

KS3

In KS3 lessons students are given the opportunity to access all aspects of the national curriculum. This is delivered in a way to values both the theory behind computing and the practical skills required to support students across the curriculum.

National Curriculum Strands

1. design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems
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
3. use two 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
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]
5. understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems
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
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
8. create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability
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.

KS3 Curriculum Overview

Term	Year 7	Year 8
1A	<p>Intro to ICT – students need to learn and understand;</p> <ul style="list-style-type: none">• E-safety.• Health and Safety.• Accessing the Network. <p>Driver – “Critical Thinkers” – staying safe online & fake news.</p> <p><i>CST - “Dignity of the Human Person” – You have been created in the likeness of God! How does your digital foot print reflect the image of God? How does what you post impact on others?</i></p> <p><i>CST – “Dignity of work and participation” – all workers have the right to contribute to society – How can technology aid this? Can Technology have a negative impact on our lives?</i></p> <p><i>Careers – IT Technician (An IT Technician is a professional who is responsible for installing, maintaining and repairing hardware & software components of the organization's computers).</i></p> <p>Intro to Word – Students to develop practical skills in Word before completing online document for Intro to Networks.</p> <p>Intro to Networks – students to look at the hardware and software components that make up a Network. Students to complete learning document via Teams.</p> <p><i>Careers – IT Operations Manager (IT Operations Manager responsibilities include monitoring network infrastructure and resolving system issues)</i></p> <p>Oracy - Group discussion on ergonomics, safe use of equipment, and screen time. Students explain and justify their opinions on managing screen time or posture. Questions about uses of the applications and alternative methods of presentation / discussions around e-safety, potential consequences and ways to be safe. E-safety very important questions about reporting and examples of phishing.</p> <p>Virtues curriculum – Slides - Dangerous and unsafe behaviours / Damage to property (treating the IT suites with respects / Health and Safety in a computer room) could also draw on Acceptable Use Policy – accessing and using the school Network.</p>	<p>Recap - Intro to ICT 1st Lesson – students need to learn and understand;</p> <ul style="list-style-type: none">• E-safety.• Health and Safety.• Accessing the Network.• Accessing Teams <p>(this unit refreshes the knowledge gained in yr. 7 1A)</p> <p>Driver – “Critical Thinkers” – staying safe online & fake news.</p> <p><i>CST - “Dignity of the Human Person” – You have been created in the likeness of God! How does your treatment of others online reflect the image of God? How does what you post impact on others?</i></p> <p>Networks Extension – students to look at the hardware and software components that make up a Network. Students to complete a PowerPoint about Input, Output, hardware and networking. New content;</p> <ul style="list-style-type: none">• Wired V Wireless Networks• Network Topologies• The Internet• Network Security Threats• Network Security Measures <p>(this unit builds on from the knowledge gained in yr. 7 1A)</p> <p>Driver – “Computational Thinkers” – how Networks function</p> <p><i>Careers – Network Operations / Manager- responsibilities include monitoring network infrastructure and resolving system issues. You need to have experience with IT performance management, network administration and system security.</i></p> <p>Oracy – Students to discuss the key terms and develop definitions they can remember. Students discuss the word “Network” in both computing and non-computing terms.</p> <p>Virtues curriculum – Slides - Dangerous and unsafe behaviours / Damage to property (treating the IT suites with respects / Health and Safety in a computer room)</p>

Term	Year 7	Year 8
1B	<p>Intro to Publisher - students will modify a document to learn the common tools.</p> <p>Micro:Bit intro - Students will build on skills from KS2 to create a timer, they will further develop their understanding of key concepts such as;</p> <ul style="list-style-type: none">• Algorithms• Variables• Inputs• Outputs• Iteration• IF• Error Spotting• Testing solutions• Refining solutions <p>Micro: Bit project (Christmas) – Students to use Micro: Bits to create a series of animated decorations.</p> <p>Driver – “Computational Thinkers” – practical computing.</p> <p>Careers – <i>Programmer (Someone who can create secure and functional code to solve a problem or develop new software/apps)</i> Look at <u>Canva</u> to present outcomes – (look at screen capture of outcome (video))</p> <p>Oracy - Students describe how a LAN or WAN functions using a diagram. This helps them learn technical vocabulary and structure explanations. Get them to repeat instructions together out loud e.g. say Local Area Network repeat after me. Troubleshooting with the micro: bit – explain elements of a Micro: bit.</p> <p>Virtues curriculum – Slides – Attendance and Lateness (how this could have an impact on future careers)</p>	<p>Computers and the Law – Students to look at how the law affects their interaction with computers.</p> <ul style="list-style-type: none">• Computer Misuse act• Copyright, designs and Patents Act• Data Protection Act.• Malicious Communications Act• The Freedom of Information Act• Creative Commons licensing• Investigatory Powers Act 2016• GDPR – how it has replaced Data Protection <p>Create an Info Graphic (Publisher document) to inform others about the Laws relating to ICT. Talk to students about use of copyright images etc. CyberFirst overview - NCSC.GOV.UK (this unit is new knowledge for students but builds on skills gained in yr. 7 1B)</p> <p>Driver – “Critical Thinkers” – personal responsibilities, influence of legislation. CST – “<i>Subsidiarity</i>” – how does you use of technology affect others? How can you contribute to the creation of laws? CST – “<i>Stewardship of creation</i>” – You are stewards of creation. What are your responsibilities to ensure you are not infringing on the rights of others? CST – “<i>Dignity of work and participation</i>” – all workers have the right to contribute to society – How can technology aid this? How do we protect ourselves when using technology so that we stay within the law?</p> <p>Creating and Designing a Model (Spreadsheets) – students will plan and develop a spreadsheet model to enable them to efficiently plan an event. (*Extension – students can look at the costing for a campaign to advertise their events using traditional v social media)</p> <p>Careers – <i>Data Manager oversees the development and use of data systems. You will discover efficient ways to organize, store and analyse data with attention to security and confidentiality</i></p> <p>Oracy – students to discuss aspects of computing not yet covered by a law. Discussion on “banning under 16’s from smart phones.</p> <p>Virtues curriculum – Slides – Stealing (by breaching copyright you are essentially stealing) Homophobic Language / Name Calling and Bullying (by doing these online you are committing a crime)</p> <p>All classes to take part in Bebras Competition between 10th - 21st November 2025</p>

Term	Year 9
1	<p>Word – Students to develop practical skills in Word. Students will create a report about an Acceptable Use Agreement.</p> <p>Publisher - students will modify a document to learn the common tools.</p> <p>Careers in IT/Computing and Business – students will look at the jobs available Locally/Nationally and the skill needed.</p> <p>Students need to create a job advert for a possible job, a C.V.</p> <p><i>(this unit builds on from the knowledge gained in yr.7 1A.1B)</i></p> <p>Driver – “Critical Thinkers” – careers in Tech, impact of Tech on modern life.</p> <p>CST - “Dignity of the Human Person” – You have been created in the likeness of God! You are a gift from God, how does your future career give back and enhance your appreciation of that gift?</p> <p>CST – “Dignity of work and participation” – You have rights in your chosen career. How can technology infringe or support these?</p> <p>CST – “Stewardship of creation” – You are stewards of creation. How do careers and developments in technology impact on the planet? How can we use technology to reduce our environmental impact.</p> <p>Careers –</p> <ul style="list-style-type: none">• <i>Store Manager - is a professional who is responsible for overseeing the daily operations of their store, making sure it runs smoothly and effectively.</i>• <i>Payroll Accountant - prepare employee salary statements and process pay checks.</i>• <i>Research Assistant - is a professional who supports research projects by conducting literature searches, data management and maintaining files for project Researchers.</i>• <i>Data Engineer - is a data professional who uses their expertise in data engineering and programming to build systems that collect, manage and convert raw data into usable information for business analysts.</i> <p>Oracy – discussion on careers in the future. How AI will affect future jobs.</p> <p>Virtues curriculum – Slides – Attendance and Lateness (how this could have an impact on future careers)</p> <p>CyberFirst Girls Competition – registration September – Competition Late November</p>

Term	Year 7	Year 8
2A	<p>Intro to Excel - students will modify a document to learn the common tools.</p> <p>Creating and Designing a Model (Spreadsheets) – students will plan and develop a spreadsheet model to enable them to efficiently plan an event.</p> <p>Project Planning – graphs etc – random data e.g. hair, eye colour, shoe size. (categoric data – discrete data (shoe size) (ask size about data – arm, hand, height span (continuous data))</p> <p>Driver – “Computational Thinkers” - rules and instructions</p> <p><i>Careers - Data Manager (someone who oversees the development and use of data systems. This involves efficient ways to organize, store and analyse data with attention to security and confidentiality.)</i></p> <p>Oracy – Students explain how to carry out tasks in Word, Excel, or PowerPoint to a partner. E.g. “How to insert a formula in Excel”. Why/how Excel can be useful in our everyday lives and potential futures. Why error might occur in formula. What and why is a formula or function efficient?</p>	<p>Algorithms and Sorting – students will look at the basic fundamentals of computational thinking including;</p> <ul style="list-style-type: none">AlgorithmsRepresenting AlgorithmsLinear SearchBinary SearchBubble SortInsertion Sort <p>Students to create a document to explain Algorithms and Sorting. (this unit builds on from the knowledge gained in yr. 7 3A)</p> <p>Driver – “Computational Thinkers” – how computers handle information.</p> <p><i>Careers – Cybersecurity Analyst (is a professional who helps design and implement security systems to protect an organization's computer networks from cyber-attacks).</i></p> <p>Oracy – students to be able to describe each type of search or sort. Students should be able to come up with the steps for an Algorithm to solve a simple problem e.g. Line Ups</p> <p>Virtues curriculum – Slides – Line up (how this is an Algorithm)</p>

