



School's Curriculum Vision:

Hope Academy is a family, guided by Christian love, in which we serve our whole community with empathy and compassion, helping every member to flourish so all can pursue a rich and full life.

Our curriculum is designed to encourage a love of life-long learning, guided by the ultimate Christian value of love. We work to ensure that our curriculum makes our school's vision a reality and that every member of our Hope family can flourish and be the best that they can be.

Faculty: Computing

Subject Vision:

“Computing gives us the power to transform lives with love, creativity and innovation.”

The **purpose** of our curriculum is to empower students so they can effectively engage with technology, understand computer systems, use technology responsibly and with kindness.

Guided by our mission we **aim** to create a curriculum so students can...

1. become creators of technology, rather than just consumers.

Problem solving skills / programming skills / critical thinking skills.

2. develop their computational thinking and creativity to solve problems and understand and change the world.

Problem solving skills / decomposition / abstraction / algorithmic thinking/ recognising patterns / programming skills.

3. understand how computers and computer systems work (hardware and software).

Technical skills / knowledge of hardware and software

4. use technology safely, respectfully, responsibility and securely.

Knowledge of cyber security / online dangers / privacy protection / well-being / positive online presence / communication skills

5. become digitally literate (the ability to use digital tools appropriately and help identify, access, manage, integrate, evaluate, and analyse digital resources).

Communication skills / data analysis skills / collaboration / technical skills / research skills

[Curriculum Policy](#)

Our computing vision aligns well with the broader curriculum vision of Hope Academy, which emphasises love, empathy, compassion, and the pursuit of a rich and full life for all members of the community. Here's how our computing vision meets the whole school curriculum vision:

1. **Love and Service:** our computing vision supports the overarching vision by promoting the love and service aspect of the Christian values within the context of technology and digital interactions. It emphasises using technology responsibly, respectfully, and safely, fostering empathy and compassion in digital spaces.
2. **Lifelong Learning:** our computing vision aligns with the aim of fostering a love for lifelong learning. By emphasising problem-solving skills, critical thinking, computational thinking, and creativity, it encourages students to develop a passion for learning in the field of technology that extends beyond the classroom.
3. **Personal Flourishing:** our computing vision aims to equip students with the skills and knowledge needed to understand and change the world through technology. By nurturing their problem-solving skills, programming skills, and computational thinking abilities, it supports their personal growth and helps them flourish in the digital age.
4. **Digital Literacy and Communication:** our computing vision emphasises digital literacy and effective communication skills. This aligns with the broader curriculum vision by enabling students to access, evaluate, and analyse digital resources while fostering communication skills necessary for responsible and respectful digital interactions.

By integrating these aims and purposes, our computing curriculum contributes to the overall vision of the school by preparing students to navigate the digital world with empathy, responsibility, and a commitment to lifelong learning, in alignment with Christian values.

Subject Curriculum Mapping – Overview

KS3 CURRICULUM		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	Topic	Using Computers Safely How can we use computers safely? ... how computers and computer systems work ...use technology safely, respectfully, responsibility and securely.	Using Computers Safely How can we use computers safely? ... how computers and computer systems work ...use technology safely, respectfully, responsibility and securely.	Hour of Code (Visual Programming). ...computational thinking and creativity ... become creators of technology, rather than just consumers.	Hour of Code (Visual Programming). ...computational thinking and creativity ... become creators of technology, rather than just consumers.	Pet Rescue Project (Information Technology). ... digital literacy ... become creators of technology, rather than just consumers.	Pet Rescue Project (Information Technology). ... digital literacy ... become creators of technology, rather than just consumers.
	National Curriculum references & links	NC 5 and 9 DL	NC 5 and 9 DL	NC2 and 3 CS	NC2 and 3 CS	NC1, 4, 7 and 8 CS IT	NC1, 4, 7 and 8 CS IT
	Summative Assessment Hope Academy Assessment Model.docx Subject Assessment Model Overviews	3 Core assessments across each year BASELINE ASSESSMENT	Y7 END OF TERM 1 ASSESSMENT Education for a connected world (Part 1)		Y7 END OF TERM 2 ASSESSMENT Visual Programming		Y7 END OF TERM 3 ASSESSMENT Information Technology
	Formative Assessment Hope Academy Assessment Model.docx Subject Assessment Model Overviews	9 core and 3 option pieces planned across year Diagnostic assessments: -7.1.1 Self-image & identity -7.1.2 Online relationships -7.1.3 Online reputation	Diagnostic assessments: -7.1.4 Online bullying -7.1.5 Managing online information	Diagnostic assessments: -7.2.1 Visual Programming 1 -7.2.1 Visual Programming 2	Diagnostic assessments: -7.2.3 Visual Programming 3 -7.2.4 Visual Programming 4	Diagnostic assessments: -7.3.1 Graphic software -7.3.2 Word processing / Desk Top Publishing	Diagnostic assessments: -7.3.3 Spreadsheets

Intent & Rationale:

Curriculum rationale for each year - How is the purpose and aim of the curriculum for this year group linked to your subject vision? What do students' study what they do when they do? Why is the curriculum sequenced in the way it is for this year group and how is it progressive and built upon each year?

