

Year: 7

Subject: Science

<p>Overview of the year:</p> <p>Students will be covering the foundations in Biology, Chemistry and Physics. There is now a stronger emphasis on Maths and literacy in Secondary Science, therefore our scheme of works is focused on developing greater clarity and coherence when working with mathematical ideas, language and procedures in science.</p> <p>Students will be summatively assessed six times a year (one Key Assessed Piece, KAP, per half-term)</p> <p>The practical investigations at the end of the year are used to effectively develop confidence in practical techniques and familiarity with scientific equipment although students will have a full range of practical experiences throughout the year.</p>	<p>Ways to consolidate and extend learning in Science:</p> <ul style="list-style-type: none"> • Purchase KS3 Science, Complete Study and Practice from CGP (reference SHS33) at a reduced cost from the science technicians. This will cover all three years of Key Stage 3 • SAM learning to complete activities at their own pace. It is recommended that students repeat activities until they have a good understanding of that topic • Use of KS3 Science – BBC Bitesize resources • Homework, set on SMHW at regular intervals, will be self-assessed at the beginning of the lesson • Students are encouraged to make revision cards and question cards for each topic to aid in their revision. They will be trained how to make science revision cards at the start of the year • Visit museums and exhibitions such as: Science Museum, Welcome Trust Collection, Natural History Museum, London Zoo, Horniman Museum
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Half term	Content	Skills to be developed	Key Assessment Piece (KAP) <i>(Please note these dates may be subject to change)</i>
1	Becoming a scientist 7G - Particle model 7I - Energy	Identifying variables Drawing charts and linear graphs Hypothesis and theories Recording and presenting scientific data	KAP 1 , October
2	7A - Cells 7H - Atoms, elements and compounds 7J – Electricity, Revision for the Block Test	Preparing a specimen Using a light microscope Making comparisons and ratios	KAP 2, Block Test , November
3	7B – Reproduction 7E – Mixtures and separation 7L - Sound	Identifying steps used in scientific method Writing a scientific method Identifying relationships using scatter graphs	KAP 3, Block Test , February
4	7C – Muscles 7F – Acids and Alkalis, Revision for the Block Test	Identifying scientific, non-scientific and ethical questions Identifying risks and how to reduce them	KAP 4 , end of March

HIGHGATE WOOD SCHOOL: CURRICULUM MAP FOR KEY STAGE 3

5	7F – Acids and Alkalis 7D – Ecosystems 7K - Forces	Rearranging equations Using SI Units Converting units	KAP 5 End of year assessment , end of May
6	7K – Forces Revision for End of Year assessment Maths Skills Development Practical Skills Development	Drawing conclusions from graphs Enhancing revision skills and exam techniques Evaluating an investigation	KAP 6 , end of June

Year: 8

Subject: Science

<p>Overview of the year:</p> <p>Students will be building upon knowledge learnt in year 7. There is now a stronger emphasis on Maths and literacy in Secondary Science, therefore our scheme of works is focused on developing greater clarity and coherence when working with mathematical ideas, language and procedures in science.</p> <p>Students will be summatively assessed six times a year (one Key Assessed Piece, KAP, per half-term)</p> <p>The practical investigations at the end of the year are used to effectively develop confidence in practical techniques and familiarity with scientific equipment although students will have a full range of practical experiences throughout the year.</p>	<p>Ways to consolidate and extend learning in Science:</p> <ul style="list-style-type: none"> • Purchase KS3 Science, Complete Study and Practice from CGP (reference SHS33) at a reduced cost from the science technicians. This will cover Y8 and Y9 of Key Stage 3 • SAM learning to complete activities at their own pace. It is recommended that students repeat activities until they have a good understanding of that topic • Use of KS3 Science – BBC Bitesize resources • Homework, set on SMHW at regular intervals, will be self-assessed at the beginning of the lesson • Students are encouraged to make revision cards and question cards for each topic to aid in their revision. They will be trained how to make science revision cards at the start of the year • Visit museums and exhibitions such as: Science Museum, Welcome Trust Collection, Natural History Museum, London Zoo, Horniman Museum
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Half term	Content	Skills to be developed	Key Assessment Piece (KAP) <i>(Please note these dates may be subject to change)</i>
1	8F – Periodic Table 8L – Earth & Space 8C – Breathing & respiration	Anomalous results Making comparisons Improving accuracy and reliability	KAP 1 , September
2	8C – Breathing & respiration, 8G – Metals & their Uses 8K – Energy Transfers 8A – Food & Nutrition, Revision for the Block Test	Surface area calculation Explaining how to avoid systematic and random errors	KAP 2 Block Test , end of October
3	8A – Food & Nutrition 8E – Combustion 8I – Fluids	Writing a scientific method Means and ranges Cause and effect	KAP 3 Block Test , February
4	8D – Unicellular Organisms 8H – Rocks, Revision for the Block Test	Drawing pie charts Accuracy and precision	KAP 4 , end of March

