert units - Use an appropriate number of significant figures 	<ul style="list-style-type: none"> - Plan and devise scientific experiments to test hypotheses - Make and record observations and measurements - Present data using appropriate methods - Carry out statistical analysis - Use scientific terminology, vocabulary and definitions - Use standard SI units - Interconvert units - Use an appropriate number of significant figures 	
ASSESSMENTS	<p>Required practical – reaction time</p>	<p>College Entry 1</p> <p>College Entry 2</p> <p>College Entry 3</p>	<p>Pre public examination 1</p> <p>Pre public examination 2</p> <p>Pre public examination 3</p>			