Intent:

To help students understand how to use technology safely, respectfully, responsibly, and securely.

To help students learn how to solve a range of problems using computational thinking skills and a range of programming constructs.

To help students solve a range of problems using a set brief.

Rationale:

In today's world, it is essential for students to be able to use technology safely and responsibly.

Programming is a valuable skill that can be used in a variety of fields.

Problem-solving is a critical skill that is essential for success in school and in life.

Specifically, the intent and rationale for each of the three strands in Y7 are as follows:

Strand 1: Digital Literacy

Intent: To help students understand how to use technology safely, respectfully, responsibly, and securely.

Rationale: In today's world, it is essential for students to be able to use technology safely and responsibly. They need to be aware of the risks associated with using technology, such as cyberbullying, grooming, and sexting. They also need to know how to protect their online identity and privacy.

Links to > Year 8 Online Safety Part 2 (health and wellbeing, copyright and privacy) > Links to Y11 DIT

Strand 2: Visual Programming

Intent: To help students learn how to solve a range of problems using programming constructs.

Rationale: Programming is a valuable skill that can be used in a variety of fields. It can help students to develop their problem-solving skills, their creativity, and their logical thinking skills.

Links to > Y8 textual programming > Y9 Problem solving with Programming > Y11 CS Paper 2 Computational thinking – problem solving using programming.

Y7 The artist > Y9 Turtle Module (drawing shapes – using Maths)

Y7 basic subprograms (creating a bridge in Minecraft) > Y9 Creating procedures for a calculator.

Strand 3: Problem-Solving using IT

Intent: To help students solve a range of problems using a set brief.

Rationale: Problem-solving is a critical skill that is essential for success in school and in life. It requires students to be able to identify problems, to brainstorm solutions, and to evaluate the effectiveness of their solutions.

Links to > Y8 App Design > Y10 DIT User Interface Design

The curriculum is sequenced in this way for this year group because it is progressive and built upon each year. This means that the concepts and skills that students learn in Year 7 will be built upon in Year 8, Year 9, and so on. For example, in Year 7, students learn about the basics of programming, such as sequence of instructions, selection, and iteration using a visual programming language. In Year 8 and 9, they will learn more advanced programming concepts, such as lists and subprograms using a textual programming language.

The curriculum is also sequenced in this way because it is designed to help students develop their problem-solving skills. In Year 7, students learn how to solve a range of problems using a set brief. In Year 8, they will learn how to solve more complex problems, such as those that require them to use multiple programming constructs.

The following are some of the reasons why the curriculum is sequenced in this way:

- To build on prior knowledge and skills: The curriculum is sequenced in a way that builds on prior knowledge and skills. This means that students will be able to understand and learn new concepts more easily if they have a solid foundation in the basics.
- To provide a progressive learning experience: The curriculum is sequenced in a way that provides a progressive learning experience. This means that students will be able to build their skills gradually and incrementally.
- To ensure that students are prepared for future learning: The curriculum is sequenced in a way that ensures that students are prepared for future learning. This means that students will be able to build on the skills they learn in Year 7 when they move on to Year 8 and beyond.

Reading & Literacy:

References to key texts/books throughout the year that students are exposed to - [Literary Canon Audit](#)