Term	Year 7	Year 8
2B	<p>Intro to PowerPoint - students will modify a document to learn the common tools.</p> <p>Driver – “Computational Thinkers” – creating solutions.</p> <p><i>Careers - A Web Designer (is a professional who is responsible for how company websites look and work. They have to consider the needs of the company and the intended audience of the website).</i></p> <p>People in Technology (PowerPoint / Internet Research) – students to research pioneers in technology such as Nancy Roman (Hubble), Mae Jemison (Challenger 3), Mark Zuckerberg (Facebook), Tim Berners-Lee (WWW). Students need to be able to comment on the reliability of sources.</p> <p>Driver – “Critical Thinkers” – Selection of information, reliability, bias etc.</p> <p><i>CST – “The Common Good” – People in technology can have a great impact on others. When we work together for the common good technology can positively impact the lives of all. Do we always allow everyone to contribute to developments? Are we aware of the impact some lesser know people in our society have had?</i></p> <p><i>Careers - Cybersecurity Analyst (is a professional who helps design and implement security systems to protect an organization's computer networks from cyber-attacks).</i></p> <p>Oracy – (Alternative – Codementum) One student explains a bug they encountered, and a peer suggests solution. Coding terminology – misconceptions. Debugging programs.</p> <p>Oracy - Reflect on what people did in technology, what drove innovation. People in technology and the way their discoveries, inventions or achievements affected the wider world</p> <p>Virtues curriculum – Slides – Racist Language / Homophobic Language (how people were discriminated against e.g. Hidden Figures or how Alan Turing was treated due to his sexuality).</p> <p>Hidden Figures (why and how) <i>Imitation Game</i> (have Into Film access)</p>	<p>Data Representation – students will look at how the computer stores information.</p> <ul style="list-style-type: none">Logic GatesTruth TablesLogic CircuitsBinary NumbersConverting between Binary and Decimal/DenaryCharactersImagesSoundCompression <p>Students to complete Knowledge booklet. (this unit builds on from the knowledge gained in yr. 7 1B)</p> <p>Driver – “Computational Thinkers” – how computers handle information.</p> <p><i>Careers – A Data Engineer is a data professional who uses their expertise in data engineering and programming to build systems that collect, manage and convert raw data into usable information for business analysts.</i></p> <p>Oracy – students can talk each other through the outcomes of a Truth table. Students can give each other instructions on converting between Binary and Decimal/Denary.</p>

Term	Year 9
2	<p>Recap of Networks – students to look at the hardware and software components that make up a Network. <i>Students to complete a PowerPoint about Input, Output, hardware and networking.</i> (*Extension – students can look at how PP can be used to be interactive like an APP)</p> <p><i>(this unit builds on from the knowledge gained in yr.8 1A)</i></p> <p>Advanced Excel – Students need to develop a series of linked pages to solve a brief.</p> <p>(*Extension – students can how the use of spreadsheets relates to Encryption e.g. VLOOKUP’s or random generators.)</p> <p><i>(this unit builds on from the knowledge gained in yr.7 2A)</i></p> <p>Driver – “Critical Thinkers” – data and information</p> <p><i>Careers - Computer Security Specialist - implements and maintains security systems. Responsible for preventing unauthorized access to our data and responding to privacy breaches.</i></p> <p>Oracy – Students need to be able to explain the parts of a formula and predict the outcomes – Q+A – will this work? What is the expected outcome? Why didn’t this work?</p>

Term	Year 7	Year 8
3A	<p>Algorithms and Sorting – students will look at the basic fundamentals of computational thinking including;</p> <ul style="list-style-type: none">AlgorithmsRepresenting AlgorithmsLinear Search <p>Driver – “Computational Thinkers” – how computers sort and search.</p> <p>App Lab – student will look at project development. Key aspects they need to understand are;</p> <ul style="list-style-type: none">Problem solvingDecompositionAbstractionProject planning <p>Classes will need to be registered on Code.org</p> <p>Driver – “Computational Thinkers” – planning a solution <i>Careers - Market Research Analyst is a professional who collects data from multiple sources and uses it to forecast trends to try and predict where the market will go in the future. They use current trends, then compare them with future expectations to make strategic decisions about where resources should go next.</i></p> <p>Oracy – Paired discussions: “Which sorting method is more efficient and why?”</p>	<p>Encryption – Students will look at how cryptology has evolved into modern encryption and its importance in the real world.</p> <p>Students to create a model using V-lookups to enable them to quickly encrypt / decrypt messages. <i>(this unit builds on from the knowledge gained in yr. 7 3B)</i></p> <p>Driver – “Computational Thinkers” – how encryption was developed and its effect on modern life.</p> <p>Add in Semaphores? (link to Networking) – Terry Pratchett (going postal)</p> <p><i>Careers – An Information Security Analyst is a professional in charge of designing and implementing protection for organization networks. They help set standards and maintain computer networks while protecting the company from cyber-attacks.</i></p> <p>Oracy – explain the difference between Information and Data – Explain the need for precise instructions when encoding or decoding a message – use a line shift to encode and decode messages.</p> <p>Virtues curriculum – Slides – Homophobic Language (how Alan Turing was treated due to his sexuality).</p>

Term	Year 7	Year 8
3B	<p>Living in a digital world – students will be able to define and apply their knowledge to a variety of situations;</p> <ul style="list-style-type: none">CommunicationOn the MoveEntertain MeSmart WorkingOnline Shopping <p>Students to complete knowledge booklet.</p> <p>Driver – “Critical Thinkers” – application of theory to solution</p> <p>Update – AI content -</p> <p>CST – “Option for the poor” You need to consider how access to technology can impact the poor. How does not having access to technology impact the opportunities available to the poorest in society? Can this widen the gap between rich and poor?</p> <p><i>Careers - Software Engineer is an IT professional who produces and implement functional software solutions for the company’s computer systems. They use their excellent organisation and problem-solving skills to take a lead on operational and technical projects.</i></p> <p>Oracy – Key terms – pairs to explain a key term. Discuss how technology impacts on society. Justify choices when choosing a solution to a problem e.g. why recommending a particular CPU.</p>	<p>Cybersecurity – students will look at the principals of cybersecurity including key elements;</p> <ul style="list-style-type: none">Value of dataHuman ErrorHackingMalwareThreats V Probability <p>Students to create a reference guide. CyberFirst overview - NCSC.GOV.UK <i>(this unit builds on from the knowledge gained in yr. 7 3B)</i></p> <p>Driver – “Computational Thinkers” – how to stay safe online.</p> <p>(Troy the Magician – Digital High Jack 2016)</p> <p><i>Careers – Computer Security Specialist = implement and maintain security systems. They are responsible for preventing unauthorized access to our data and responding to privacy breaches</i></p> <p>Oracy – look at the development of computing words e.g. Malware – Malicious Software. Discussion about the value of data e.g. cookies sold as transactional data to marketing companies.</p>

Term	Year 9
3	<div>Python Unit – Module Yr8 Intro to python (teach computing)</div> <div>Sequence selection iteration Sorting</div> <div>(this unit builds on from the knowledge gained in yr.8 2B)</div> <div>Driver – “Computational Thinkers” – text based coding to solve problems.</div> <div>Careers - Data Analyst - is a professional who collects and analyses data across the business to make informed decisions or assist other team members and leadership in making sound decisions.</div> <div>Oracy – syntax errors – importance of accuracy and what debugging means.</div>

KS4 Computer Science

Computing (J277/01 - 2020 Spec) This course is made up of 2 distinct papers which are equally weighted and examined with one 1hr 30mins paper for each.

J277/01: Computer systems - This component will introduce students to the Central Processing Unit (CPU), computer memory and storage, wired and wireless networks, network topologies, system security and system software.

Students must become familiar with the impact of Computer Science in a global context through the study of the ethical, legal, cultural and environmental concerns associated with Computer Science.

J277/02: Computational thinking, algorithms and programming - This component incorporates and builds on the knowledge and understanding gained in Component 01, encouraging students to apply this knowledge and understanding using computational thinking.

Students will be introduced to algorithms and programming, learn about programming techniques, how to produce robust programs, computational logic, translators and facilities of computing languages and data representation. Students will become familiar with computing related mathematics.

The course no longer has a set NEA but has a “Practical Programming” focus which means all students must be given the opportunity to undertake a programming task(s), either to a specification or to solve a problem (or problems), during their course of study. Students may draw on some of the content in both components when engaged in Practical Programming.

Due to the nature of the course we will be interleaving content from “Practical Programming” with both papers to ensure through coverage of all the required subject knowledge and coverage of programming skills. In year 10 Students will be introduced to concepts which are then revisited and knowledge secured.