HIGHGATE WOOD SCHOOL: CURRICULUM MAP FOR KEY STAGE 3

5	8J – Light 8B – Plants	Random and systematic errors Making comparisons using percentages and ratios Scientific arguments	KAP 5 End of Year Assessment May
6	8B – Plants Revision for End of Year assessment Math skills development Practical Investigations	Drawing conclusions from graphs Enhancing revision skills and exam techniques Evaluating an investigation	KAP 6 June

Year: 9

Subject: Science

<p>Overview of the year:</p> <p>The final year of key stage 3 will be developing ideas around Evolution and how genes affect organisms, Making Materials and Electromagnetism. There is now a stronger emphasis on Maths and literacy in Secondary Science, therefore our scheme of works is focused on developing greater clarity and coherence when working with mathematical ideas, language and procedures in science.</p> <p>Students will be summatively assessed six times a year (one Key Assessed Piece, KAP, per half-term)</p> <p>The GCSE course content will be started in March 2020 when the end of year assessment has taken place.</p>	<p>Ways to consolidate and extend learning in Science:</p> <ul style="list-style-type: none"> • Purchase KS3 Science, Complete Study and Practice from CGP (reference SHS33) at a reduced cost from the science technicians. This will cover Y9 content taught until February • SAM learning to complete activities at their own pace. It is recommended that students repeat activities until they have a good understanding of that topic • Use of KS3 Science – BBC Bitesize resources • Homework, set on SMHW at regular intervals, will be self-assessed at the beginning of the lesson • Students are encouraged to make revision cards and question cards for each topic to aid in their revision. • Visit museums and exhibitions such as: Science Museum, Welcome Trust Collection, Natural History Museum, London Zoo, Horniman Museum
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Half term	Content	Skills to be developed	Key Assessment Piece (KAP) <i>(Please note these dates may be subject to change)</i>
1	9F – Reactivity 9I – Forces and Motion 9A – Genetics and evolution	Working out the percentage loss or gain in mass Using key words to write explanations Balancing equations	KAP 1 , October
2	9E – Making materials 9J – Force fields and Electromagnets	Explaining advantages and disadvantages of peer review Rounding numbers to different decimal places and significant figures	KAP 2 Block Test (assessment on Reactivity, Forces & Motion, Genetics & Evolution, and Making materials). December
3	9J – Force fields and Electromagnets 9B – Plant growth	Bias and validity Explain how something is valid (eg experimental results) Enhancing revision skills and exam techniques	Activities to prepare students for EoY assessment
4	Starts GCSE syllabus BI Cell organisation CI Atomic Structure Revision for End of KS3 Assessment	Preparing a specimen Calculating magnification Using atomic number and mass numbers of familiar atoms to determine the number of each subatomic particle.	KAP 3 and KAP 4 End of KS3 exam (2 papers of equal length) March 2020

HIGHGATE WOOD SCHOOL: CURRICULUM MAP FOR KEY STAGE 3

5	C1 Atomic Structure B2 Cell division P1 Conservation & dissipation of energy	Using chemical symbols and formulae to represent elements and compounds Converting units Rearranging equations	KAP 5 , GCSE exam style questions on selected units (students will be informed in advance), May
6	C2 Periodic table P2 Energy transfers by heating	Identifying trends in properties and reactivity Making predictions about electronic structure and reactions of elements Measuring the specific heat capacity of a material and find a mean value	KAP 6 , GCSE exam style questions on selected units (students will be informed in advance), end of June