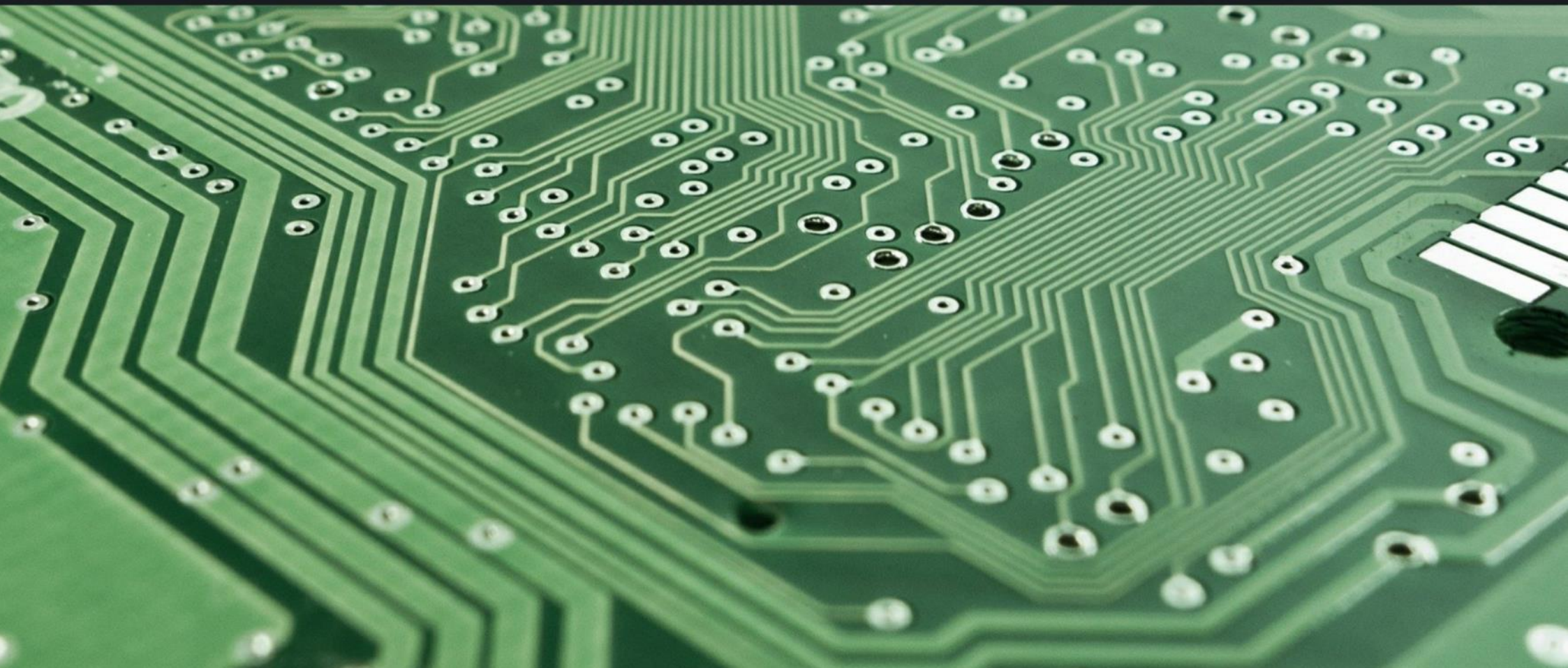
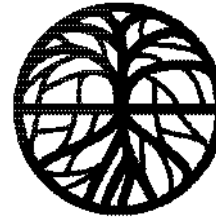