Term	Year 10 Computer Science	Year 11 Computer Science
1A	<p>Yr.10 Autumn Term 1a Paper 1 –</p> <p>Computer systems (J277/01)</p> <p>1.1 - Systems Architecture: How the computer is designed and built. Von Neumann architecture provides the basis for the majority of the computers we use today. The fetch-decode-execute cycle describes how a processor functions. Sub topics include:</p> <ul style="list-style-type: none"> • The purpose of the CPU • CPU components • Von Neumann architecture • How common characteristics of CPUs affect their performance • Embedded systems <p>1.2 – Memory and Storage: Memory how data essential to the operation of the computer is accessed. Primary memory is a key component of a computer system. Its function is to hold data and programs that are currently in use. Storage how data is stored on the system. Computers need to be able to store programs and data when the power is switched off. Secondary storage is used to hold data and programs when the computer is not in use. Sub topics include:</p> <ul style="list-style-type: none"> • Primary storage • Secondary storage • Common types of storage • Units of data storage • Data storage • Compression <p><i>CST - Stewardship of creation - we are all called to care for creation as stewards of it, not simply consumers, taking what we can get from the earth. How does computing technology impact on the environment? How can we ensure technology is used for the greater good and not for unethical reasons?</i></p> <p>2.1 / 2.2 Programming Fundamentals It is important that there is a good understanding of the fundamental rules and ways of working required to build, test and debug success working programs. Python is a general-purpose programming language that can be used on any modern computer operating system. It can be used for processing text, numbers, images, scientific data and just about anything else you might save on a computer.</p> <p>Subtopics include:</p> <ul style="list-style-type: none"> • Introduction to Python • The use of variables, constants, operators, inputs, outputs and assignments <p><i>Students will be assessed regularly using Teams – “Do it now” Quizzes as well as a selection of exam style questions and plenary quizzes leading to a summative end of unit assessment.</i></p>	<p>Students will further develop the basic concepts they have developed a foundation knowledge of.</p> <p><u>New content:</u></p> <ul style="list-style-type: none"> • 2.1 Algorithms <ul style="list-style-type: none"> ○ Truth tables • 2.2.3 Additional programming techniques <ul style="list-style-type: none"> ○ The use of basic string manipulation ○ The use of basic file handling operations: <ul style="list-style-type: none"> ▪ Open ▪ Read ▪ Write ▪ Close <p><u>Review content:</u></p> <ul style="list-style-type: none"> • Paper 1 content to be tailored to students’ progress at this time and relevant assessment data. <p><i>Students will be assessed regularly using Teams – “Do it now” Quizzes as well as a selection of exam style questions and plenary quizzes leading to a summative end of unit assessment.</i></p>
1B	<p>1.3 – Networks and Protocols:</p> <p>What are networks and how we use them. Networking computers brings many benefits to users. Without networking, many computing applications would not be possible.</p>	<p><u>New content:</u></p> <ul style="list-style-type: none"> • 2.2.3 Additional programming techniques

	<p>Subtopics include:</p> <ul style="list-style-type: none"> • Networks and topologies • Factors that affect the performance of networks • The different roles of computers in a client-server and a peer-to-peer network • The hardware needed to connect stand-alone computers into a LAN • Transmission media • Networks and topologies • Wired and wireless networks, protocols and layers • Standards • Common protocols • The concept of layers <p><i>CST – The economy must serve people, not the other way around. Work is more than a way to make a living; it is a form of continuing participation in Gods creation. If the dignity of work is to be protected, then the basic rights of workers must be respected--the right to productive work, to decent and fair wages, to the organization and joining of unions, to private property, and to economic initiative. How does the use of computer networks enable the improvement and development of such activities?</i></p> <p>2.1 / 2.2 Programming Fundamentals It is important that there is a good understanding of the fundamental rules and ways of working required to build, test and debug success working programs. Python is a general-purpose programming language that can be used on any modern computer operating system. It can be used for processing text, numbers, images, scientific data and just about anything else you might save on a computer.</p> <p>Subtopics include:</p> <ul style="list-style-type: none"> • The common arithmetic operators • The use of the three basic programming constructs used to control the flow of a program <p>Data types 1.4 – Network Security It is vital to understand the need for networks to be secured from unauthorised use and protected from potential attack. Subtopics include:</p> <ul style="list-style-type: none"> • Threats to computer systems and networks - Forms of attack • Identifying and preventing vulnerabilities • Common prevention methods <p><i>Students will be assess regularly using Teams – “Do it now” Quizzes as well as a selection of exam style questions and plenary quizzes leading to a summative end of unit assessment.</i></p>	<ul style="list-style-type: none"> ○ The use of arrays (or equivalent) when solving problems, including both one-dimensional and two-dimensional arrays ○ How to use sub programs (functions and procedures) to produce structured code ○ Random number generation <p><u>Review content:</u></p> <ul style="list-style-type: none"> • Paper 1 content to be tailored to students’ progress at this time and relevant assessment data. <p><i>Students will be assessed regularly using Teams – “Do it now” Quizzes as well as a selection of exam style questions and plenary quizzes leading to a summative end of unit assessment.</i></p>
2A	<p>1.5 – Systems Software It is important to understand the different roles and functions each of the different pieces of software performs in allowing users to use and maintain computer systems. Subtopics include:</p> <ul style="list-style-type: none"> • Operating systems - The purpose and functionality of operating systems • Utility software - The purpose and functionality of utility software • Utility system software <p>2.2 Programming Fundamentals (As above) Subtopics include:</p> <ul style="list-style-type: none"> • The use of variables, constants, operators, inputs, outputs and assignments • The common arithmetic operators The use of the three basic programming constructs used to control the flow of a program 	<p><u>New content:</u></p> <ul style="list-style-type: none"> • 2.2.3 Additional programming techniques <ul style="list-style-type: none"> ○ The use of records to store data ○ The use of SQL to search for data <p><u>Review content:</u></p> <ul style="list-style-type: none"> • Paper 1 content TBA • Paper 2 content TBA <p><i>Students will be assessed regularly using Teams – “Do it now” Quizzes as well as a selection of exam style questions and plenary quizzes leading to a summative end of unit assessment.</i></p>

	<ul style="list-style-type: none"> Interpreting questions to understand how to apply programming concepts to situational questions. <p>Data types 1.6 - Ethical, legal, cultural and environmental concerns How computing affects everyday life, the laws and how ethics should be considered in what we use computing for. The use of computers has brought about ethical, legal, cultural and environmental impacts. These issues increasingly affect people's daily lives.</p> <p><i>CST - Stewardship of creation - we are all called to care for creation as stewards of it, not simply consumers, taking what we can get from the earth. How does computing technology impact on the environment? How can we ensure technology is used for the greater good and not for unethical reasons?</i></p> <p>Subtopics include:</p> <ul style="list-style-type: none"> Impacts of digital technology on wider society Legislation relevant to Computer Science <p><i>Students will be assessed regularly using Teams – “Do it now” Quizzes as well as a selection of exam style questions and plenary quizzes leading to a summative end of unit assessment.</i></p>	
2B	<p>2.1 – Algorithms Students will be introduced to algorithms and programming, learn about programming techniques, how to produce robust programs, computational logic, translators and facilities of computing languages and data representation. Students will become familiar with computing related mathematics.</p> <p>Subtopics include:</p> <ul style="list-style-type: none"> Principles of computational thinking Designing, creating and refining algorithms Create, interpret, correct, complete and refine algorithms using pseudocode Identify common errors <p><i>CST - Rights and Responsibilities. The Catholic tradition teaches that human dignity can be protected and a healthy community can be achieved only if human rights are protected and responsibilities are met. Therefore, every person has a fundamental right to life and a right to those things required for human decency. Corresponding to these rights are duties and responsibilities--to one another, to our families, and to the larger society. In our increasingly automated society, any errors or oversights can have drastic impacts on people's lives and wellbeing. How can efficient, effective and careful programming ensure people's safety and privacy?</i></p> <p>2.2 Programming Fundamentals (As above) Subtopics include:</p> <ul style="list-style-type: none"> The use of variables, constants, operators, inputs, outputs and assignments The common arithmetic operators The use of the three basic programming constructs used to control the flow of a program. Data types <p><i>Students will be assessed regularly using Teams – “Do it now” Quizzes as well as a selection of exam style questions and plenary quizzes leading to a summative end of unit assessment.</i></p>	<p><u>Review content:</u></p> <ul style="list-style-type: none"> TBA based on mock exam results.
3A	<p>2.1 Algorithms (As above)</p> <p>Subtopics include:</p> <ul style="list-style-type: none"> Searching and sorting algorithms <p>2.2 Programming Fundamentals (As above)</p> <p>Subtopics include:</p>	<p><u>Review content:</u></p> <ul style="list-style-type: none"> TBA based on assessment Exam practice

	<ul style="list-style-type: none"> • The use of variables, constants, operators, inputs, outputs and assignments • The common arithmetic operators the use of the three basic programming constructs used to control the flow of a program • Data types <p><i>CST - Rights and Responsibilities. The Catholic tradition teaches that human dignity can be protected and a healthy community can be achieved only if human rights are protected and responsibilities are met. Therefore, every person has a fundamental right to life and a right to those things required for human decency. Corresponding to these rights are duties and responsibilities--to one another, to our families, and to the larger society. In our increasingly automated society, any errors or oversights can have drastic impacts on people's lives and wellbeing. How can efficient, effective and careful programming ensure people's safety and privacy?</i></p> <p>2.3 Producing Robust Programs How to build a program effectively and efficiently. Programs must run correctly or they are of little value. Careful planning and testing of a program are essential, as is writing maintainable code.</p> <p>Subtopics include:</p> <ul style="list-style-type: none"> • Defensive design • Defensive design considerations Input validation • Maintainability • Testing • The purpose of testing • Types of testing • Identify syntax and logic errors • Selecting and using suitable test data • Refining algorithms <p><i>Students will be assessed regularly using Teams – “Do it now” Quizzes as well as a selection of exam style questions and plenary quizzes leading to a summative end of unit assessment.</i></p>	
3B	<p>2.2 Programming Fundamentals (As above)</p> <p>Subtopics include:</p> <ul style="list-style-type: none"> • The use of variables, constants, operators, inputs, outputs and assignments • The common arithmetic operators • The use of the three basic programming constructs used to control the flow of a program • Data types <p><i>CST - Rights and Responsibilities. The Catholic tradition teaches that human dignity can be protected and a healthy community can be achieved only if human rights are protected and responsibilities are met. Therefore, every person has a fundamental right to life and a right to those things required for human decency. Corresponding to these rights are duties and responsibilities--to one another, to our families, and to the larger society. In our increasingly automated society, any errors or oversights can have drastic impacts on people's lives and wellbeing. How can efficient, effective and careful programming ensure people's safety and privacy?</i></p>	