KS3 CURRICULUM		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8	Topic	Textual Programming (Python Adventure Game) How can computational thinking help solve problems? ... computational thinking and creativity	Textual Programming (Python Adventure Game) How can computational thinking help solve problems? ... computational thinking and creativity	Computers & Binary How do computers work? ...how computers and computer systems work	Computers & Binary How do computers work? ...how computers and computer systems work	Digital Literacy (Online safety Project). How can we be safe, responsible, and respectful online? ...use technology safely, respectfully, responsibility and securely.	Digital Literacy (Online safety Project). How can we be safe, responsible, and respectful online? ...use technology safely, respectfully, responsibility and securely.
	National Curriculum references & links	NC 3 CS	NC 3 CS	NC 4, 5 and 6 CS	NC 4, 5 and 6 CS	NC 8 and 9 IT DL	NC 8 and 9 IT DL
	Summative Assessment	3 Core assessments across each year Hope Academy Assessment Model.docx Subject Assessment Model Overviews	Y8 END OF TERM 1 ASSESSMENT Textual Programming		Y8 END OF TERM 2 ASSESSMENT Computers/Binary		Y8 END OF TERM 1 ASSESSMENT Education for a connected world (part 2)
	Formative Assessment	9 core and 3 option across pieces planned across year Hope Academy Assessment Model.docx Subject Assessment Model Overviews Diagnostic assessments: -8.1.1 Syntax -8.1.2 Functions (print and input) -8.1.3 Variables / libraries	Diagnostic assessments: -8.1.4 Selection (IF, THEN, ELSE) -8.1.5 Operators & Data types -8.1.6 Iteration	Diagnostic assessments: -8.2.1 Hardware & software -8.2.2 Networks -8.2.3 Boolean Logic -8.2.4 Binary	Diagnostic assessments: -8.2.3 Boolean Logic -8.2.4 Binary	Diagnostic assessments: -8.3.1 Health, wellbeing, and lifestyle -8.3.2 Privacy and security -8.3.3 Copyright and ownership	Diagnostic assessments: -8.3.4 Online relationships

Intent & Rationale:

Curriculum rationale for each year - How is the purpose and aim of the curriculum for this year group linked to your subject vision? What do students' study what they do when they do? Why is the curriculum sequenced in the way it is for this year group and how is it progressive and built upon each year

Intent:

- To help students learn how to design, create, and evaluate a child's adventure game using Python.
- To help students learn how to solve a range of problems using programming constructs.
- To help students explore how computers work by investigating the hardware and software used by digital devices.
- To help students understand how data (images, text, and sound) is represented using binary.
- To help students explore how computers are networked together and the advantages and disadvantages of linking devices together.

Rationale:

- Learning how to design, create, and evaluate a child's adventure game using Python will help students develop their problem-solving skills, their creativity, and their logical thinking skills.
- Learning how to solve a range of problems using programming constructs will help students develop their problem-solving skills and their understanding of how to break down problems into smaller, more manageable steps.
- Exploring how computers work by investigating the hardware and software used by digital devices will help students understand how computers work and how they are able to process information.
- Understanding how data (images, text, and sound) is represented using binary will help students understand how computers store and represent information.
- Exploring how computers are networked together and the advantages and disadvantages of linking devices together will help students understand how computers can communicate with each other and how this can be used to share information.

Reading & Literacy:

References to key texts/books throughout the year that students are exposed to - [Literary Canon Audit](#)

KS3 CURRICULUM		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 9	Topic	Programming Fundamentals ...computational thinking and creativity	Programming Fundamentals	Problem Solving with Programming	Working with Data	App Design How do humans interact with computers? ... become creators of technology, rather than just consumers. ... become digitally literate .	App Design How do humans interact with computers? ... become creators of technology, rather than just consumers. ... become digitally literate .
	National Curriculum references & links	NC 2 and 3 ■ ■ CS	NC 2 and 3 ■ ■ CS	NC 1 and 3 ■ ■ CS	NC 1 and 3 ■ ■ CS	NC 1 ■ CS	NC 1 ■ CS
	Summative Assessment	3 Core assessments across each year Hope Academy Assessment Model.docx Subject Assessment Model Overviews	Y9 END OF TERM 1 ASSESSMENT		Y9 END OF TERM 2 ASSESSMENT		Y9 END OF TERM 1 ASSESSMENT
	Formative Assessment	9 core and 3 options across pieces planned across year Hope Academy Assessment Model.docx Subject Assessment Model Overviews Diagnostic assessments: -9.1.1 Programming BASICS -9.1.2 Input, output & Operators -9.1.3 Data Types & Operators	Diagnostic assessments: -9.1.4 Selection: IF THEN ELSE	Diagnostic assessments: -9.2.1 Testing Python Code -9.2.2 String manipulation -9.2.3 Python Iteration (for and while loops)	Diagnostic assessments: -9.3.1 Python 1D Arrays -9.3.2 Python 2D Arrays -9.3.3 Working subroutines -9.3.4 Turtle library	Diagnostic assessments: -8.2.5 User interfaces -8.2.6 Principles of User Interface Design	Diagnostic assessments: -8.2.7 App design

Y9 Intent & Rationale:

Curriculum rationale for each year - How is the purpose and aim of the curriculum for this year group linked to your subject vision? What do students' study what they do when they do? Why is the curriculum sequenced in the way it is for this year group and how is it progressive and built upon each year

Intent:

The intent of the Year 9 computer science curriculum is to help students develop the following skills:

- Programming skills: Students will learn how to design, read, write, and debug programs. They will also learn how to apply their skills to solve real problems and produce robust programs.
- Computational thinking skills: Students will develop a set of computational thinking skills that will enable them to understand how computer systems work and design, implement, and analyze algorithms for solving problems.
- Data representation skills: Students will learn how computers store and manipulate data. They will also learn how different types of data are represented in a computer.
- To help students have an awareness of what makes an effective user interface by using wireframe designs to show effective layout.

