Curriculum Intent for Key Stage 3 Computing

Course Overview

The Key Stage 3 Computing curriculum is designed to develop students' digital literacy, computational thinking, and understanding of how computer systems work. Students build a strong foundation in computer science, information technology, and digital citizenship, enabling them to become confident, responsible, and capable users of technology. The curriculum balances theoretical understanding with practical application, ensuring students can use technology effectively, safely, and creatively while preparing them for further study at GCSE and beyond.

Intent Statement

The Key Stage 3 Computing curriculum is designed to ensure that all students:

Develop Secure Digital Literacy and Online Safety	Students learn how to use digital systems responsibly and safely, developing an understanding of online communication, digital footprints, ethical issues, and cyber security. This ensures learners are able to protect themselves and others while navigating an increasingly digital world.
Build Strong Computational Thinking and Programming Skills	The curriculum develops students' ability to think logically and computationally through algorithms, decomposition, abstraction, and programming. Students' progress from visual programming concepts to text-based programming, preparing them for GCSE Computer Science.
Understand How Computer Systems Work	Students gain knowledge of hardware, software, networks, data representation, and number systems. This foundational understanding enables learners to explain how computers process, store, and transmit data.
Apply Technology Creatively to Solve Problems	Through projects such as website design, user interface development, and stakeholder challenges, students apply their knowledge to real-world scenarios. They learn to plan, design, test, evaluate, and refine digital solutions for specific audiences and purposes.
Develop Ethical Awareness and Responsibility in Computing	Students explore the legal, ethical, and environmental implications of technology, including computer misuse, copyright, data protection, and sustainability. This supports informed, responsible decision-making and respect for the law.

Cross-Curricular Skills and Values

Throughout the Business and Economics courses, the curriculum aims to develop a broad range of transferable skills and values that support academic success, employability, and responsible citizenship.

Link to British Values
Students develop an understanding of the rule of law through computing legislation, individual liberty through creative digital expression, and mutual respect through responsible online behaviour and accessibility-aware design.
Critical Thinking and Problem-Solving
Learners analyse problems, design solutions, and evaluate outcomes through programming, data representation, and project-based work.
Communication and Collaboration
Students communicate ideas through digital presentations, interfaces, and collaborative projects, developing teamwork and presentation skills.
Digital Literacy
The curriculum equips students with essential digital skills, including data handling, programming, online communication, and the effective use of software tools.
Ethical Awareness and Sustainability
Students consider the ethical use of technology, cyber security risks, and the environmental impact of digital systems, encouraging responsible and sustainable practice.

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Pathways and Progression

The Key Stage 3 Computing curriculum prepares students for GCSE Computer Science, IT, and Creative iMedia, as well as future study and careers in software development, cyber security, data analysis, engineering, digital design, and related fields.

Conclusion

The Key Stage 3 Computing curriculum provides a coherent and ambitious foundation that equips students with the knowledge, skills, and values required to succeed in a digital society. Through a balance of technical understanding, creativity, and ethical awareness, students are prepared to become confident learners and responsible digital citizens.

Year 7 Scheme of Learning

	Autumn Term		Spring Term		Summer Term	
	Autumn Term 1	*Autumn Term 2*	*Spring Term 1*	*Spring Term 2*	*Summer Term 1*	*Summer Term 2*
	HT1 - Introduction to Computing I	HT2 – E-Safety and Digital Literacy	HT3 – Spreadsheets & MS Excel	HT4 - Computer Systems	HT5 - Binary and Data Representation	HT6 – Artificial Intelligence (AI)
Year 7	**Core Lessons** **C1** Introduction to Computing **C2** Functionality of a Keyboard C3 Email Etiquette **C4** File Management and OneDrive	**Core Lessons** **C1** Social Media and Cyber Bullying **C2** Digital Footprint **C3** Passwords and Authentication **C4** Artificial Intelligence and E-Safety	**Core Lessons** **C1** Entering and Editing Data **C2** Formatting and Conditional Formatting **C3** Basic Formulae **C4** CountIf and VLookup	**Core Lessons** **C1** Input and Output Devices **C2** Computer Components **C3** Hardware and Software **C4** Boolean Logic - Truth Tables	**Core Lessons** **C1** Base Conversion (Binary-Decimal) **C2** Base Conversion (Decimal-Binary) **C3** ASCII and Unicode **C4** Image Representation	**Core Lessons** **C1** The History of Artificial Intelligence **C2** Artificial Intelligence in Video Games **C3** What is Generative Artificial Intelligence? **C4** Using GenAI Systems.
	Expansion Lessons **E1** Microsoft Word Basics **E2** Mail Merge	**Expansion Lessons** **E1** Phishing and Online Scams	**Expansion Lessons** **E1** Creating Pivot Tables & Charts **E2** Data Validation	**Expansion Lessons** **E1** Boolean Logic **E2** Operating Systems	**Expansion Lessons** **E1** Storage Devices **E2** Audio Rep **E3** Hexadecimal	**Expansion Lessons** **E1** Images & GenAI **E2** Machine Learning

Year 7 – Intended Learning Outcomes

The Year 7 Computing curriculum is designed to establish strong foundations in digital literacy, computer systems, and safe, responsible use of technology. Students develop confidence in using common software tools, managing files, communicating appropriately online, and understanding how computers process data. Through early exposure to spreadsheets, binary, data representation, and artificial intelligence, learners begin to think logically and analytically while developing an awareness of emerging technologies and their impact. By the end of Year 7, students are able to use technology effectively, safely, and responsibly, with a secure grounding for further study in Computing.

