Year 10

Subject Name:	Computer Science and Information Technology

Key Stage 4 (GCSE and/or B Tech)

Curriculum Intent Statement

Our intention is to equip pupils to develop their computational thinking skills and creativity to solve a variety of problems. To build an understanding of the workings of digital systems and the importance of online safety and its impact. Our teaching of both Computing and ICT will provide students with the future-proof skills and knowledge of using and creating digital technologies that will prepare and enable them to fully participate in a technology-driven world.

Autumn Term 1

GCSE Computer Science	BTEC IT
Systems architecture • The CPU • Functions & characteristics of CPU • Memory • Storage	**Component 1** • Introduction to user interfaces • Complex user interfaces, accessibility and user skills • How hardware and software affect user interfaces • Design principles • Assignment A tasks

Autumn Term 2

GCSE Computer Science	BTEC IT
Algorithms • Computational Thinking • Searching algorithms • Sorting algorithms • Flowchart algorithms • Pseudocode • Interpret, correct, complete algorithms	**Component 1** • Project planning techniques • Project methodologies • Coordinating project tasks • SMART objectives • Design specification • Assignment B tasks

Spring Term 1

GCSE Computer Science	BTEC IT
Networks • The internet • Local Area Networks • Wireless networking • Client-server and peer-to-peer • Protocols and Layers	**Component 1** • Project planning techniques • Project methodologies • Coordinating project tasks • Project planning tools • SMART objectives • Design specification • Assignment B tasks

<table>
<tr><th colspan="2">Spring Term 2</th></tr>
<tr><td>GCSE Computer Science

Programming
Programming concepts
Sequence and selection
Iteration
Arrays</td><td>BTEC IT

Component 1
Developing a functional user interface
Dashboard
Assignment C tasks
Reviewing the interface
Reviewing the project planning techniques</td></tr>
<tr><th colspan="2">Summer Term 1</th></tr>
<tr><td>GCSE Computer Science

Programming
Procedures and functions
Records and files
Practice programming project
Select a programming task
Design solution
Develop solution in programming language
Test solution
Evaluate program</td><td>BTEC IT

Component 1
Developing a functional user interface
Assignment C tasks
Reviewing the interface
Reviewing the project planning techniques</td></tr>
<tr><th colspan="2">Summer Term 2</th></tr>
<tr><td>GCSE Computer Science

Logic and languages
Logic diagrams and truth tables
Defensive design
Errors and testing
Translators and facilities of languages</td><td>BTEC IT

Component 2
Data and information
How to present information
Making data suitable for processing
Collecting data
Assignment A tasks</td></tr>
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