Rationale:

- Programming skills are a valuable skill that can be used in many different fields. They are also essential for understanding how computers work and how they can be used to solve problems.
- Computational thinking skills are essential for understanding how computers work and how they can be used to solve problems. These skills are also essential for many other fields, such as engineering, mathematics, and business.
- Data representation skills are essential for working with computers in any capacity. They are also essential for understanding how computers store and manipulate information.
- Having an awareness of what makes an effective user interface by using wireframe designs to show effective layout will help students understand how to design user interfaces that are easy to use and understand.

Reading & Literacy:

References to key texts/books throughout the year that students are exposed to - [Literary Canon Audit](#)

KS4 CURRICULUM GCSE Computer Science (2020)		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	Topic	Topic 1: Computational Thinking	Topic 1: Computational Thinking Topic 2: Data	Topic 2: Data Topic 3: Computers	Topic 3: Computers	Topic 4: Networks	Topic 4: Networks Topic 6: Programming
	GCSE Specification Points	NC 1 and 2	NC 1 and 2	NC 1 and 2	NC 1 and 2	NC 1 and 2	NC 1 and 2
	Summative Assessment	3 Core assessments across each year Hope Academy Assessment Model.docx Subject Assessment Model Overviews	End of Topic 1 Assessment	End of Topic 2 Assessment	End of Topic 3 Assessment		End of Topic 4 Assessment
	Formative Assessment	9 core and 3 option across pieces planned across year Hope Academy Assessment Model.docx Subject Assessment Model Overviews Diagnostic assessments: Topic 1 -1.1.1 Decomposition and abstraction -1.1.2 Subprogram benefits -1.2.1 Algorithms -1.22 Variables and Data structures -1.2.3 Operators -1.2.4 Trace tables -1.2.5 Errors	Diagnostic assessments: Topic 1 -1.2.6 Sort and Search -1.2.7 Efficiency of algorithms -1.3.1 Truth tables Topic 2 -2.1.1. Need for binary -2.1.2 Negative binary numbers -2.1.3 Binary conversion -2.1.4 Binary arithmetic -2.1.5 Overflow -2.1.6 Hexadecimal	Diagnostic assessments: Topic 2 -2.2.1 Character encoding -2.2.2 Bitmap image representation -2.2.3 Sound representation -2.2.4 Image limitations -2.3.1. Units of storage -2.3.2 Compression Topic 3 -3.1.1 CPU -3.1.2 Secondary storage -3.1.3 Embedded systems	Diagnostic assessments: Topic 3 -3.2.1 Operating systems -3.2.2 Utility software -3.2.3 Robust software -3.3.1 Levels of programming language -3.3.2 Translators	Diagnostic assessments: Topic 4 -4.1.1 Need for networks -4.1.2 Types of network -4.1.3 Internet structure -4.1.4 Wired and wireless networks -4.1.5 Network bandwidth	Diagnostic assessments: Topic 4 -4.1.6 Protocols -4.1.7 TCP/IP model -4.1.8 Network topologies -4.2.1 Network security

Y10 Intent & Rationale:

Curriculum rationale for each year - How is the purpose and aim of the curriculum for this year group linked to your subject vision? What do students' study what they do when they do? Why is the curriculum sequenced in the way it is for this year group and how is it progressive and built upon each year

Intent:

- To help students develop a set of computational thinking skills that will enable them to understand how computer systems work and design, implement, and analyse algorithms for solving problems.
- To help students understand how computers store and manipulate data, and the need for data encryption and how binary data can be represented as images, sound and text.
- To help students understand the hardware and software components that make up a computer system, and the input-process-output model.
- To help students understand the key principles behind the organization and operation of computer networks, the different types of network, and the role of network protocols and network topologies.
- To help students learn about network security and how the internet is structured.