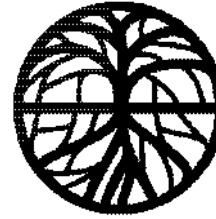
COMPUTING



Curriculum Aims, Delivery & Content



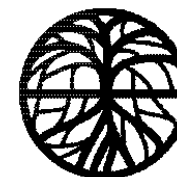
Curriculum Delivery KS3	<p>Each topic is delivered through lesson time with extended learning to reinforce learning, and blended learning to cultivate deeper, richer learning experiences.</p> <p>Classes are taught as part of a rotation. Each rotation is typically 12 weeks, meaning that students will receive approximately 24 lessons.</p>
Curriculum aims Year 7	<p>We aim to build on the knowledge and skills gained at our feeder primary schools.</p> <p>Computing comprises of 3 strands:</p> <p>Information Technology - the study and use of systems for storing, retrieving and sending information;</p> <p>Computer Science - computational thinking and an understanding of how computer systems work;</p> <p>Digital Literacy – the skills needed to live, learn and work safely and effectively using technology, on a number of different platforms and for different purposes.</p> <p>We aim to make students confident users of IT with skills for analysis and research, presentation and communication; effective in the basics of coding and how computers work; knowledgeable about the purpose and safe practices of modern technology, with a clear understanding of the dangers and implications of using different technologies.</p>
Curriculum Content Year 7	<p>ICT legislation – the Computer Misuse Act, alongside the School’s Acceptable Use Policy. This includes looking at good practice such as password management.</p> <p>E-safety – privacy options on social media, as well as general good practice, particularly in relation to the sharing of information.</p> <p>Binary – at the lowest levels of a computer everything is represented by a binary electrical signal that registers in one of two states: one or off.</p> <p>Algorithms – steps to solving problems logically, using both flowcharts and pseudocode.</p> <p>Programming – designing and building an executable computer program for accomplishing a specific computing task using Small Basic.</p> <p>Hardware – the physical, tangible components of a computer.</p> <p>Networks - how computers share and exchange information, looking at the differences between Area Networks and Cloud Networks.</p>



<p>Curriculum aims Year 8</p>	<p>The curriculum in Year 8 will deepen the students' understanding of how computers work and strengthen knowledge of concepts from Year 7. Teaching will begin to integrate more sophisticated transferable computational thinking skills and independent learning. A key aspect of the learning in Year 8 is to develop their critical thinking and problem solving skills.</p>
<p>Curriculum Content Year 8</p>	<p>ICT Legislation – the Copyright Act and using this to inform their own practices when researching. Studying the Health and Safety Act. E-safety – social media platforms and their purpose, as well as how to stay safe across platforms. Media – how the media is constructed and how digital tools are used in the media, such as photo-shopping and evaluating the reasons for this. Micro:bits – developing team skills by carrying out physical computing and programming tasks with Micro:bits Algorithms – revisiting algorithms to create more complex instructions, both with flowcharts and pseudocode. Programming – designing and building an executable computer program for accomplishing a specific computing task using Block Based Language. Boolean Logic – studying Boolean Operators: OR, AND and NOT. At the heart of Boolean Logic is the idea that all values are either True or False.</p>
<p>Curriculum aims Year 9</p>	<p>The curriculum in Year 9 will deepen the students' understanding of how computers work and strengthen knowledge of concepts from Years 7 and 8. An important part of the Year 9 curriculum is to ensure that students are competent, confident users of computers and generally used programmes. Develop transferable problem-solving skills and allow students to develop their ability to learn new software quickly and efficiently.</p>
<p>Curriculum Content Year 9</p>	<p>ICT Legislation – the Data Protection Act to better understand how data is protected and used. E-safety – Digital Footprints and evaluating their own. Spreadsheets – spreadsheets in real world scenarios, using both Mathematical and formatting options. Programming – designing and building an executable computer program for accomplishing a specific computing task using python. This will include creating, adding to and exporting data using lists and arrays; creating variables and subroutines. Networks – a set of computers connected together for the purpose of sharing resources. Developing Network knowledge learnt in Year 7 to extend beyond our school networks. Web Design – planning and creating a website using the software CC Dreamweaver.</p>

