Phase One - Computing - Curriculum Map

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Computing Contexts: Alan Turing						
Year 7	*Collaborating Respectfully Online (Digital Literacy)*	*Networks, Hardware & Software (Information Technology & Digital Literacy)*	*Computational Thinking (Computer Science)*		*Design Principles Introduction (Digital Literacy)*	*Spreadsheets Introduction (Information Technology)*
	1.1: Logging onto the system 1.2: Microsoft Teams 1.3: Setting Up, Saving & Organising Documents (Cloud) 1.4: Email Etiquette 1.5: Online Introduction **Online Safety: Introduction** *Careers:* **IT Support Technician**	2.1: Hardware History (Type Test) 2:2 Modern Hardware (Keyboard Shortcuts) 2.3: Inputs & Outputs (Features of Word) 2.4: Software (Features of PowerPoint) 2.5: Network Types (Search Tools) 2.6: Network Connections (Speed test) **Online Safety: Malware** **Careers: Software Developer**	***AW1*** 3.1: Computational Thinking 3.2: Algorithms 3.3: Sequence 3.4: Iteration 3.5: Nested Iteration 4.1: Selection 4.2: Block Based Functions ***Project Assessment*** **Online Safety: Inappropriate Content** **Online Safety: Blocking & Reporting Concerns**		5.1: Artificial Intelligence 5.2: Categorising Target Audiences 5.3: Pixels & Resolution 5.4: Colour & Digital Artefacts 5.5: Typography *(Artificial intelligence in medicine and healthcare)* ***Adobe Creative Cloud Express*** **Online Safety***: Cyberbullying* *Careers:* **Social Media Manager**	***AW2*** 6.1: Spreadsheet Introduction 6.2: Formatting 6.3: Basic Formulae 6.4: Simple Functions (SUM/MAX/MIN/AVERAGE) 6.5: Filters & Complex Functions **Online Safety: Digital Footprint** **Careers: Data Entry Clerk**
Computing Contexts: Ada Lovelace						
Year 8	*Computing Systems (Information Technology)*	*Binary (Information Technology)*	*Spreadsheets: Complex Functions (Digital Literacy)*	*Python Programming (Computer Science)*		*Design Principles: Vector Graphics (Digital Literacy)*
	1.1: Computer Systems 1.2: Hardware, Input & Output Devices 1.3: Software 1.4: Storage 1.5: Central Processing Unit *Features of PowerPoint Throughout* **Online Safety: Social Media Privacy Settings** *Careers:* **Network Manager**	2.1: The Binary System: Data and Representation 2.2: Binary Conversion 2.3: Binary De-Conversion 2.4: Binary Addition 2.5: Binary Shifts **Online Safety***: Inappropriate Content* **Careers: Geospatial Technician**	***AW1*** 3.1: Simple Functions / Formulae 3.2: Data vs Information 3.3: Complex & Binary Functions (COUNTIF) 3.4: Conditional Formatting **Online Safety: Reporting Concerns** **Careers: Computer Games Developer**	4.1: Algorithms & Flow Charts 4.2: Syntax vs Logic Errors & Print Statements 4.3: Variables and Inputs 4.4: Sequence & Selection 4.5: Iteration – FOR & While Loops 5.1: Data Types 5.2: Selection – Boolean Logic ***Project Assessment*** **Online Safety: Cyberbullying** **Online Safety: Protecting Online Identity** **Careers: App Developer**		***AW2*** 6.1: Technology & the Environment 6.2: Analysing Target Audiences 6.3: Vector vs Bitmap 6.4: Composition 6.5: Contrast 6.6: Creating Vector Graphics ***Adobe Creative Cloud Express*** *(Technology and the Environment))* **Online Safety: The Digital Footprint** **Careers: Graphic Designer**
Computing Contexts: Bill Gates						
Year 9	*Networks (Information Technology)*	*Design Principles (Digital Literacy)*	*HTML Web Design (Computer Science)*		*Advanced Binary (Information Technology)*	*Fractal Art in Python (Computer Science)*
	1.1: Network Types (LAN & WAN) 1.2: Network Connections (Wired & Wireless) 1.3: Network Topologies 1.4: Network & Computer Threats 1.5: Identify and Prevent Vulnerabilities *Features of Microsoft Word Throughout* **Online Safety: Cybersecurity** **Careers: Network Engineer**	2.1: Wearable Technology 2.2: Compression 2.3: File Types 2.4: House Style 2.5: Creating Media Campaigns **(Wearable Technology)** ***Adobe Creative Cloud Express*** **Online Safety: Data Protection** **Careers: Video Editor**	***AW1 &*** 3.1: HTML Pre-Sets 3.2: HTML Text Hierarchy 3.3: HTML Typography 3.4: HTML Tables (basic) 3.5: HTML Table Formatting 3.6: HTML Background Colours & Navigation Bars 4.1: HTML Images 4.2: HTML Videos 4.3: HTML Hyperlinks ***Project Assessment*** **(Trinity MAT Earthshot)** **Online Safety: Physical Security & Biometrics** **Careers: Web Designer**		5.1: Logic Gates 5.2: Binary Conversion 5.3: Binary De-Conversion 5.4: Binary Addition 5.5: Binary Shifts: Multiplication & Division **Online Safety: Online Gaming** **Careers: Database Administrator**	***AW2*** 6.1: Python Recap 6.2: Fractal Art - Sequence 6.3: Fractal Art - Iteration 6.4: Fractal Art – Nested Iteration 6.5: Fractal Art – Formatting **Online Safety: Impact of Filters & Editing Tools** **Careers: Forensic Computer Analysis**

Curriculum Intent

The computing curriculum serves to develop the mindset of a computer scientist through equipping students with the skills, knowledge and understanding to participate in a rapidly changing world. The curriculum is underpinned by four key pillars; computer science, information technology, digital literacy and digital citizenship, preparing students to solve the problems of tomorrow through key computational concepts and experiences. In computing we aspire to enrich students with a varied and rich understanding of computing contexts, developments, approaches, and the impact of technology in our society and the environment. Through our innovative bookletised curriculum in phase one, students develop a strong understanding of both declarative knowledge through variation and unplugged activities, as well as procedural knowledge to ensure that they have a wide skillset which develops their ability to be able to think like a computer scientist.

The curriculum has been designed to ensure learners have sufficient knowledge to stay safe online and how to use computers safely as effective digital citizens, co-constructed with PSHE. The relevant, coherent and well-sequenced approach to online safety is underpinned by our four Christian values of empathy, honesty, respect and responsibility, teaching students how to interact effectively in a digital landscape. The curriculum provides learners with opportunities to develop their understanding of British Values, for example understanding the rule of law and being able to demonstrate mutual tolerance and respect when accessing and engaging with digital spaces, particularly when using social media. The computing curriculum prepares students for the future workplace and as active participants in a digital world, which feeds into and benefits from key learning within other subject disciplines including maths, geography and art.

Our curriculum offer exposes students to the wealth of career opportunities available in the computing sector with a half termly learning focus on a role linked to the unit of work. A wealth of enrichment learning opportunities is open to all students, to enrich educational experiences, engage learners and cultivate and extend lifelong effect of learning, for example 'coding club' which is designed to engage our programmers of the future and year 8 girls are given the opportunity to enter the 'CyberFirst' competition, competing against schools from all over the UK. In years 7, 8 and 9, students also develop their digital, enterprise and employability skills through the 'Inspiring Digital Enterprise Award'. Our team of 'E-Safety Ambassadors' are tasked with promoting good online habits for all students across the academy.