Rationale:

- Developing a set of computational thinking skills will help students understand how computers work and how they can be used to solve problems. These skills are also essential for many other fields, such as engineering, mathematics, and business.
- Understanding how computers store and manipulate data is essential for working with computers in any capacity. Data encryption is also an important security concept that students should be familiar with.
- Understanding the hardware and software components that make up a computer system is essential for understanding how computers work. The input-process-output model is a fundamental concept in computer science that students should understand.
- Understanding the key principles behind the organization and operation of computer networks is essential for working with computers in a networked environment. The different types of network and the role of network protocols and network topologies are important concepts that students should be familiar with.
- Understanding network security is essential for protecting computers and networks from attack. The internet is a complex system that students should understand in order to use it safely and effectively.

Reading & Literacy:

References to key texts/books throughout the year that students are exposed to - [Literary Canon Audit](#)

KS4 CURRICULUM GCSE Computer Science (2020)		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 11	Topic	Topic 5: Issues & Impact	Topic 6: Problem Solving Programming	Topic 6: Problem Solving Programming	Topic 6: Problem Solving Programming	Revision	
	GCSE Specification Points	NC 1 and 3	NC 1 and 3	NC 1 and 2	NC 1 and 2	NC 1, 2 and 3	
	Summative Assessment	3 Core assessments across each year Hope Academy Assessment Model.docx Subject Assessment Model Overviews End of Topic 5 Assessment		MOCKS – Paper 1 MOCKS – Paper 2		External Exams May	
	Formative Assessment	9 core and 3 option across pieces planned across year Hope Academy Assessment Model.docx Subject Assessment Model Overviews Diagnostic assessments: -5.1.1 Environmental issues -5.2.1 Personal data -5.2.2 Emerging trends -5.2.3 Copyright and licensing -5.3.1 System threats -5.3.2 Protecting systems	Diagnostic assessments: 6.1.1 Decomposition 6.1.2 Write programs 6.1.3 Convert algorithms and programs 6.1.4 Maintaining code 6.1.5 Find program errors 6.1.6 Evaluate program's efficiency 6.2.1 Understand program structures	WTM Diagnostic assessments: 6.2.2 Sequence, selection and repetition 6.3.1 Data types and structures 6.3.2 Variables and constants 6.3.3 Strings 6.4.1 User input 6.4.2 Text files 6.4.3 Validation	Diagnostic assessments: 6.4.4 Authentication 6.5.1 Arithmetic operators 6.5.2 Relational operators 6.5.3 Logical operators 6.6.1 Subprograms 6.6.2 Parameters 6.6.3 Scope of variables		

Y11 Intent & Rationale:

Curriculum rationale for each year - How is the purpose and aim of the curriculum for this year group linked to your subject vision? What do students' study what they do when they do? Why is the curriculum sequenced in the way it is for this year group and how is it progressive and built upon each year.

- Intent: The intent of this course is to teach students about the impact of computing technology on society. We want students to be aware of the environmental, ethical, and legal implications of using technology. We also want students to be able to program computers and solve real-world problems using computer science.
- Rationale: Computing technology is having a major impact on our world. It is important for students to understand this impact so that they can make informed decisions about how to use technology. Programming is a core skill for anyone who wants to work in computer science. It is also a valuable skill for anyone who wants to be able to use technology to solve problems.

Here are some specific examples of the impact of computing technology on society:

- Environmental impact: Computing technology uses a lot of energy. This can have a negative impact on the environment. For example, the production of computers and other electronic devices requires a lot of resources, such as water and minerals. The use of computers also generates a lot of heat and waste.
- Ethical impact: Computing technology can be used to invade people's privacy. For example, social media companies collect a lot of data about their users. This data can be used to track people's movements, interests, and even their political views.
- Legal impact: Computing technology can be used to commit crimes. For example, hackers can use computers to steal people's personal information or to disrupt businesses.

The programming component of the course will test students' skills in solving computer science problems. Students will be given a project brief that describes a problem that they need to solve by developing a computer program. Students will need to be able to design, read, write, and debug programs. They will also need to be able to apply their skills to solve real problems and produce robust programs.

The exam questions will cover a range of topics from the two papers: Principles of Computer Science and Application of Computational Thinking. Students will be taught a range of exam techniques to support answering extended questions

The order is designed to scaffold knowledge in a way that builds on fundamental concepts to support more complex understanding. This order also has the benefit of starting with more abstract, conceptual topics (like computational thinking and data) and moving towards more concrete, practical topics (like computers, networks, and programming).