Year 8 Scheme of Learning

	Autumn Term		Spring Term		Summer Term	
	Autumn Term 1	*Autumn Term 2*	*Spring Term 1*	*Spring Term 2*	*Summer Term 1*	*Summer Term 2*
Year 8	HT1 - Computer Networks	HT2 - Cyber Security	HT3 – Data Science	HT4 - Algorithms	HT5 - Python Programming I	HT6 - Python Programming II
	C1 What is a Computer Network? **C2** Transmission Media **C3** Wired and Wireless Networks **C4** Types of Networks	**Core Lessons** **C1** Malware **C2** Social Engineering **C3** Protecting Data **C4** Computer Hackers	**Core Lessons** **C1** Decision Making **C2** Data Gathering Methods **C3** Data Reliability **C4** Making Recommendations	**Core Lessons** **C1** What is an Algorithm? **C2** Creating a Flow Chart **C3** Search Algorithms – Linear Search	**Core Lessons** **C1** What is a Programming Language? **C2** Our First Python Program **C3** Syntax and Logic Errors **C4** Maths in Python	**Core Lessons** **C1** Selection Statements **C2** Iteration Statements **C3** Arrays and Lists **C4** Random Number Generation
	Expansion Lessons **E1** What is the Internet? **E2** Cloud Computing **E3** Network Protocols	**Expansion Lessons** **E1** Impact of Cyber Attacks I **E2** Impact of Cyber Attacks II	**Expansion Lessons** **E1** Big Data and social media	**Expansion Lessons** **E1** Search Algorithms – Binary Search **E2** Sorting Algorithms – Bubble Sort	**Expansion Lessons** **E1** Testing Programs	**Expansion Lessons** **E1** Testing Programs **E2** Subroutines

Year 8 – Intended Learning Outcomes

The Year 8 Computing curriculum builds on prior knowledge to deepen students' understanding of how digital systems work and how data is used, protected, and analysed. Students explore computer networks, cyber security, data science, algorithms, and programming, developing computational thinking and problem-solving skills. Through Python programming, learners progress from basic code to more complex constructs such as selection, iteration, and subroutines. By the end of Year 8, students can analyse problems logically, write and test simple programs, understand how data supports decision-making, and recognise the importance of security in digital environments.

Year 9 Scheme of Learning

	Autumn Term		Spring Term		Summer Term	
	Autumn Term 1	*Autumn Term 2*	*Spring Term 1*	*Spring Term 2*	*Summer Term 1*	*Summer Term 2*
Year 9	HT1 - UX and Website Design	HT2 - HTML and CSS Programming Project I	HT3 - HTML and CSS Programming Project II	HT4 - Ethics, Environmental Impacts and Emerging Technologies	HT5 – App Development Part I	HT6 – App Development Part II
	Core Lessons **C1** What is a User Interface? **C2** Audience Needs **C3** Design Principles **C4** Website Design Principles	**Core Lessons** **C1** Website Foundations **C2** Text Formatting **C3** Adding Images and Links **C4** Colour, Style and CSS	**Core Lessons** **C1** Creating a Cultural Food Website **C2** Testing and Feedback **C3** Project Evaluation	**Core Lessons** **C1** Autonomous Cars **C2** Wearable Technology **C3** Internet of Things (IoT) **C4** Extended Reality	**Core Lessons** **C1** Creating a Project Proposal **C2** Gantt Charts and Timescales **C3** Creating a Wireframe Design	**Core Lessons** **C1** Creating a Prototype **C2** Testing and Feedback **C3** Project Evaluation
	Expansion Lessons **E1** Website Domains and Hosting **E2** How Search Engines Work	**Expansion Lessons** **E1** The Div Tag **E2** Website Audio and Video		**Expansion Lessons** **E1** Cybernetic Implants	**Expansion Lessons** **E1** Start HT6 Content Early	

Year 9 – Intended Learning Outcomes

The Year 9 Computing curriculum focuses on applying technical knowledge creatively and ethically through extended projects and real-world contexts. Students design and develop websites, explore HTML and CSS, and apply user interface design principles to meet audience needs. They also examine ethical, environmental, and societal impacts of emerging technologies and complete an app development project from planning through to evaluation. By the end of Year 9, students can independently plan, develop, test, and evaluate digital solutions, demonstrating readiness for GCSE-level Computing and a clear understanding of technology's role in society.