

Curriculum Map – Computing & IT

Curriculum Intent Statement – Computing

At our school, we embrace an ambitious vision for our students within the Computing curriculum, instilling in them the skills, knowledge, and resilience to thrive in today's rapidly evolving digital landscape. Our commitment to ambition and rigour drives the following principles:

- 1. Nurturing Computational Thinkers:** Our primary focus is on nurturing computational thinkers. We empower students to become confident programmers, equipping them with essential skills such as abstraction, logic, algorithms, and data representation.
- 2. Digital Literacy and Online Safety:** In addition to programming, we emphasize digital literacy and online safety. Our students receive guidance on safe online practices and are taught the necessary steps to ensure their own safety and the well-being of others.
- 3. Problem Solving and Innovation:** We inspire creativity and problem-solving through the use of computational thinking. Students learn to evaluate and apply information technology, including emerging technologies, to analytically solve real-world problems.
- 4. Social and Ethical Considerations:** We foster ethical awareness. Our curriculum addresses key issues such as cyberbullying, online safety, security, plagiarism, and responsible digital communication, ensuring that students are not only skilled but also responsible digital citizens.
- 5. Key Stage 4 Pathways:** Our Key Stage 3 Computing curriculum aligns with the National Curriculum Computing programme of study and prepares students for their Key Stage 4 journey. Here, students have the opportunity to select from two distinct pathways:
 - **Computer Science GCSE:** For those with a passion for in-depth computer science knowledge, we offer the option to study Computer Science at GCSE level. This pathway is designed for students seeking a rigorous, technical understanding of the field.
 - **Level 2 Cambridge National in Creative iMedia:** For those inclined towards creative digital media, we provide the option to pursue a Level 2 Cambridge National in Creative iMedia. This qualification encourages students to explore creative aspects of computing.
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Through our Computing curriculum, we instil ambition and rigour, preparing our students for a seamless transition into Key Stage 4, where they can tailor their studies to their unique interests and aspirations within the field of computing.

Implementation

Computing Curriculum						
½ Term	1	2	3	4	5	6
Yr 7	Clear Messaging in Digital Media Introduction to systems, rules for responsible computer use. Use a range of different skills across several pieces of software. Unit overview/rubric/lessons (ET & SS)	From Semaphores to The Internet Unit overview/rubric/lessons (NW, CS)	Programming Essentials: Part 1 Unit overview/rubric/lessons (AL, PG)	Modelling Data: Spreadsheets Unit overview/rubric/lessons (ET, CM)	Programming Essentials: Part 2 Unit overview/rubric/lessons (AL, PG)	Using Media: Gaining Support for a Cause Unit overview/rubric/lessons (IT & ET)
Yr 8	Media: Vector Graphics Unit overview/rubric/lessons (CM, ET)	Computing Systems Unit overview/rubric/lessons (PG, CS)	Developing for the Web Unit overview/rubric/lessons (CM, PG)	Representations: From Clay to Silicon Unit overview/rubric/lessons (CS, DI)	Mobile App Development Unit overview/rubric/lessons (ET, PG)	Introduction To Python Programming Unit overview/rubric/lessons (AL & PG)
Yr 9	Python Programming with Sequences of Data Unit overview/rubric/lessons (AL, PG)	Media: Animations Unit overview/rubric/lessons (ET, CM)	Representations: Going Audio visual Unit overview/rubric/lessons (AL, PG)	Physical Computing Unit overview/rubric/lessons (CS, PG)	Cybersecurity Unit overview/rubric/lessons (SS, IT)	Data Science Unit overview/rubric/lessons (DD, DI)
Key:	AL Algorithms / CS Computing Systems / CM Creating Media / DI Data and Information / DD Design and Development / ET Effective Use of Tools / IT Impact of Technology / NW Networks / PG Programming / SS Safety and Security					

Yr 10 / Yr 11

Computer Science

Part (01) Computer Systems

- Introduces students to parts of a computer and looks at how they work together
- Investigations into how computers communicate with each other via networks
- What security issues are there surrounding computer systems and technology and what is the impact?

Part (02) Computational Thinking, Algorithms and Programming

- Logic and problems solving is key in this section
- Students look at different problems that can be solved using 'computational thinking' and apply this to everyday problems, this will also help with their programming and designing programs.

Part (03) Programming

- Students will learn about programming and different programming techniques.

Creative iMedia

Creative iMedia is a vocational course which equips students with a wide range of knowledge and skills needed to work in the creative digital media sector, areas covered are:

R093 – Creative iMedia in the media industry

- **Topic area 1** The media industry
- **Topic area 2** Factors influencing product design
- **Topic area 3** Pre-production planning
- **Topic area 4** Distribution considerations

R094 – Visual identity and digital graphics

- **Topic area 1** Develop visual identity
- **Topic area 2** Plan digital graphics for products
- **Topic area 3** Create visual identity and digital graphics

R095 – Characters and comics

- **Topic area 1** Plan characters and comics
- **Topic area 2** Create characters and comics
- **Topic area 3** Review characters and comics

Impact

Impact Statement for Key Stage 3 Computing Curriculum

At Key Stage 3, our approach to the Computing curriculum is designed to foster meaningful learning, track progress effectively, and prepare students for their future in the digital age. Our impact assessment strategy includes the following key elements:

- 1. Personalized Learning Pathways:** To meet the diverse needs and interests of our students, we place them on individualized learning pathways. These pathways are chosen based on students' prior knowledge, interests, and aspirations within the field of computing.
- 2. Continuous Monitoring:** Throughout the academic year, we maintain a close watch on students' progress. Each student's journey is closely monitored through a series of half-termly units of work. These units of work are carefully crafted to provide a well-rounded foundation in computing.
- 3. Assessment for Every Unit:** Within each school year, students engage with six distinct units of work. At the conclusion of each unit, students are assessed rigorously in examination conditions. This not only allows them to apply their knowledge and skills but also provides them with a clear understanding of their individual progress.
- 4. Individual and Collaborative Assessments:** In addition to individual assessments, we emphasize collaborative project work, recognizing the importance of teamwork and communication skills in the digital era. Some units involve group projects, and students are assessed on their ability to work effectively as part of a team.
- 5. Qualitative and Quantitative Evaluation:** Our assessment approach goes beyond grades and numbers. We consider both qualitative and quantitative measures, evaluating not only students' technical competencies but also their problem-solving abilities, creativity, and ethical considerations in computing.
- 6. Feedback and Support:** Regular feedback sessions provide students with insights into their strengths and areas for improvement. This feedback is a catalyst for growth, guiding students towards achieving their full potential.
- 7. Preparing for Key Stage 4:** Our Key Stage 3 Computing curriculum is strategically designed to prepare students for Key Stage 4. As students progress through Key Stage 3, they are equipped with the knowledge and skills necessary to make informed choices for their Key Stage 4 pathways, including Computer Science GCSE or Level 2 Cambridge National in Creative iMedia.

Through these comprehensive monitoring and assessment practices, we ensure that our students not only excel in Computing but also develop essential skills and attitudes for success in an ever-evolving digital world. This approach enables us to track and enhance the impact of our curriculum, fostering lifelong learners who are well-prepared for the opportunities and challenges of the future.