Reading & Literacy:

References to key texts/books throughout the year that students are exposed to - [Literary Canon Audit](#)

KS4 CURRICULUM BTEC Tech Award (2022) in DIT		Autumn 1 Component 1 Interface Design Principles and Project Planning Techniques	Autumn 2 Component 1 Interface Design Principles and Project Planning Techniques	Spring 1 Component 1 Interface Design Principles and Project Planning Techniques	Spring 2 Component 2 Collecting, Presenting and Interpreting Data	Summer 1 Component 2 Collecting, Presenting and Interpreting Data	Summer 2 Component 2 Collecting, Presenting and Interpreting Data
Year 10	Topic	Topic 1A and 1B: Interface design & Project planning techniques	Topic 1B and 1C: Project planning techniques & Reviewing interface designs	Topic 1 A B C	Topic 2A & 2B: How is data collected & Using data manipulation tools	Topic 2B: Using data manipulation tools	Topic 2C: Using data manipulation tools
	GCSE Specification Points	NC 1 and 2	NC 1 and 2	NC 1 and 2	NC 1 and 2	NC 1 and 2	NC 1 and 2
	Summative Assessment	3 Core assessments across each year Hope Academy Assessment Model.docx Subject Assessment Model Overviews	Component 1: Practice Pearson- set assignment	Component 1: Pearson-set assignment			Component 2: Practice Pearson- set assignment
	Formative Assessment	9 core and 3 option across pieces planned across year Hope Academy Assessment Model.docx Subject Assessment Model Overviews Diagnostic assessments: Topic 1A - 1A1 User interfaces -1A2 Audience needs -1A3 Design principles -1A4 Designing an efficient user interface Topic 1B	Diagnostic assessments: Topic 1B - 1B3 Creating an initial design - 1B3 Creating an initial design - 1B4 Developing a user interface Topic 1C - 1C1 Review	Diagnostic assessments: Topic 2A - 2A1 Characteristics of data and information - 2A2 Representing information - 2A3 Ensuring data is suitable for processing - 2A4 Data collection	Diagnostic assessments: Topic 2A - 2A5 Quality of information -2A6 Sectors that use data modelling - 2A7 Threats to individuals Topic 2B - 2B1 Data processing methods - 2B2 Producing a dashboard	Diagnostic assessments: Topic 2B - 2B2 Producing a dashboard Topic 2C - 2C1 Drawing conclusions - 2C2 How presentation affects understanding	Diagnostic assessments: Topic 3A - 3A1 Modern Technologies - 3A2 Impact of modern technologies

	- 1B1 Project planning techniques -1B2 Creating a project proposal and plan					
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Y10 Intent & Rationale:

Curriculum rationale for each year - How is the purpose and aim of the curriculum for this year group linked to your subject vision? What do students' study what they do when they do? Why is the curriculum sequenced in the way it is for this year group and how is it progressive and built upon each year

- Intent: The Tech Award is a qualification that gives learners the opportunity to develop the skills, knowledge, and attitudes they need to succeed in a career in digital information technology.
- Rationale: Digital information technology is a rapidly growing field, and there is a high demand for skilled workers. The Tech Award provides learners with the skills they need to fill these jobs.

The Tech Award covers four key areas:

- Key skills: These are the essential skills that all digital information technology professionals need, such as project planning, designing user interfaces, and creating dashboards.
- Work processes: These are the ways of working that are used in digital information technology, such as project planning, the iterative design process, and cyber security.
- Attitudes: These are the personal qualities that are important in digital information technology, such as personal management and communication.
- Knowledge: This is the understanding of the concepts and principles that are used in digital information technology, such as how different user interfaces meet user needs, how organisations collect and use data to make decisions, virtual workplaces, cyber security, and legal and ethical issues.

The Tech Award is designed to be relevant to the needs of the industry. The content of the qualification is based on feedback from employers and industry experts. The qualification is also designed to be flexible, so that it can be adapted to meet the needs of different learners and employers.

The Tech Award is a valuable qualification for anyone who wants to work in digital information technology. It provides learners with the skills, knowledge, and attitudes they need to succeed in this growing field.

Here are some examples of how the skills, knowledge, and attitudes that learners develop through the Tech Award can be applied in the workplace:

- Key skills: Project planning skills can be used to manage large and complex projects. Designing user interfaces skills can be used to create user-friendly interfaces for websites and apps. Creating dashboards skills can be used to present data in a clear and concise way.
- Work processes: The iterative design process can be used to develop products and services that meet the needs of users. Cyber security skills can be used to protect information and systems from attack. Virtual team working skills can be used to collaborate with colleagues from different locations.
- Attitudes: Personal management skills can be used to manage time and workload effectively. Communication skills can be used to communicate effectively with colleagues, clients, and customers.
- Knowledge: Understanding of how different user interfaces meet user needs can be used to improve the user experience of websites and apps. Understanding of how organisations collect and use data to make decisions can be used to make better business decisions. Understanding of virtual workplaces can be used to work effectively from a remote location. Understanding of cyber security can be used to protect information and systems from attack. Understanding of legal and ethical issues can be used to make ethical decisions in the workplace.

