CURRICULUM MAP

Term Autumn 12 weeks	A Level Biology Year 12
Literacy foci Reading skills Terminology and vocabulary Writing skills Numeracy Graph skills Calculations STATs tests Hardy Weinberg Microscopy Homework Exam style questions Revision of content Revisiting, revising, remembering opportunities Exam style questions Flip learning Required practical's Kerboodle Kahoot of key words and terms Additional support Differentiated online work 1-1 Intervention Tiers exam style questions Scaffolded classwork tasks PR support lessons Study skills sessions Working scientifically skills Assessments Year12 Transition Work Year 12 Assessment 1 SIMS Data drop: Monday 12th Oct Year 12 EOC Test/EOC HWK Tracking on Pupil progress Blended learning for students that are self-isolating to reduce knowledge gap.	**Section 1 Biological molecules and Section 2 cells, Section 3 Organisms exchange and substances with their environment** **Enrichment/life and work skills:** **Debating** **Public speaking** • Opportunities to debate topical issues in Biology **Required practical's** • Practical's will continue to take place. **Group work - pair and share, peer assessment, creating revision resources, designing experiments** **Analysis** **Research skills** **Communication** **Assessments:** **Section 1, 2 and 3 assessment exam style questions, short and long answered questions.** Critical analysis of given experimental data. Feedback targeted to individual learners Peer assessment **SMSC Opportunities: The Advanced Biology** course continues to develop a pupils ability to make judgements and make reasoned opinions built on knowledge gained at foundation and mastery. **Each assessment must cover** AO1: Demonstrate knowledge and understanding of scientific ideas, processes AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures. AO3: Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues. **Practical assessment:** Practical's will resume and take place Independent thinking Use and application of scientific methods and practices Numeracy and the application of mathematical concepts in a practical context understand how to use a wide range of experimental and practical Instruments and equipment **Extra Curricular opportunities and trips: TBC** • **Science lectures at Brunel University** • **Bioscience Lectures** • **Future scientists virtual Science Club** • **Future Learn resource sharing on Science Club**

Term Spring 10 weeks	A Level Biology Year 12
Literacy foci Reading skills Terminology and vocabulary Writing skills Numeracy Graph skills Calculations STATs tests Hardy Weinberg Heart rate and lung volume Rearranging equations Homework Exam style questions Revision of content Revisiting, revising, remembering opportunities Exam style questions Flip learning Required practical's Kerboodle Kahoot of key words and terms Additional support Differentiated online work 1-1 Intervention Tiers exam style questions Scaffolded classwork tasks PR support lessons Study skills sessions Working scientifically skills schemes to Assessments Year 12 Assessment 2 SIMS Data drop: Friday 19th March Year 12 EOC Test/EOC HWK Tracking on Pupil progress Blended learning for students that are self-isolating to reduce the knowledge gap.	**Section 2 Cells and section 3 Organisms exchange and substances with their environment and section 4 genetic information, variation and relationships between organisms** **Enrichment/life and work skills:** **Debating** **Public speaking** • We will provide students with opportunities within the school. (assembly presentations current science news) **Required practical's** • Practical's will continue to take place **Group work: pair and share, peer assessment, creating revision resources, designing experiments** **Analysis** **Research skills** **Communication** **Assessments:** **Section 2, 3 and 4 assessment exam style questions, short and long answered questions.** critical analysis of given experimental data. Peer assessed. **SMSC Opportunities:** Pupils develop the ability to discuss social issues for example, the global impact of malaria and HIV; the use of vaccination programmes; the effects of smoking. Student's will be able to apply and incorporate the knowledge developed in this section to the current Covid-19 pandemic. **Each assessment must cover** AO1: Demonstrate knowledge and understanding of scientific ideas, processes AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures. AO3: Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues. **Practical assessment:** Practical's will resume and take place Independent thinking Use and application of scientific methods and practices Numeracy and the application of mathematical concepts in a practical context understand how to use a wide range of experimental and practical Instruments and equipment **Extra Curricular opportunities and trips: TBC** • **Science lectures at Brunel University** • **Bioengineering Project** • **Bioscience Lectures** • **Research skill to include Harvard referencing** • **Participate and leading celebration of British Science week at Uxbridge High School .** • **Open Day's at Universities** • **Future scientists virtual Science Club** • **Future Learn resource sharing on Science Club**