Key Stage 4

OCR Cambridge National Creative iMedia



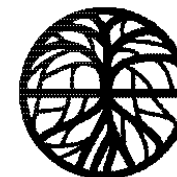
Bottisham Village College

Achievement through Inspiring, Caring, Enriching

<p>Curriculum Aims Year 10</p>	<p>To fully understand and develop knowledge of preproduction's procedures for any digital product. Students will aim to have a working knowledge of how to produce high quality digital products and what factors to consider when undertaking project work. Learners will cover topics for Units R081 and R082 from the OCR Creative iMedia Cambridge Nationals Level 1 / 2 course.</p>	<p>Curriculum Aims Year 11</p>	<p>Using the foundation knowledge gained in Year 10, students are to broaden their skill set and working knowledge of specific digital products and be able to give students the maturity to evaluate and review multiple digital projects.</p>
<p>Curriculum Delivery Year 10</p>	<p>Students will have 5 lessons a fortnight. Each unit has a formal assessment at the end, where staff have guidance and rules from the exam board OCR and JCQ. Autumn – To learn the necessary skills for R082 and to complete activities in preparation for the controlled assessment tasks. To learn the theory topics in R081 (exam unit). Spring – Complete controlled assessments on R082.. Summer – Complete learning the content on R081 and sit the exam in May. Opportunity to revisit controlled assessments in R082.</p>	<p>Curriculum Delivery Year 11</p>	<p>Students will have 5 lessons a fortnight. Each unit has a formal assessment at the end, where staff have guidance and rules from the exam board OCR and JCQ. Autumn – To learn the necessary skills for R085 and completed the controlled assessments on R085. Spring – To learn the necessary skills for R092 and completed the controlled assessments on R092 Summer – Continue on R081 for those students who can re-sit the exam. Opportunity to revisit controlled assessments in R082, R085 and R092.</p>
<p>Curriculum Content Year 10</p>	<p>This includes:</p> <ul style="list-style-type: none"> • Understand the purpose and content of pre-production. • Planning a pre-production and producing documentation. • Reviewing preproduction materials. • Understanding the purpose and properties of digital graphics. • Planning the creation of a digital graphics. • Creating a digital graphic. • Reviewing digital graphics. • Understanding the purpose and properties of digital graphics. • Planning the creation of a digital graphics. • Creating a digital graphics. • Reviewing digital graphics. 	<p>Curriculum Content Year 11</p>	<p>In Year 11 student will complete and finish the remaining two units of the OCR Creative iMedia course and re-sit any controlled assessments necessary. The two remaining units are R085 Designing and creating a website and R092 Designing and creating a digital game.</p>

Key Stage 4

OCR GCSE Computer Science



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<p>Curriculum Aims Year 10</p>	<p>The GCSE Computer Science course is an engaging and practical subject which focuses on both hardware and software. The course aims to develop students understanding of system architecture and how the components that make up a system operate and communicate with one another.</p> <p>The subject aims to encourage students to develop their understanding and application of the core concepts within a computer system. Student will comprehend and apply the essential principles and concepts of computational thinking including abstraction, decomposition, logic, algorithms, and data representation.</p> <p>Students also analyse problems in computational terms and plan inventive solutions by designing, writing, debugging and evaluating programs using the python programming language.</p>		
<p>Curriculum Delivery Year 10</p>	<p>Students will have 5 lessons a fortnight.</p> <p>Lessons will be delivered through theory and practical based tasks.</p> <p>Typically students will be assessed formatively during lessons and receive summative assessment throughout the GCSE course.</p> <p>Past papers and GCSE style questions are used to assess students understanding of both components 1 & 2 in preparation for their GCSE exams.</p> <p>Practical tasks will be assessed visually and with the assistance of online tools.</p>		
<p>Curriculum Content Year 10</p>	<p>Computer systems – COMP01 (50% Of GCSE 1.5 hour exam)</p> <ul style="list-style-type: none"> • Systems Architecture • Memory • Storage • Wired and wireless networks • Network topologies, protocols and layers • System security • System software • Ethical, legal, cultural and environmental concerns 	<p>Computational thinking, algorithms and programming - COMP2 (50% Of GCSE 1.5 hour exam)</p> <ul style="list-style-type: none"> • Algorithms • Programming techniques • Producing robust programs • Computational logic • Translators and facilities of languages • Data representation 	
<p>Curriculum Aims Year 11</p>	<p>Develop previous knowledge gained and cover pinnacle topics and concepts within the course in preparation for the students GCSE exams.</p>	<p>Curriculum Content Year 11</p>	<p>Programming Project</p> <ul style="list-style-type: none"> • Programming techniques • Analysis • Design • Development • Testing and evaluation and conclusions <p>Revision/complete</p> <ul style="list-style-type: none"> • COMP01 – all chapters • COMP02 – all chapters
<p>Curriculum Delivery Year 11</p>	<p>Students will have 5 lessons a fortnight.</p> <p>Selected topics will be recovered and content revised up until the GCSE exams.</p> <p>GCSE EXAM in COMP01 Computer systems (50% of final grade)</p> <p>GCSE EXAM in COMP02 Computational thinking, algorithms and programming (50% of the final grade)</p>		