Reading & Literacy:

References to key texts/books throughout the year that students are exposed to - [Literary Canon Audit](#)

KS4 CURRICULUM BTEC Tech Award in DIT (2022)		Autumn 1 Component 2 Collecting, Presenting and Interpreting Data	Autumn 2 Component 2 Collecting, Presenting and Interpreting Data Component 3 Effective Digital Working Practices	Spring 1 Component 3 Effective Digital Working Practices	Spring 2 Component 3 Effective Digital Working Practices	Summer 1 Component 3 Effective Digital Working Practices	Summer 2
Year 11	Topic	Topic 2 ABC: Using data manipulation tools & Drawing conclusions	Topic 3A: Modern technologies Topic 3B: Cyber security	Topic 3C: The wider implications of digital systems Planning	Topic 3D: Planning and communication in digital systems	Topics 3A, 3B, 3C and 3D	
	GCSE Specification Points	NC 1 and 2	NC 1 and 2	NC 1 and 3	NC 1 and 3	NC 1 and 3	
	Summative Assessment	3 Core assessments across each year Hope Academy Assessment Model.docx Subject Assessment Model Overviews Practice Comp 2 PSA	Comp 2 PSA		Mock paper – Past Paper (Component 3)	External Exams May	
	Formative Assessment	9 core and 3 option across pieces planned across year Hope Academy Assessment Model.docx Subject Assessment Model Overviews Diagnostic assessments: - 3B1 Threats to data - 3B2 Prevention and management of threats to data - 3B3 Policy	Diagnostic assessments: - 3C1 Responsible use - 3C2 Legal and ethical	Diagnostic assessments: - 3D1 Forms of notation	Diagnostic assessments: RESIT REVISION / PRACTICE	Diagnostic assessments:	

Y11 Intent & Rationale:

Curriculum rationale for each year - How is the purpose and aim of the curriculum for this year group linked to your subject vision? What do students' study what they do when they do? Why is the curriculum sequenced in the way it is for this year group and how is it progressive and built upon each year

Intent: The Tech Award is a qualification that gives learners the opportunity to develop the skills, knowledge, and attitudes they need to work in the digital information technology (IT) sector.

Rationale: The IT sector is a rapidly growing field, and there is a high demand for skilled workers. The Tech Award provides learners with the skills they need to fill these jobs.

The Tech Award covers four key areas:

- Key skills: These are the essential skills that all IT professionals need, such as project planning, designing user interfaces, and creating dashboards.
- Work processes: These are the ways of working that are used in IT, such as project planning, the iterative design process, and cyber security.
- Attitudes: These are the personal qualities that are important in IT, such as personal management and communication.
- Knowledge: This is the understanding of the concepts and principles that are used in IT, such as how different user interfaces meet user needs, how organisations collect and use data to make decisions, virtual workplaces, cyber security, and legal and ethical issues.

The Tech Award is designed to be relevant to the needs of the IT industry. The content of the qualification is based on feedback from employers and industry experts. The qualification is also designed to be flexible, so that it can be adapted to meet the needs of different learners and employers.

The Tech Award is a valuable qualification for anyone who wants to work in the IT sector. It provides learners with the skills, knowledge, and attitudes they need to succeed in this growing field.

Here are some examples of how the skills, knowledge, and attitudes that learners develop through the Tech Award can be applied in the workplace:

- Key skills:
 - Project planning skills can be used to manage large and complex projects.
 - Designing user interfaces skills can be used to create user-friendly interfaces for websites and apps.
 - Creating dashboards skills can be used to present data in a clear and concise way.
- Work processes:
 - The iterative design process can be used to develop products and services that meet the needs of users.
 - Cyber security skills can be used to protect information and systems from attack.
 - Virtual team working skills can be used to collaborate with colleagues from different locations.

- Attitudes:
 - Personal management skills can be used to manage time and workload effectively.
 - Communication skills can be used to communicate effectively with colleagues, clients, and customers.
- Knowledge:
 - Understanding of how different user interfaces meet user needs can be used to improve the user experience of websites and apps.
 - Understanding of how organisations collect and use data to make decisions can be used to make better business decisions.
 - Understanding of virtual workplaces can be used to work effectively from a remote location.
 - Understanding of cyber security can be used to protect information and systems from attack.
 - Understanding of legal and ethical issues can be used to make ethical decisions in the workplace.

