

Statement of Intent

The economy is changing on a regular basis and almost all jobs in the UK today require employees to have a good level of digital literacy. The modern world expects digital skills to be as important as English and Maths.

Students will develop 'underpinning' concepts which are useful in many subjects, for example mathematics, science and engineering. The rigorous approach of the subject will facilitate a smooth transition to the next level of study.

Key Stage 3 Curriculum

Computer Science covers the importance of computation thinking in the modern world today and how it will do in the future. It is a qualification that enable students to apply themselves and give them the skills to succeed in their chosen pathway. Students are taught computing 1 hour per week in dedicated Computing Suites.

Key Stage 4 Curriculum

In BTEC Award in IT there are opportunities for students to develop employability skills. It gives students the type of skills, knowledge and behaviours required in modern digital sector. Studying this course allows students to develop technical skills in data interpretation, data presentation and data protection. Other skills acquired by taking this course are outlined below:

- cognitive and problem-solving skills: use critical thinking, approach non-routine problems applying expert and creative solutions, use systems and technology
- intrapersonal skills: communicating, working collaboratively, negotiating and influencing, self-presentation
- interpersonal skills: self-management, adaptability and resilience, self-monitoring and development.

Lessons are taught by specialist teacher in dedicated Computing suites. Students are taught three lessons per week.

Key Stage 5 Curriculum

This pathway focuses on the development of a range of applications across platforms and sectors. We've made sure our students will gain the right combination of knowledge, understanding and skills required for the 21st century, enabling them to demonstrate the skills of writing specifications, and the design, build, testing and implementation of applications.

Apart from learning the theoretical aspects, students are taught various practical around software application, web development and game development.

Computing/ICT

Extended Learning

What we offer to extend the learning of our students

Sixth form students develop and share their knowledge/skills with the lower school by acting as subject ambassadors in lessons and Computing club.

What can parents do to support extended learning in this subject

Parents can support their children in various ways. This is include purchasing Raspberry Pi for coding, attending exhibitions, making sure homework is completed or use any of the website below to support learning.

<https://www.bbc.co.uk/bitesize/subjects/z34k7ty>

www.teach-ICT.com

<https://www.codecademy.com/>

<https://www.w3schools.com/>

KS3 Curriculum Map

	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Year 7	School Project (Letters from the Lighthouse) <ul style="list-style-type: none"> Create a telegram using binary code (Problem-solving skill) E-safety & Formatting Health and Well-being; how to be a modelled citizen Create jingles and leaflet of the skills needed to stay safe online.	Python Programming (Strings, Print, Variables, Selection & Turtle) (Problem-solving skills/creative thinker skill) <ul style="list-style-type: none"> Write several programs to solve various problems 	Microbits/Pi-Top (Sonic) <ul style="list-style-type: none"> Writes programs using various methods (touch, code and blocks) Use the Pi-top to create music and learn basic command line. If time permits create programs in logo 	Spreadsheet Modelling <ul style="list-style-type: none"> Create several models in SS 	Small Basic <ul style="list-style-type: none"> Write several programs in another language and produce drawings using codes. Making decision Repeating Graphics Turtle Graphics Subroutines Arrays	Scratch Programming
Year 8	Python Programming <ul style="list-style-type: none"> Strings Print Variables Selection Subroutines Turtle 	Binary Data Representation <ul style="list-style-type: none"> Carry out calculations and understand how computer interpret information 	HTML & CSS Web Design & Programming <ul style="list-style-type: none"> Use web development software to create a website on input, output and storage devices. 	Game Maker <ul style="list-style-type: none"> Create various games using game maker software. This involves creating own sprites and intermediate codes 	Computational Thinking <ul style="list-style-type: none"> Solve various problem problems using abstraction, decomposition, pattern recognition, algorithms 	Fireworks animation <ul style="list-style-type: none"> Use fireworks to create animation.
Year 9	Intermediate - Python Programming <ul style="list-style-type: none"> Strings Print Variables Selection Turtle Subroutines 	Data Representation & Computer (intermediate)	Mobile Phone Applications <ul style="list-style-type: none"> Create mobile app for phone using appshed 	HTML, Advanced CSS & Javascript <ul style="list-style-type: none"> Create an online radio station with web development software 	Game maker <ul style="list-style-type: none"> Create a maze and platform game (Advance level) 	Fireworks animation <ul style="list-style-type: none"> Use fireworks to create animation.