	<p>2.4 Boolean Logic At the simplest level, computers are little more than a collection of transistors and circuits. They connect together to form logic gates, which in turn are used to form logic circuits.</p> <p>Subtopics include:</p> <ul style="list-style-type: none"> • Simple logic diagrams using the operators AND, OR and NOT • Truth tables • Combining Boolean operators using AND, OR and NOT • Applying logical operators in truth tables to solve problems <p>2.5 Languages & IDE Translators are needed to translate programs written in high level languages into the machine code that a computer understands. Tools exist to help programmers develop error-free code.</p> <p>Subtopics include:</p> <ul style="list-style-type: none"> • Languages • Characteristics and purpose of different levels of programming language • The purpose of translators • The characteristics of a compiler and an interpreter • The Integrated Development Environment (IDE) • Common tools and facilities available in an Integrated Development Environment. <p><i>Students will be assessed regularly using Teams – “Do it now” Quizzes as well as a selection of exam style questions and plenary quizzes leading to a summative end of unit assessment.</i></p>	
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KS4 Digital Information Technology

The digital sector is a major source of employment in the UK. Despite a turbulent economy in 2020 the Digital sector in the UK advertised 90,000 jobs per week during. Digital skills span all industries, and almost all jobs in the UK today require employees to have a good level of digital literacy. The UK Tech industry as a whole employ over 2.93 million people and has seen 40% growth between 2017-2019. The UK has positioned itself to be the 'Digital capital of Europe' as it continues to invest billions every year in digital skills and commerce. The modern world expects digital skills to be as important as English and maths. Having both technical skills and business understanding is the key to success.

What does the qualification cover?

The Tech Award gives learners the opportunity to develop sector-specific applied knowledge and skills through realistic vocational contexts. The main focus is on four areas of equal importance, which cover the:

- development of key skills that prove your aptitude in digital information technology, such as project planning, designing and creating user interfaces and dashboards as a way to present and interpret data
- process that underpins effective ways of working in digital information technology, such as project planning, the iterative design process, cyber security, virtual teams, legal and ethical codes of conduct
- attitudes that are considered most important in digital information technology, including personal management and communication
- knowledge that underpins effective use of skills, process and attitudes in the sector 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.

Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology				
Component number	Component title	GLH	Level	How assessed
1	Exploring User Interface Design Principles and Project Planning Techniques	36	1 / 2	Internal
2	Collecting, Presenting and Interpreting Data	36	1 / 2	Internal
3	Effective Digital Working Practices	48	1 / 2	External Synoptic

Term	Year 10 Digital Information Technology (1 st Teaching Sept 2024)
1A	<p>Component 1: Exploring User Interface Design Principles and Project Planning Techniques (PSA to be completed Nov 2024)</p> <p><i>Learning outcome A: Understand interface design for individuals and organisations</i></p> <p><i>A1 User interfaces</i></p> <p>Learners will understand the use of different types of user interface and how they vary across different uses, devices and purposes.</p> <ul style="list-style-type: none"> • Types of user interface: * text based * speech/natural language * graphical user interface (GUI)/windows, icons, menus, pointer (WIMP) * sensors * menu/forms. • Range of uses and devices, to include: * computers * handheld devices to include smartphones, tablets, laptops, e-readers * entertainment systems to include games console, home theatre system * domestic appliances to include air conditioners, dishwashers, tumble dryers, freezers, washing machines, microwave ovens * controlling devices to include security lights, central heating controllers * embedded systems to include electronic parking meters, traffic lights, vending machines, smartwatches/digital wristwatches, robotic vacuum cleaners. • Factors affecting the choice of user interface: * performance/response time * ease of use * user requirements * user experience * accessibility * storage space. • Hardware and software influences: * operating systems/platforms * types/size of screen, to include touchscreen, traditional displays * types of user input, to include keyboard, mouse, voice, gestures * hardware resources available, to include processing power, memory * emerging technologies, to include new innovations of input techniques. <p><i>A2 Audience needs</i></p> <p>Learners will understand the varying needs of the audience and how they affect both the type and the design of the interface.</p> <ul style="list-style-type: none"> • Accessibility needs: * visual * hearing * speech * motor * cognitive. • Skill level: * expert * regular * occasional * novice. • Demographics: * age * beliefs/values * culture * past experiences. <p><i>A3 Design principles</i></p> <p>Learners will understand how design principles provide both appropriate and effective user interaction with hardware devices.</p> <ul style="list-style-type: none"> • Colours: * use of a limited range of colours * use of organisational house style * ensuring that colours do not clash * use of textures, to include glossy, corporate textures in colours, warm, fabric-style textures. • Font style/size: * ensuring text style/size is readable * use of sans serif fonts for screen reading * avoiding decorative fonts. • Language: * using appropriate language for user needs, to include age-appropriate language * using language that is appropriate for user skill level. • Amount of information: * providing appropriate amount of information for the task * making appropriate use of white space. • Layout: * consistency throughout the whole interface * keeping the layout as close as possible to user expectations * placing important items in prominent positions * grouping related tasks together * use of navigational components to include search fields, breadcrumbs, icons * use of input controls, to include dropdown lists, tick boxes, toggles. • User perception of: * colour, to include green to indicate go/successful interactions, orange to indicate warnings, red to indicate stop/errors * sound, to include positive high-pitched sounds, negative low-pitched sounds * symbols, to include green ticks, red crosses o visuals, to include photographs, symbols, graphics. • Retaining user attention: * grabbing attention, to include pop-up messages, flashing graphics, sound, animation * ensuring the screen is uncluttered * clearly labelled items/features * use of predetermined/default values for common user inputs * use of autofill to reduce the amount of data entry needed, to include postcodes * use of tip text to provide help if the user is unsure what buttons/tools do. • Intuitive design: * use graphics to denote what buttons do * helpful pop-up messages * easy-to-use help features * ensuring consistency * easy reversal of actions. <p><i>A4 Designing an efficient user interface</i></p> <p>Learners will understand the techniques that can be used to improve both the speed and access to user interfaces.</p> <ul style="list-style-type: none"> • Use of keyboard shortcuts • Informative feedback • Easy reversal of actions • Ensuring buttons/links are distinguishable • Using bigger objects to influence selection and reduce selection time • Making objects stand out to reduce focus time • Placing related objects next to each other to reduce selection time. <p><i>Learning outcome B: Be able to use project planning techniques to plan, design and develop a user interface</i></p> <p><i>B1 Project planning techniques</i></p> <p>Learners will understand the use of different planning tools and design methodologies that can be used to plan, monitor and execute projects.</p>

	<ul style="list-style-type: none"> Planning tools: * task lists * written or graphical descriptions * Gantt charts * mood boards * mind maps. Methodologies: * waterfall * agile * scrum. <p>B2 Creating a project proposal and plan Learners will understand project planning techniques used to develop a project proposal and project plan for the development of a user interface for a given brief. Project proposal:</p> <ul style="list-style-type: none"> Purpose and audience. Project requirements: * user requirements * output requirements, to include visual, audio, haptic * input requirements, to include mouse, keyboard, voice, touch. User accessibility requirements. Constraints: * time * resources * task dependencies * security. <p>Project plan:</p> <ul style="list-style-type: none"> Timescales: * overall timescale * when tasks will be completed, including sub-tasks * key milestones.
1B	<p>Component 1: Exploring User Interface Design Principles and Project Planning Techniques (PSA to be completed Nov 2024)</p> <p>B3 Creating an initial design Learners will understand how to produce an initial design using design principles.</p> <ul style="list-style-type: none"> Producing a design that meets: * the user requirements, including input and output requirements * user accessibility needs. Producing a design specification that includes: * visualisation, to include storyboards, sketches * hardware requirements * software requirements. Producing a design that allows for: * increased user confidence/familiarity * reduced learning time of new interfaces/features * reduced time to complete tasks o increased user attention * reduced need for specialised knowledge. <p>B4 Developing a user interface Learners will understand how to use their design to produce a user interface.</p> <ul style="list-style-type: none"> Initial design using the design principles listed in A3 Design principles. <p>Learning outcome C: Be able to review a user interface C1 Review Learners will understand how to review the success of the user interface and the use of their chosen project planning techniques.</p> <ul style="list-style-type: none"> Strengths and weaknesses of the user interface, to include: o how well the user requirements have been met o suitability for purpose and audience o ease of use o accessibility features o how effectively the design principles have been met. Suggest improvements that could be made to the user interface to better meet the audience needs.
2A	<p>Component 2: Collecting, Presenting and Interpreting Data (PSA to be completed April 2025)</p> <p>Learning outcome A: Understand how data is collected and used by organisations and its impact on individuals A1 Characteristics of data and information Learners will understand the concepts of data and that data is meaningless without converting it into information by adding structure and context.</p> <ul style="list-style-type: none"> Characteristics of data: * no meaning * no structure * no context * unprocessed. Characteristics of information: * has meaning * has structure * has context * is processed. <p>A2 Representing information Learners will understand the different ways of representing information and will be able to explain situations where they would be used.</p> <ul style="list-style-type: none"> Text Numbers Tables Graphs/charts Sparklines Infographics. <p>A3 Ensuring data is suitable for processing Learners will understand the methods that can be used to ensure data input is suitable and within boundaries so that it is ready to be processed.</p> <ul style="list-style-type: none"> Validation methods: * range check * type check * presence check * length check. Verification methods: * proofreading * double entry. <p>A4 Data collection Learners will understand the different types of data collection methods, the strengths and weaknesses of each, how data collection features affect its reliability and how the collection of data could be improved.</p>