Reading & Literacy:

References to key texts/books throughout the year that students are exposed to - [Literary Canon Audit](#)

KS4 CURRICULUM ICDL		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	Topic	Topic 1: IT Security for Users.	Topic 1: IT Security for Users.	Topic 1: IT Security for Users. Topic 2: IT User Fundamentals	Topic 2: IT User Fundamentals	Topic 2: IT User Fundamentals	Topic 2: IT User Fundamentals
	GCSE Specification Points						
	Summative Assessment	3 Core assessments across each year Hope Academy Assessment Model.docx Subject Assessment Model Overviews	ICDL Topic 1 Diagnostic assessment	ICDL Topic 1 Summative assessment			ICDL Topic 2 Diagnostic assessment / summative assessment
	Formative Assessment	9 core and 3 option across pieces planned across year Hope Academy Assessment Model.docx Subject Assessment Model Overviews Diagnostic assessments: Topic 1 -Security issues -Security precautions: systems/data -Identify threats -Security precautions: information	Diagnostic assessments: Topic 1 -Guidelines and procedures -Security precautions: information -Data backup	Diagnostic assessments: Topic 2 -Correct procedures -Interface Features -System settings - Accessing the internet -IT Systems terminology	Diagnostic assessments: Topic 2 -Working with files and folders -Storage media -Organise and store information	Diagnostic assessments: Topic 2 -Working safely -Computer viruses -Securing information -Staying safe and respecting others	Diagnostic assessments: Topic 2 -Routine maintenance

<p>Y10 Intent & Rationale: Curriculum rationale for each year - How is the <i>purpose and aim</i> of the curriculum for this year group linked to your subject vision? What do students' study what they do when they do? Why is the curriculum <i>sequenced</i> in the way it is for this year group and how is it <i>progressive</i> and built upon each year</p>
<p>Reading & Literacy: References to key texts/books throughout the year that students are exposed to - Literary Canon Audit</p>

KS4 CURRICULUM ICDL		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 11	Topic	Topic 3A: Using Email	Topic 3A: Using Email	Topic 3B: Using the Internet	Topic 3B: Using the Internet	Topic 3B: Using the Internet	
	GCSE Specification Points						
	Summative Assessment	<p>3 Core assessments across each year Hope Academy Assessment Model.docx Subject Assessment Model Overviews</p> <p>Practice Comp 2 PSA</p>	ICDL Topic 3 Diagnostic assessment		ICDL Topic 3 Diagnostic assessment	ICDL Topic 3 summative assessment Catch-up assessments	Catch-up assessments
Formative Assessment	<p>9 core and 3 option across pieces planned across year Hope Academy Assessment Model.docx Subject Assessment Model Overviews</p> <p>Diagnostic assessments: Topic 3A -Browsing the web -Email basics -Email safety -Using email address books</p>	<p>Diagnostic assessments: Topic 3A -Managing incoming emails</p>	<p>Diagnostic assessments: Topic 3B -Internet connection methods -Browsers -Search techniques</p>	<p>Diagnostic assessments: Topic 3B -Browsers -Online safety & security</p>			

Y11 Intent & Rationale:

Curriculum rationale for each year - How is the purpose and aim of the curriculum for this year group linked to your subject vision? What do students' study what they do when they do? Why is the curriculum sequenced in the way it is for this year group and how is it progressive and built upon each year

Reading & Literacy:

References to key texts/books throughout the year that students are exposed to - [Literary Canon Audit](#)

Subject Curriculum Mapping – Overview

KS3 Computing National Curriculum (Computer Science: CS, Digital Literacy: DL and Information Technology: IT)

1.	design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems CS
2.	understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem CS
3.	use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions CS
4.	understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal] CS
5.	understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems CS
6.	understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits CS
7.	undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users IT
8.	create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability IT
9.	understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns. DL

Useful resources

<https://www.advanced-ict.info/blog/what-computing.html>

Computing National Curriculum: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239067/SECONDARY_national_curriculum_-_Computing.pdf

KS4 Computing National Curriculum

All pupils must have the opportunity to study aspects of information technology and computer science at sufficient depth to allow them to progress to higher levels of study or to a professional career.

All pupils should be taught to:

1.	develop their capability, creativity and knowledge in computer science, digital media and information technology
2.	develop and apply their analytic, problem-solving, design, and computational thinking skills
3.	understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to identify and report a range of concerns.

Assessments

<https://eedi.com/projects/teach-computing>

<https://diagnosticquestions.com/>