KS4 Curriculum Map BTEC Award ICT

	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Year 10	<p>Component 1: Exploring user interface design principles and project planning techniques LO – A</p> <p>Component 3 Effective Digital Working Practices</p> <p>LO –A1 (Modern Technologies)</p>	<p>Component 1: Exploring user interface design principles and project planning techniques LO – B</p> <p>Component 3 Effective Digital Working Practices</p> <p>LO –B (Cyber security)</p>	<p>Component 1: Exploring user interface design principles and project planning techniques LO – C</p> <p>Component 3 Effective Digital Working Practices</p> <p>LO –C (The wider implications of digital systems)</p>	<p>Component 1: Exploring user interface design principles and project planning techniques LO – C</p> <p>Component 3 Effective Digital Working Practices</p> <p>LO –D (Planning and communication in digital systems) & Exam Prep</p>	Exam Prep	<ul style="list-style-type: none"> Problem solving skills development
Year 11	<p>Controlled Assessment</p> <ul style="list-style-type: none"> Programming techniques and mini task 	<p>Computational thinking, algorithms and programming</p> <p>Systems Architecture</p> <ul style="list-style-type: none"> Memory Storage Wired and wireless networks Network topologies, protocols and layers <p>Computer systems</p> <ul style="list-style-type: none"> Algorithms Programming techniques Producing robust programs Computational logic 	<p>Computational thinking, algorithms and programming</p> <ul style="list-style-type: none"> System security System software Ethical, legal, cultural and environmental concerns <p>Computer systems</p> <ul style="list-style-type: none"> Translators and facilities of languages Data representation 	<p>Revision Com1 & Com2</p> <p>Exam Practice</p>	<p>Revision Com1 & Com2</p> <p>Exam Practice</p>	

KS5 Curriculum Map BTEC ICT

	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Year 12	<p>Unit 21 Web design and prototyping coursework. LO1-LO2</p> <p>Understand the fundamentals of web design</p> <p>Be able to plan the development of an interactive website for an identified client</p> <p>Unit 1 FUNDAMENTALS OF IT</p> <p>Teaching content for LO1-LO3</p>	<p>Unit 21 Web design and prototyping coursework. LO3-LO4</p> <p>Be able to create prototype websites for an identified client</p> <p>Be able to present the interactive website concept to an identified client</p> <p>Unit 1 FUNDAMENTALS OF IT</p> <p>Teaching content for LO4-LO5</p>	<p>Unit 15 game design and prototyping coursework. LO1-LO2</p> <p>Be able to develop game concepts</p> <p>Be able to develop game prototypes</p> <p>Unit 2</p> <p>CLOBAL INFORMATION</p> <p>Teaching content LO1-LO3</p>	<p>Unit 2</p> <p>CLOBAL INFORMATION</p> <p>Teaching content LO4-LO6</p>	Exam Practice	<p>Unit 15 game design and prototyping coursework. LO3</p> <p>Be able to develop game prototypes</p>
Year 13	<p>Unit 6 - Application design coursework LO1-LO2</p> <p>Understand how applications are designed.</p> <p>Be able to investigate potential solutions for application developments</p> <p>Unit 1 Exam prep</p>	<p>Unit 6 - Application design coursework LO3-LO4</p> <p>Be able to generate designs for application solutions</p> <p>Be able to present application solutions to meet client and user requirements</p> <p>Unit 2 Exam Prep</p>	<p>Unit 21 Web design and prototyping coursework. LO1-LO2 – Review</p> <p>LO3-LO4 – Implementation</p>	<p>Unit 15 game design and prototyping coursework. LO1-LO2 – Review</p> <p>LO3-LO4 – Implementation</p>		