	<ul style="list-style-type: none"> Data collection methods: <ul style="list-style-type: none"> Primary data: * interviews * questionnaires * surveys * Secondary data: * websites * books * journals * blogs * forums * booking systems * company internal documents. Data collection features: * size of sample * who was in the sample * where the data was collected * when the data was collected * methods used. <p>A5 Quality of information</p> <p>Learners will understand the factors that affect the quality of information.</p> <ul style="list-style-type: none"> Quality of information factors: * source/collection method * accuracy * age * completeness * amount of detail * format/presentation * volume. <p>A6 Sectors that use data modelling</p> <p>Learners will understand how different types of data are used by organisations for data modelling.</p> <ul style="list-style-type: none"> Types of sectors, to include: * transport * education * retail * banking * entertainment * government * health care * construction * communication * health and safety * sport and fitness. <p>A7 Threats to individuals</p> <p>Learners will understand the different threats that face individuals who have data stored about them.</p> <ul style="list-style-type: none"> Threats to individuals, to include: * invasion of privacy * fraud * targeting vulnerable groups of people * inaccurate data could be stored. <p><i>Learning outcome B: Be able to create a dashboard using data manipulation tools</i></p> <p>B1 Data processing methods</p> <p>Learners will understand how data can be imported from an external source. They will then explore how to accurately apply data processing methods to aid decision making. These include:</p> <ul style="list-style-type: none"> data manipulation methods: * importing data, to include from other files, the internet * formulae, to include add, divide, subtract, multiply * functions, to include SUM, AVERAGE, MIN, MAX * sorting, to include sorting multiple columns and values. advanced manipulation methods: <ul style="list-style-type: none"> decision-making functions, to include; IF, WHATIF, SUMIF lookup functions, to include; VLOOKUP, HLOOKUP count functions, to include; COUNTBLANK, COUNTIF, COUNTA logical operators, to include; NOT, AND, OR outline, to include; group, ungroup subtotal to include; AVERAGE, SUM, MIN, MAX, COUNT, COUNTA filtering, to include; greater than, less than, equals, contains, begins with, ends with, text to columns, to include delimited, fixed width. other processing methods: <ul style="list-style-type: none"> absolute and relative cell referencing, to include; use of dollar sign (\$) and named cells macros, to include; for automatic navigation, change graph options, change data ranges multiple and linking worksheets, to include; for dashboard and raw data * cell comments * alternative views, to include hiding/unhiding cells, freezing planes * conditional formatting, to include data bars, colour scales, icon sets.
2B	<p>Component 2: Collecting, Presenting and Interpreting Data (PSA to be completed April 2025)</p> <p>B2 Producing a dashboard</p> <p>Learners will use a dashboard to select and display information summaries based on a given data set.</p> <ul style="list-style-type: none"> Showing data summaries from the data set: * totals * counts * averages * percentages * sales breakdowns * departmental/section breakdown. Appropriate presentation methods: * tables * pivot tables * sparklines * graphs/charts, including dynamic charts/graphs * form controls, to include button, combo box, check box, spin button (spinner), dropdown menu, option button. Using appropriate presentation features: * font size, style and colour * merge cells * text wrap * cell borders and shading * graphics * axis labels * titles, including overall and section titles * conditional formatting. <p><i>Learning outcome C: Be able to draw conclusions and review data presentation methods</i></p> <p>C1 Drawing conclusions based on findings in the data</p> <p>Learners will use a dataset and dashboard to present findings and draw conclusions based on their findings.</p> <ul style="list-style-type: none"> Findings, to include: * trends * patterns * possible errors.

	<p>C2 How presentation affects understanding</p> <p>Learners will investigate how well the presentation methods and features listed in B2 have been used, to ensure they do not lead to:</p> <ul style="list-style-type: none"> • information being misinterpreted • information being biased • inaccurate conclusions being made.
3A	<p>Component 3: Effective Digital Working Practices (External paper to be completed Jan 2026)</p> <p>A Modern technologies</p> <p>Learners should learn about how current and modern technologies are used by and have an impact on organisations and their stakeholders. Learners need to know the ways in which organisations and associated individuals use modern technologies to exchange information, communicate, and complete work-related tasks. Learners must be able to apply their knowledge to a range of vocational contexts.</p> <p>A1 Modern technologies</p> <p>Understand how and why modern technologies are used by organisations and stakeholders to access and manipulate data, and to provide access to systems and tools in order to complete tasks. Learners should understand the implications of these tools and technologies for organisations and stakeholders.</p> <ul style="list-style-type: none"> • Communication technologies: *setting up ad hoc networks (open Wi-Fi, tethering/personal hotspot) * security issues with open networks * performance issues with ad hoc networks • issues affecting network availability (rural versus city locations, developed versus developing countries, available infrastructure, mobile network coverage, blackspots). • Features and uses of cloud storage: * setting and sharing of access rights * synchronisation of cloud and individual devices * availability (24/7) * scalability (getting more by renting/freeing to save money). • Features and uses of cloud computing: * online applications * consistency of version between users (features, file types) * single shared instance of a file * collaboration tools/features. • How the selection of platforms and services impacts on the use of cloud technologies: * number and complexity of features * paid for versus free * interface design (layout, accessibility, mobile versus desktop) * available devices. • How cloud and ‘traditional’ systems are used together: * device synchronisation * online/offline working * notifications. • Implications for organisations when choosing cloud technologies: * consideration of disaster recovery policies (service provider’s, organisation’s) * security of data (location, service provider’s security procedures and features) * compatibility • maintenance (software updates, downtime, staff expertise) * getting a service/storage up and running quickly • performance considerations (responsiveness to user, complexity of task, available devices and communication technologies). <p>A2 Impact of modern technologies</p> <p>Learners should understand how modern technologies impact on the way organisations perform tasks. Learners should understand how technologies are used to manage teams, to enable stakeholders to access tools and services, and to communicate effectively. Learners should understand the positive and negative impact that the use of modern technologies has on organisations and stakeholders.</p> <ul style="list-style-type: none"> • Changes to modern teams facilitated by modern technologies: * world teams (not bound by geographical restrictions, diversity) * multicultural * inclusivity (facilitation of member’s needs) *24/7/365 (no set work hours, team members in different time zones) * flexibility (remote working versus office based, permanent versus casual staff). • How modern technologies can be used to manage modern teams: * collaboration tools * communication tools * scheduling and planning tools. • How organisations use modern technologies to communicate with stakeholders: * communication platforms (website, social media, email, voice communication) * selection of appropriate communication channels (private/direct message, public status update) for sharing information, data and media. • How modern technologies aid inclusivity and accessibility: * interface design (layout, font and colour selection) * accessibility features (screen reader support, alt text, adjustable typeface/font size, text to speech/’listen to this page’) *flexibility of work hours and locations. • Positive and negative impacts of modern technologies on organisations in terms of: * required infrastructure (communication technologies, devices, local and web-based platforms) * demand on infrastructure of chosen tools/platforms <ul style="list-style-type: none"> ○ availability of infrastructure * 24/7 access or security of distributed/dispersed data * collaboration or inclusivity (age, health, additional needs, multicultural) ○ accessibility (meeting legal obligations, provision requirements) * remote working. • Positive and negative impacts of modern technologies on individuals: * flexibility (home/remote working) * working styles (choice of time, device, location) * impact on individual’s mental wellbeing (depression, loneliness, self-confidence, separation from stressful environment, feel in control of own schedule, schedule adjusted to meet needs of family, less time commuting).