Term Summer 14 weeks	A Level Biology Year 12
Literacy foci Reading skills Terminology and vocabulary Writing skills Past papers Numeracy Graph skills Calculations STATs tests Hardy Weinberg Redox reactions Standard deviation Species diversity index Rf values Homework Exam style questions Revision of content Revisiting, revising, remembering opportunities Exam style questions Flip learning Required practicals' Kerboodle Kahoot of key words and terms Additional support Differentiated online work 1-1 Intervention Tiers exam style questions Scaffolded classwork tasks PR support lessons Study skills sessions Working scientifically skills schemes to Assessments Year 12 PPE Year 12 EOC Test/EOC HWK Tracking on Pupil progress Blended learning for students that are self-isolating to reduce the knowledge gap.	**Section 3 cells Organisms exchange and substances with their environment and section 4 genetic information, variation and relationships between organisms** **Enrichment/life and work skills:** **Debating** **Public speaking** • We will provide students with opportunities within the school. (assembly presentations current science developments) **Required practical's** • Practical's will continue to take place **Group work: pair and share, peer assessment, creating revision resources, designing experiments** **Analysis** **Research skills** **Communication** **Assessments:** **Section 3 & 4 assessment exam style questions, short and long answered questions.** critical analysis of given experimental data. **Each assessment must cover** AO1: Demonstrate knowledge and understanding of scientific ideas, processes AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures. AO3: Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues. Feedback targeted to individual learners Peer assessment **SMSC Opportunities:** Animal and Human Behaviour is discussed how the links between a range of human behaviours and the dopamine receptor may contribute to the understanding of human behaviour. Thus social understanding maybe enhanced. **Practical assessment:** Practical's will take place Independent thinking Use and application of scientific methods and practices Numeracy and the application of mathematical concepts in a practical context understand how to use a wide range of experimental and practical Instruments and equipment **Extra Curricular opportunities and trips: TBC** • **Work experience placement in Hillingdon Hospital** • **External Doctors/ cardiologist lectures** • **Work experience** • **Summer Schools at Universities** • **CERN visit –Geneva, July-working of the Hadron Collider and meet with scientists involved in the world's biggest experiment**

The progressive … racy, life skills and enrichment'

CURRICULUM MAP

Term Autumn 12 weeks	A Level Biology Year 13
Literacy foci Reading skills Terminology and vocabulary Writing skills **Numeracy** Graph skills Calculations STATs tests Hardy Weinberg Redox reactions Standard deviation Species diversity index Range and error bars **Homework** Exam style questions Revision of content **Revisiting, revising, remembering opportunities** Exam style questions Flip learning Required practicals' Kerboodle Kahoot of key words and terms **Additional support** Differentiated online work 1-1 Intervention Tiers exam style questions Scaffolded classwork tasks PR support lessons Study skills sessions Working scientifically skills **Assessments** Year 13 Transition Work Year 13 Assessment 1 SIMS Data drop: Friday 23rd October Year 13 PPE 1 SIMS Data drop: Friday 18th December, Year 13 EOC Test/EOC HWK Tracking on Pupil progress Blended learning for students that are self-isolating to reduce knowledge gap.	**Section 4 genetic information, variation and relationships and Section 7 Genetics, populations, evolution and ecosystems between organisms and** **Enrichment/life and work skills:** **Debating** **Public speaking** • We will provide students with opportunities within the school. **Required practical's** • Practical's will continue to take place **Group work: pair and share, peer assessment, creating revision resources, designing experiments** **Analysis** **Research skills and scientific enquiry** **Communication** **Assessments:** Section 4 & 5 assessment exam style questions, short and long answered questions. critical analysis of given experimental data. **Each assessment must cover** AO1: Demonstrate knowledge and understanding of scientific ideas, processes AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures. AO3: Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues. **SMSC Opportunities:** Biotechnology and Gene Technology provide ample scope for moral and social considerations for example the use of microorganisms in food and drug production; cloning of animals for human advantage; gene therapy; and the ethical concerns raised by genetic manipulation of humans, animals, plants and microorganisms. **Practical assessment:** Practical's take place Independent thinking Use and application of scientific methods and practices Numeracy and the application of mathematical concepts in a practical context understand how to use a wide range of experimental and practical Instruments and equipment **Extra Curricular opportunities and trips:** • **Bioscience Lectures** • **Work experience placement in Hillingdon Hospital** • **Future scientists virtual Science Club** • **Future Learn resource sharing on Science Club**

