

Curriculum Intent

At My Online Schooling, we believe ICT and Computer Science are unique and complementary subjects, serving different purposes and meeting different student needs, and therefore we are offering both subjects in KS 3 and KS4.

ICT develops important skills in students, such as data handling, which are transferable and useful for a wide range of jobs. In an increasingly digital world, we want to provide students with every opportunity to learn skills that will enable them to thrive.

Computer Science enables students to meet the demands of 21st Century employers. A CBI Report stated that: 'teaching programming and computer science in much greater depth will expand understanding of the digital world ... encouraging the development of the active, creative interactions with technology that will be fundamental to economic success in the 21st Century. Employers need people who are not only effective users of technology, but also able to innovate with it.'

Our curriculum promotes diversity and international mindedness, and we are working to build further opportunities around this into our Schemes of Work.

Implementation

The sequence of teaching allows pupils to acquire basic ICT and Computer Science knowledge in Key Stage 3 before choosing to specialise in ICT or Computer Science for KS4 and KS5. This can be seen in the list of topics on the next page.

The development of practical skills in both ICT and Computer Science is more challenging in an online setting, but we challenge this by using online platforms that allow us to share programs for example: Google sheets for ICT and Trinket for Computer Science for programming. We also use video tutorials and the screen sharing function on Zoom. Through this, our pupils obtain an understanding of skills to solve software problems and learn how to use digital applications more effectively.

Key Stage 3

Computer Science	
Year 7	Computer System, Computational Thinking, IT Project Management, Programming: Python, Spreadsheets – Data Modelling and Using Media – Gaining Support for a Cause.
Year 8	IT and the World, Computer System, Programming: Python, Online Safety and JavaScript.
Year 9	Computational Thinking, Programming: Python Theory and Practical, Communication and Networks, Cybersecurity and Data Science.

KS3 Digital Skills	
Year 7-9	Citizen, Worker, Maker and Entrepreneur.

Key Stage 4

Computer Science	
Year 10	Topic 1 - Problem Solving, Topic 2 - Programming, Topic 3 - Data, Topic 4 - Computer
Year 11	Topic 5 - Communication and the Internet, Topic 6 - The Bigger Picture.

{Missing ICT?}

Key Stage 5

Computer Science	
Year 12	Unit 1 - Information representation, Unit 2 - Communication and Networking Technologies, Unit 3 - Hardware, Unit 4 - Processor Fundamentals, Unit 5 - System Software, Unit 6 - Security, Privacy and Data Integrity, Unit 7 - Ethics and Ownership, Unit 8 - Databases, Unit 9 - Algorithm Design and Problem-Solving, Unit 10 - Data Types and Structures, Unit 11 - Programming, Unit 12 - Software Development.
Year 13	Unit 13 - Data Representation, Unit 14 - Communication and Internet Technologies, Unit 15 - Hardware and Virtual Machines, Unit 16 - System Software, Unit 17 - Security, Unit 18 - Artificial Intelligence (AI), Unit 19 - Computational Thinking and Problem Solving, Unit 20 - Further Programming.

Impact

Key Stage 4

Computer Science		
Exam board	Pearson Edexcel	
Structure	Multiple-choice, short open-response, open-response, extended open-response answer questions, task-based questions. A choice of three programming languages will be available (Python, C# or Java). The task-based questions will be carried out using a computer system under supervision. All other questions requiring a written response will be answered in the paper.	
International GCSE Computer Science (4CP0)	<p>Paper 1</p> <ul style="list-style-type: none"> • 2 hours • 50% of qualification <p>Paper 2</p> <ul style="list-style-type: none"> • 3 hour practical • 50% of qualification 	<ol style="list-style-type: none"> 1. Problem Solving 2. Programming 3. Data 4. Computers 5. Communication and the Internet 6. The Bigger Picture

ICT		
Exam board	Pearson Edexcel	
Structure	Multiple-choice, short open-response, open-response, extended open-response answer questions, task-based questions.	
International GCSE ICT (4IT1)	<p>Paper 1</p> <ul style="list-style-type: none"> • 1 hour 30 minutes • 50% of qualification <p>Paper 2</p> <ul style="list-style-type: none"> • 3 hour practical • 50% of qualification 	<ol style="list-style-type: none"> 1. Digital Devices 2. Connectivity 3. Operating Online 4. Online Goods and Services 5. Applying Information and Communication Technology 6. Software Skills

Key Stage 5

Computer Science		
Exam Board	Cambridge International	
Structure	Multiple-choice, short open-response, open-response and extended open-response answer questions.	
A Level Computer Science (9608)	<p>Paper 1</p> <ul style="list-style-type: none"> • 1 hour 30 minutes • 50% of the AS Level • 25% of the A Level <p>Paper 2</p> <ul style="list-style-type: none"> • 2 hours • 50% of the AS Level • 25% of the A Level <p>Paper 3</p> <ul style="list-style-type: none"> • 1 hour 30 mins • 25% of the A level <p>Paper 4</p> <ul style="list-style-type: none"> • 2 hours 30 mins • 25% of the A level 	<ol style="list-style-type: none"> 1. Information Representation 2. Communication and Networking Technologies 3. Hardware 4. Processor Fundamentals 5. System Software 6. Security, Privacy and Data Integrity 7. Ethics and Ownership 8. Databases 9. Algorithm Design and Problem-Solving 10. Data Types and structures 11. Programming 12. Software Development 13. Data Representation 14. Communication and Internet Technologies 15. Hardware and Virtual Machines 16. System Software 17. Security 18. Artificial Intelligence (AI) 19. Computational thinking and problem solving 20. Further Programming

Department

Teacher	Role
Susan Miller	Computer Science Subject Leader, Teacher of KS3 Computer Science, KS4 Computer Science, KS5 Computer Science, KS4 ICT
Adam Wilks	Teacher of KS3 Computer Science, KS3 Digital Skills, KS4 ICT