	<p><i>B Cyber security</i></p> <p>Learners must understand how the increased reliance of organisations on digital systems to hold data and perform vital functions presents a range of challenges and dangers. They should understand the nature of threats to digital systems and ways that they can be mitigated through organisation policy, procedures and the actions of individuals. They should be able to apply knowledge of cyber security to a range of vocational contexts.</p> <p><i>B1 Threats to data</i></p> <p>Learners should understand why systems are attacked, the nature of attacks and how they occur, and the potential impact of breaches in security on the organisation and stakeholders.</p> <ul style="list-style-type: none"> • Why systems are attacked: <ul style="list-style-type: none"> ○ fun/challenge * industrial espionage or financial gain * personal attack * disruption * data/information theft. • External threats (threats outside the organisation) to digital systems and data security: <ul style="list-style-type: none"> * unauthorised access/hacking (black hat) * malware (virus, worms, botnet, rootkit, Trojan, ransomware, spyware) * denial of service attacks or phishing (emails, texts, phone calls) * pharming * social engineering * shoulder surfing * ‘man-in-the-middle’ attacks. • Internal threats (threats within the organisation) to digital systems and data security: <ul style="list-style-type: none"> * unintentional disclosure of data * intentional stealing or leaking of information * users overriding security controls * use of portable storage devices * downloads from internet * visiting untrustworthy websites. • Impact of security breach: <ul style="list-style-type: none"> * data loss * damage to public image * financial loss * reduction in productivity * downtime * legal action. <p><i>B2 Prevention and management of threats to data</i></p> <p>Learners should understand how different measures can be implemented to protect digital systems. They should understand the purpose of different systems and how their features and functionality protect digital systems. Learners should understand how one or more systems or procedures can be used to reduce the nature and/or impact of threats.</p> <ul style="list-style-type: none"> • User access restriction: <ul style="list-style-type: none"> * physical security measures (locks) * passwords * using correct settings and levels of permitted access * biometrics * two-factor authentication (who you are, what you know, what you have). • Data level protection: <ul style="list-style-type: none"> * firewall (hardware and software) * software/interface design (obscuring data entry, autocomplete, ‘stay logged in’) * anti-virus software * device hardening * procedures for backing up and recovering data * encryption of stored data (individual files, drive) * encryption of transmitted data. • Finding weaknesses and improving system security: <ul style="list-style-type: none"> * ethical hacking (white hat, grey hat) * penetration testing * analyse system data/behaviours to identify potential risks. <p><i>B3 Policy</i></p> <p>Learners should understand the need for and nature of security policies in organisations. They should understand the content that constitutes a good security policy and how it is communicated to individuals in an organisation. To ensure that potential threats and the impact of security breaches are minimised, learners should understand how procedures in security policies are implemented in organisations.</p> <ul style="list-style-type: none"> • Defining responsibilities: <ul style="list-style-type: none"> * who is responsible for what * how to report concerns * reporting to staff/employees. • Defining security parameters: <ul style="list-style-type: none"> * password policy * acceptable software/installation/usage policy * parameters for device hardening. • Disaster recovery policy: <ul style="list-style-type: none"> * who is responsible for what * dos and don’ts for staff * defining the backup process (what is backed up, scheduling, media) * timeline for data recovery * location alternative provision (hardware, software, personnel). • Actions to take after an attack: <ul style="list-style-type: none"> * investigate (establish severity and nature) * respond (inform/update stakeholders and appropriate authorities) * manage (containment, procedures appropriate to nature and severity) * recover (implement disaster recovery plan, remedial action) * analyse (update policy and procedures).
3B	<p>Component 3: Effective Digital Working Practices (External paper to be completed Jan 2026)</p> <p><i>C The wider implications of digital systems</i></p> <p>Learners should understand the wider implications of digital systems and their use. Learners should understand how legislation covering data protection, computer crimes and intellectual property has an impact on the way that organisations and individuals use digital systems and data. Learners should understand the procedures that organisations must follow in order to conform to legal requirements and professional guidelines.</p> <p><i>C1 Responsible use</i></p> <p>Learners should consider the responsible use of digital systems, including how systems and services share and exchange data as well as the environmental considerations of increased use.</p> <ul style="list-style-type: none"> • Shared data (location-based data, transactional data, cookies, data exchange between services): <ul style="list-style-type: none"> * benefits of using shared data * drawbacks of using shared data * responsible use (legal considerations, privacy, ethical use).

- **Environmental:** *impact of manufacturing, use, and disposal of IT systems (energy, waste, rare materials) *considerations when upgrading or replacing digital systems * usage and settings policies (auto power off, power-saving settings, hard copy versus electronic distribution).

C2 Legal and ethical

Learners should understand the scope and purpose of legislation (valid at time of delivery) that governs the use of digital systems and data, and how it has an impact on the ways in which organisations use and implement digital systems. Learners should understand the wider ethical considerations of use of technologies, data and information, and organisations’ responsibilities to ensure that they behave in an ethical manner.

- Importance of providing equal access to services and information: * benefits to organisations, individuals and society * legal requirements * professional guidelines/accepted standards.
- Net neutrality and how it impacts on organisations.
- The purpose and use of acceptable use policies: * scope – who the document applies to * assets – the equipment, documents, and knowledge covered by the policy * acceptable – behaviours that are expected/required by an organisation * unacceptable – behaviours that are not allowed by an organisation * monitoring – description of how behaviour is monitored by an organisation * sanctions – defining the processes and potential sanctions if unacceptable behaviour occurs * agreement – acknowledge (sign, click) that an individual agrees to abide by the policy.
- Blurring of social and business boundaries: * use of social media for business purposes * impact of personal use of digital systems (social media, web) on professional life.
- Data protection principles: * lawful processing * collected only for specific purpose * only needed information is collected * should be accurate * kept only as long as is necessary * data subject rights * protected * data subject rights not transferred to countries with less protection.
- Data and the use of the internet: * the right to be forgotten * appropriate and legal use of cookies and other transactional data.
 - Dealing with intellectual property: * the importance of intellectual property in organisations * methods of identifying/protecting intellectual property (trademarks, patents, copyright) * legal and ethical use of intellectual property (permissions, licensing, attribution).
- The criminal use of computer systems: * unauthorised access * unauthorised modification of materials * creation of malware * intentional spreading of malware.

D Planning and communication in digital systems

Learners should be able to interpret and use standard conventions to combine diagrammatical and written information to express an understanding of concepts.

D1 Forms of notation

- Understand how organisations use different forms of notation to explain systems, data and information: * data flow diagrams * flowcharts * system diagrams * tables * written information.
- Be able to interpret information presented using different forms of notation in a range of contexts.
- Be able to present knowledge and understanding using different forms of notations:
 - data flow diagrams * information flow diagrams * flowcharts.

KS4 Business

BTEC Tech Award in ENTERPRISE BTEC Level 1/Level 2 Tech Award in Enterprise, is for students who wish to acquire knowledge and skills through vocational contexts by studying the knowledge, behaviours and skills related to researching, planning, pitching and reviewing an enterprise idea as part of their Key Stage 4 learning.

The qualification enables students to develop their technical skills, such as market research skills, planning, promotional and financial skills using realistic work scenarios, and personal skills, (such as monitoring own performance, time management and problem solving) through a practical and skills based approach to learning and assessment.

Students will acquire knowledge, understanding and skills to underpin their practical activities in assessment, which will complement their GCSEs.

Term	Year 10 Business	Year 11 Business
1A	<p>General Business – Foundation Learning. Students will gain valuable general business knowledge which is not exam board specification focused.</p> <p>Ownerships – students will look at the different types of ownerships for a business and the impact this can have on the owners of the business e.g. liability. Students will understand the advantages and disadvantages of each type of ownership and be able to recommend ownership models based on scenarios.</p> <ul style="list-style-type: none"> • Sole Traders • Partnerships • Public Limited Companies • Private Limited Companies • Franchises • Charities <p>Stakeholders – student will look at all of the different groups with an interest in the performance and running of a business. The will be able to identify the impact a business may have on its shareholders.</p> <ul style="list-style-type: none"> • Owners • Employees • Suppliers • Customers • The general public • Government • Pressure Groups <p><i>CST – “The Common Good” – The common good means that the fruits of the earth belong to everyone. How could a business Aim of maximising profit bring them into conflict with others? Do some businesses prioritise profit this over the common good?</i></p> <p>Functional - students will look at the different functional areas within businesses. They will be able to identify why some business will have departments to look after each function and other business will have to multitask.</p> <ul style="list-style-type: none"> • Administration • Marketing • Distribution • Research and development • ICT • Production • Human resources • Purchasing • Sales • Finance • Customer service <p><i>Assessed through ongoing exam questions.</i></p>	<p>A2 Plan for a micro-enterprise</p> <p>Learners will draw on research to complete an accurate and realistic business plan for their chosen micro-enterprise idea within a given budget, to include:</p> <p>Ownership of the micro-enterprise:</p> <ul style="list-style-type: none"> • sole trader • social enterprise. <p>Aims of the micro-enterprise:</p> <ul style="list-style-type: none"> • financial aims: to make a profit, to break-even • non-financial aims: customer satisfaction, social aims such as meeting a need in the community. <p>Features of the product (goods or services) to be sold, including:</p> <ul style="list-style-type: none"> • ensuring product features and production of product is environmentally friendly and in the public interest, i.e. safe, ethical and legal • relevant benefits and unique selling points (USPs) • cost. <p>Pricing of the product (goods or services) to be sold, including:</p> <ul style="list-style-type: none"> • strategy: cost-plus/mark-up, competitive, skimming, penetration, premium • selling price. <p>Methods of promotion:</p> <ul style="list-style-type: none"> • selection of methods of promotion: advertising, use of social media o cost effectiveness. <p>Identifying the target market:</p> <ul style="list-style-type: none"> • market segment • pricing strategy, selling price and promotion appeal and relevance to target market • how product will reach market: selling direct, online or both • establishing and sustaining sales to target customers. <p>Resources required:</p> <ul style="list-style-type: none"> • physical resources: location, materials, equipment, fixtures and fittings, information technology, stock • financial resources: sources of finance, calculation of start-up costs, running costs, and production costs/cost of sales • human resources: skills and roles, possible training and development needs • how the resources will be obtained/funded. <p>Financial information:</p> <ul style="list-style-type: none"> • financial planning and forecasting commentary: break-even calculation and 12-month cash flow forecast • financial records commentary: profit and loss account (forecast statement of comprehensive income). <p>Risk assessment:</p> <ul style="list-style-type: none"> • description of potential and realistic risks involved: lack of skills, competitors, unexpected costs, sourcing of resources, quality control, lack of customer interest • threats posed by competitors: products, customers, customer service, advertising and promotion, success and failures, potential gaps in their offering • recommendations as to how risks can be overcome • recommendations as to how to ensure quality of products. <p>Viability of the plan based on the following considerations:</p> <ul style="list-style-type: none"> • financial data • safety