Term Spring 10 weeks	A Level Biology Year 13
Literacy foci Reading skills Terminology and vocabulary Writing skills **Numeracy** Graph skills Calculations STATs tests Hardy Weinberg Heart rate and lung volume Rearranging equations % cover and change Chi-squared T-test Correlation coefficient **Homework** Exam style questions Revision of content **Revisiting, revising, remembering opportunities** Exam style questions Flip learning Required practicals' Kerboodle Kahoot of key words and terms **Additional support** Differentiated online work 1-1 Intervention Tiers exam style questions Scaffolded classwork tasks PR support lessons Study skills sessions Working scientifically skills **Assessments** Year 13 PPE 2 SIMS Data drop: Friday 19th March Year 13 EOC Test/EOC HWK Tracking on Pupil progress Blended learning for students that are self-isolating to reduce knowledge gap.	**Section 6 Organisms respond to changes in their environment and Section 7 Genetics, populations, evolution and ecosystems** **Enrichment/life and work skills:** **Debating** **Public speaking** • We will provide students with opportunities within the school. **Required practical's** • Practical's will continue to take place • **Group work: pair and share, peer assessment, creating revision resources, designing experiments** **Analysis** **Research skills and scientific enquiry** **Communication** **Assessments:** **Section 6 & 7 assessment exam style questions, short and long answered questions.** critical analysis of given experimental data. **Each assessment must cover** AO1: Demonstrate knowledge and understanding of scientific ideas, processes AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures. AO3: Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues. **SMSC Opportunities:** The causes of variety in human (and other) populations is studied in Meiosis and Variation. Thus an opportunity to reflect on the reasonableness of tolerance of all peoples is provided. When considering the environment the use of further natural resources and its effect on future generations is an important moral consideration. **Practical assessment:** Practical's take place Independent thinking Use and application of scientific methods and practices Numeracy and the application of mathematical concepts in a practical context understand how to use a wide range of experimental and practical Instruments and equipment **Extra Curricular opportunities and trips:** • **Bioscience Lectures** • **Work experience placement in Hillingdon Hospital** • **Future scientists virtual Science Club** • **Future Learn resource sharing on Science Club**

Term Summer 14 weeks	A Level Biology Year 13
Literacy foci Reading skills Terminology and vocabulary Writing skills Essay writing Planning essays Past papers **Numeracy** Graph skills Calculations STATs tests Hardy Weinberg Redox reactions Standard deviation Species diversity index % cover and change Chi-squared T-test Correlation coefficient Probability **Homework** Exam style questions Revision of content **Revisiting, revising, remembering opportunities** Exam style questions Flip learning Required practicals' Kerboodle Kahoot of key words and terms **Additional support** Differentiated online work 1-1 Intervention Tiers exam style questions Scaffolded classwork tasks PR support lessons Study skills sessions Working scientifically skills **Assessments** Year 13 Final SIMS Data drop: Fri 14th May Tracking on Pupil progress Blended learning for students that are self-isolating to reduce knowledge gap	**Section 7 Genetics, populations, evolution and ecosystems And Section 8 The control of gene expression and Essay writing** **Enrichment/life and work skills:** **Debating** **Public speaking** • . We will provide students with opportunities within the school. **Required practical's** • Practical's will continue to take place • **Group work:pair and share, peer assessment, creating revision resources, designing experiments** **Analysis** **Research skills Tracking on Pupil progress** **Communication** **Assessments:** **Section 8 assessment exam style questions, short and long answered questions and drafting essays in timed conditions. The essay includes** one essay from a choice of two titles. critical analysis of given experimental data. **Each assessment must cover** AO1: Demonstrate knowledge and understanding of scientific ideas, processes AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures. AO3: Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues. **SMSC Opportunities:** Many aspects of biology can be used to draw attention to matters human significance for example, cooperation between cells, organs and organ systems. Fair testing in practical's – discussions re balance and non-biased. Students receive information which enables them to form their own opinions. Referencing work. Pupils are encouraged to consider the benefits and drawbacks of scientific and technological developments and the social responsibility involved. **Practical assessment:** Practical's take place Use and application of scientific methods and practices Numeracy and the application of mathematical concepts in a practical context understand how to use a wide range of experimental and practical Instruments and equipment **Extra Curricular opportunities and trips:** • **Bioscience Lectures** • **Work experience placement in Hillingdon Hospital** • **CERN visit –Geneva in July-working of the Hadron Collider and meet with scientists involved in the world's biggest experiment.**

The progressive, inclusive curriculum 'skills, knowledge and concepts: literacy, life skills and enrichment'