		<ul style="list-style-type: none"> • ethicality • legality <p>environmental</p>
1B	<p>General Business – Foundation Learning.</p> <p>Marketing Mix – students will look at how business use the marketing mix when making decisions about their products.</p> <ul style="list-style-type: none"> • Price • Place • Product • Promotion <p>Business Law – students will look at the rules and regulations that a business must comply with. Students will also look at the rights that consumers have when trading with a business.</p> <ul style="list-style-type: none"> • National Minimum Wage • Equality Act • Workers rights (pregnancy, holiday entitlement, working hours, contracts, trade union, carer for dependants) • Consumer Laws <p><i>CST - Dignity of work and participation – If the dignity of work is to be protected, then the basic rights of workers must be respected—e.g. right to join a union. Do you think businesses act morally or just because they have to because of the law?</i></p> <p><i>Assessed through ongoing exam questions.</i></p>	<p>Component 2</p> <p>Learning outcome B: Present a plan for the micro-enterprise idea to meet specific requirements Learners will develop skills to produce and deliver an electronic presentation that summarises the business plan.</p> <p>B1 Production of presentation</p> <p>Selection of relevant information and logical sequencing of information and ideas. Use of appropriate written communication skills:</p> <ul style="list-style-type: none"> • use of business terminology • presentation of information and data. <p>Consistent visual presentation appropriate for the enterprise idea: appropriate colours, use of margins, appropriate use of images and transitions, appropriate font including size and type.</p> <p>B2 Delivery of presentation</p> <p>Methods of recording and delivery: on-screen videos and sharing, electronic presentation, pre-recorded, video group calls, vlog. Accurate and effective verbal communication skills: language and tone, pace, volume and projection, use of business terminology. Engaging non-verbal communication skills: conduct of presenter, positive attitude, well-rehearsed, body language, gestures and eye contact.</p> <p>Learning outcome C: Review the presentation of the micro-enterprise idea to meet specific requirements Learners will develop critical thinking skills as they review and reflect on the success of the production and delivery of their presentation, making recommendations for improvements.</p> <p>C1 Review of presentation</p> <p>Review of own skills demonstrated in the production and delivery of the presentation, to include:</p> <ul style="list-style-type: none"> • skills demonstrated: written, summarisation, language and terminology, verbal communication, non-verbal communication, presentation, technical and practical • making supported judgements on strengths and weaknesses based on self-reflection and review: <ul style="list-style-type: none"> ○ what went well ○ what went less well or did not go to plan • recommendations for improvements to the production and delivery of the electronic presentation <p><i>Assessment is via official assignment and will be assessed as per criteria – no formative marking can be done as per exam board regulations.</i></p>
2A	<p><i>Year 10 units have been realigned due to insight gained through pilot year delivery so unit being taught will not be sequential in year 10 and with year 11.</i></p> <p>Comp 2: Learners will generate two realistic ideas for a micro-enterprise and choose one of these to plan within budget. They will individually present their business plan for their idea and review the production and delivery of their presentation to make recommendations for improvements.</p> <p>A1 Choosing ideas for a micro-enterprise</p> <p>Generation of ideas and choosing or rejecting ideas that may contribute to the likely success of an enterprise idea:</p> <ul style="list-style-type: none"> • own interests/skills audit o resources available • potential constraints: budget, age constraints – i.e. not able to employ others, not able to have a loan from a lender, not able to rent premises 	<p>Component 3: Marketing and Finance for Enterprise</p> <p>Learners will explore how marketing is used by enterprises and the factors that influence how enterprises identify and target their market. Learners will complete financial documents and statements and explore how to use them to monitor and improve the performance of an enterprise in order to make decisions and recommend strategies for success.</p> <p>A Marketing activities</p> <p>A1 Targeting and segmenting the market Learners will explore how and why enterprises may target their markets.</p> <p>Target market: the market an enterprise wants to sell its products to.</p>

	<ul style="list-style-type: none"> financial forecasts costing and pricing methods of communication and promotion potential customers gaps in the market <p>Innovative ideas which are realistic and within budget and could include:</p> <ul style="list-style-type: none"> animal and horticulture art and design cleaning and maintenance creative and speciality crafts entertainment, performing arts and leisure fashion and accessories food and drink o hair and beauty holding/hosting events o lifestyle mental health and wellbeing sport and exercise sustainable and environmental teaching, educational and coaching technological, digital, social media and e-commerce writing and publishing 	<p>Market segmentation: key differentiators that divide customers into groups to be targeted:</p> <ul style="list-style-type: none"> demographics: age, race, religion, gender, family size, ethnicity, income, education level, socio-economic group geographic: location psychographic: social class, attitudes, lifestyle and personality characteristics behavioural: spending, consumption, rate of usage, loyalty status, desired benefits. <p>Markets: Business to Business (B2B), Business to Consumer (B2C), niche, mass.</p> <p>A2 4Ps of the marketing mix Learners will explore the marketing mix, how and why traditional and digital marketing methods are used, and the importance of matching campaigns to the aims of enterprises.</p> <p>Product:</p> <ul style="list-style-type: none"> product portfolio: comprises all products (goods and services) of an enterprise o product life cycle: development, introduction, growth, maturity, decline USP (unique selling point) o branding, brand personality, brand image. <p>Price:</p> <ul style="list-style-type: none"> pricing strategies: penetration, skimming, competitive, cost-plus, premium. <p>Place:</p> <ul style="list-style-type: none"> digital and physical distribution of products. <p>Promotion:</p> <ul style="list-style-type: none"> promotional mix: advertising, Public Relations (PR), Online Public Relations (OPR), social media marketing, personal selling, direct marketing, sales promotion ‘above the line’ and ‘below the line’ promotion. <p>Multichannel marketing: using a range of traditional and/or digital methods.</p> <p>A3 Factors influencing the choice of marketing methods Learners will explore the factors influencing the choice of marketing methods for enterprises.</p> <p>Factors influencing the choice of marketing methods:</p> <ul style="list-style-type: none"> appropriateness for product and its brand image speed/accessibility of information/ease of reaching target market cost to the enterprise competitors’ activities o experience of the entrepreneur <p><i>Assessment is via official assignment and will be assessed as per criteria – no formative marking can be done as per exam board regulations.</i></p>
2B	<p>A2 Plan for a micro-enterprise</p> <p>Learners will draw on research to complete an accurate and realistic business plan for their chosen micro-enterprise idea within a given budget, to include:</p> <p>Ownership of the micro-enterprise:</p> <ul style="list-style-type: none"> sole trader social enterprise. <p>Aims of the micro-enterprise:</p> <ul style="list-style-type: none"> financial aims: to make a profit, to break-even non-financial aims: customer satisfaction, social aims such as meeting a need in the community. <p>Features of the product (goods or services) to be sold, including:</p>	<p>Comp 3</p> <p>A4 Trust, reputation and loyalty Learners will explore the importance of brand image and reputation on attracting and retaining customers of enterprises.</p> <p>Importance of brand image: perceptions of quality, value, variety and customer service.</p> <p>Importance of reputation: actions of the enterprise and how they affect public opinion o being environmentally friendly o rejecting unethical or controversial marketing strategies o responding to customer service issues quickly and efficiently o getting involved in the local community through help/donations/prizes.</p> <p>B Financial documents and statements</p>

	<ul style="list-style-type: none"> ensuring product features and production of product is environmentally friendly and in the public interest, i.e. safe, ethical and legal relevant benefits and unique selling points (USPs) cost. <p>Pricing of the product (goods or services) to be sold, including:</p> <ul style="list-style-type: none"> strategy: cost-plus/mark-up, competitive, skimming, penetration, premium selling price. <p>Methods of promotion:</p> <ul style="list-style-type: none"> selection of methods of promotion: advertising, use of social media o cost effectiveness. <p>Identifying the target market:</p> <ul style="list-style-type: none"> market segment pricing strategy, selling price and promotion appeal and relevance to target market how product will reach market: selling direct, online or both establishing and sustaining sales to target customers. <p>Resources required:</p> <ul style="list-style-type: none"> physical resources: location, materials, equipment, fixtures and fittings, information technology, stock financial resources: sources of finance, calculation of start-up costs, running costs, and production costs/cost of sales human resources: skills and roles, possible training and development needs how the resources will be obtained/funded. <p>Financial information:</p> <ul style="list-style-type: none"> financial planning and forecasting commentary: break-even calculation and 12-month cash flow forecast financial records commentary: profit and loss account (forecast statement of comprehensive income). <p>Risk assessment:</p> <ul style="list-style-type: none"> description of potential and realistic risks involved: lack of skills, competitors, unexpected costs, sourcing of resources, quality control, lack of customer interest threats posed by competitors: products, customers, customer service, advertising and promotion, success and failures, potential gaps in their offering recommendations as to how risks can be overcome recommendations as to how to ensure quality of products. <p>Viability of the plan based on the following considerations:</p> <ul style="list-style-type: none"> financial data safety ethicality legality environmental 	<p>B1 Financial documents</p> <p>Learners will complete and interpret financial documents. Learners will explore the purpose, typical format, sequence and the part that each document plays when ordering, checking, recording and paying for goods and/or services.</p> <p>Types of financial documents: purchase orders, delivery notes, goods received notes, invoices, credit notes, statements of account, remittance advice slips, receipts.</p> <p>Importance of accuracy when these documents are being used.</p> <p>Importance of accurate financial documents and record-keeping to business accounting.</p> <p>B2 Payment methods</p> <p>Learners will explore why enterprises use some or all of the following payment methods.</p> <p>Payment methods: cash, credit cards, debit cards, direct debit, payment technologies.</p> <p>Impact on customers and enterprises of using different payment methods.</p> <p>B3 Revenue and costs</p> <p>Learners will explore the sources of revenue and costs for enterprises and how and why they can be minimised/maximised.</p> <p>Revenue/turnover.</p> <p>Start-up and running costs.</p> <p>B4 Financial statements</p> <p>Learners will complete and interpret financial statements for enterprises. Learners will explore how these financial statements could be of interest to the stakeholders of enterprises.</p> <p>Profit and loss account (statement of comprehensive income): shows the profit or loss of an enterprise over time:</p> <ul style="list-style-type: none"> revenue, cost of sales, expenses, gross profit, net profit (profit for the year) <p>Balance sheet (statement of financial position): shows the financial performance of an enterprise at a point in time:</p> <ul style="list-style-type: none"> fixed (non-current) and current assets working capital (net current assets) long term (non-current) and current liabilities o debtors (accounts receivable) and creditors (accounts payable) equity. <p>Stakeholders: owner(s), managers, employees, lenders, government, customers and suppliers.</p> <p>B5 Profitability and liquidity</p> <p>Learners will explore how these financial statements could be of interest to the stakeholders of enterprises. Learners will calculate profitability and liquidity for enterprises, and comment on the results of these calculations.</p> <ul style="list-style-type: none"> Difference between cash and profit. Difference between liquidity and profitability. Calculate profitability ratios from given formulae: o gross profit margin percentage (GPM) = (gross profit ÷ revenue) × 100 o net profit margin percentage (NPM) = (net profit ÷ revenue) × 100.
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3A	<p>Component 2</p> <p>Learning outcome B: Present a plan for the micro-enterprise idea to meet specific requirements Learners will develop skills to produce and deliver an electronic presentation that summarises the business plan.</p> <p>B1 Production of presentation</p> <p>Selection of relevant information and logical sequencing of information and ideas. Use of appropriate written communication skills:</p> <ul style="list-style-type: none"> • use of business terminology • presentation of information and data. <p>Consistent visual presentation appropriate for the enterprise idea: appropriate colours, use of margins, appropriate use of images and transitions, appropriate font including size and type.</p> <p>B2 Delivery of presentation</p> <p>Methods of recording and delivery: on-screen videos and sharing, electronic presentation, pre-recorded, video group calls, vlog. Accurate and effective verbal communication skills: language and tone, pace, volume and projection, use of business terminology. Engaging non-verbal communication skills: conduct of presenter, positive attitude, well-rehearsed, body language, gestures and eye contact.</p> <p>Learning outcome C: Review the presentation of the micro-enterprise idea to meet specific requirements Learners will develop critical thinking skills as they review and reflect on the success of the production and delivery of their presentation, making recommendations for improvements.</p> <p>C1 Review of presentation</p> <p>Review of own skills demonstrated in the production and delivery of the presentation, to include:</p> <ul style="list-style-type: none"> • skills demonstrated: written, summarisation, language and terminology, verbal communication, non-verbal communication, presentation, technical and practical • making supported judgements on strengths and weaknesses based on self-reflection and review: <ul style="list-style-type: none"> ○ what went well ○ what went less well or did not go to plan • recommendations for improvements to the production and delivery of the electronic presentation 	<p>Comp 3:</p> <p>C2 Cash flow Learners will explore, complete and interpret cash flow forecasts and statements. They will consider the differences between predicted and actual cash flow.</p> <ul style="list-style-type: none"> ● Cash flow forecast: predicted inflows/receipts, outflows/payments, net inflows/outflows, opening and closing balances, surpluses, deficits. ● Purpose of cash flow forecasts: o to identify money coming in and going out of the enterprise over time o to determine the impact of timings of inflows and outflows o to determine positive and negative liquidity and make business decisions. ● Difference between forecasted and actual cash flows. <p>C3 Suggesting improvements to cash flow problems Learners will explore the effects of positive and negative cash flow on enterprises and their stakeholders, identifying possible issues and suggesting solutions. Cash flow problems: cash surpluses, cash deficits. Suggested solutions to problems:</p> <ul style="list-style-type: none"> • increasing revenue • selling off unused assets/inventory • chasing debtors for monies owed • cutting costs • delaying payment to suppliers • reducing credit period offered to customers • cutting back or delaying expansion plans • paying off debts • investment. <p>C4 Break-even point and break-even analysis</p> <p>Learners will calculate the break-even point and margin of safety, construct and interpret a break-even chart, and recognise the strengths and limitations of break-even analysis. Fixed, variable and total costs, and total revenue.</p>

	<p><i>Assessment is via official assignment and will be assessed as per criteria – no formative marking can be done as per exam board regulations.</i></p>	<p>Break-even point, margin of safety, area of profit and area of loss. Importance to an enterprise of breaking even. Strengths and limitations of break-even analysis</p> <p>C5 Sources of business finance Learners will explore why enterprises may plan different sources of finance for different purposes or at different stages, and the advantages and disadvantages of each source.</p> <p>Internal sources of finance: o personal sources: savings, credit cards, borrowing from friends and family</p> <ul style="list-style-type: none"> retained profits sale of assets. <p>External sources of finance:</p> <ul style="list-style-type: none"> long-term: mortgages, share capital, taking on new partners medium-term: hire purchase (HP), leasing, loans, peer-to-peer lending (P2P), investment from business angels short-term: bank overdraft, crowdfunding, trade credit government and charitable grants <p><i>Practise external assessments – mix of in class questions and whole papers.</i></p>
3B	<p>Component 1 – This will be assessed in the yr. 11 for this group.</p> <p>Learning outcome, A: Understand how and why enterprises and entrepreneurs are successful Learners will explore the activities enterprises undertake and the characteristics and skills of the entrepreneurs that run them.</p> <p>A1 Size and features of SMEs Size of SMEs to include:</p> <ul style="list-style-type: none"> micro: up to 10 members of staff small: between 11–49 members of staff medium: between 50–249 members of staff. <p>Types of profit-making enterprises to include:</p> <ul style="list-style-type: none"> sole trader, partnership, limited liability partnership (LLP), ltd, social enterprise that uses some of the profits to reinvest in the enterprise. <p>Features of SMEs to include:</p> <ul style="list-style-type: none"> run by a single individual or small team of people o physical location and/or online operation sole employment or as part of a hobby/side hustle existing in one or more sectors of the economy. <p><i>CST - Dignity of work and participation - Work is more than a way to make a living, it is a form of continuing participation with Gods creation. When starting a business will it impact on the owners? Will they have to invest more time in the business than if they were working for an employer? Are there risks and rewards?</i></p> <p>A2 Markets, sectors, models and industries in which enterprises operate Different sectors and business models, including:</p> <ul style="list-style-type: none"> markets: – Business to Business (B2B) – Business to Customer (B2C) sector: – goods – services models: – bricks and clicks and flips – e-commerce. <p>Different industries in which enterprises operate.</p>	

	<p>A3 Aims and activities of enterprises Aims of enterprises to include:</p> <ul style="list-style-type: none"> • making a profit, surviving, breaking-even, expanding, maximising sales, being environmentally friendly, being ethical, satisfying customers, providing a social service. <p>Impact of activities in supporting the aims of enterprises to include:</p> <ul style="list-style-type: none"> • developing and producing goods and services to meet the needs of changes in the market • attracting new customers and retaining existing customers through offers and promotions • managing business resources: finance, people, technology. <p>Impact of failing to undertake these activities successfully</p> <p>Learning outcome B: Understand customer needs and competitor behaviour through market research Learners will explore the market research methods used by enterprises and their importance in understanding customer needs and competitor behaviour.</p> <p>B1 Market research methods Benefits and drawbacks of a range of primary research methods used by enterprises to include:</p> <ul style="list-style-type: none"> • qualitative and quantitative questionnaires and surveys: face-to-face, telephone, post, on a website/social media site • visits or observation: looking at and recording how customers and competitors behave in situations in a structured way • formal or informal interviews, chats or focus groups: talking to people to find out their views and experiences. <p>Benefits and drawbacks of a range of secondary research methods used by enterprises to include:</p> <ul style="list-style-type: none"> • online research o books, journals, trade magazines • company materials o market and government reports and statistics. <p>B2 Understanding customer needs The importance of the information that primary and secondary research methods can provide about customers to include:</p> <ul style="list-style-type: none"> • understanding the market: anticipating and identifying customer needs • producing products to market that solve a problem or add value for the customers • identifying customer expectations: good-value products, rapid response to enquiries, clear and honest information, after-sales service • adapting different products to meet customer needs according to age, gender, income, lifestyle and location. <p>B3 Understanding competitor behaviour Understanding the market:</p> <ul style="list-style-type: none"> • anticipating and identifying competitor behaviour • producing products to market that are different from competitors • identifying features of the competitors <p>Competitive advantage:</p> <ul style="list-style-type: none"> • the ability to meet customer needs better than competitors on quality, price, features, customer service, availability, convenience. <p>B4 Suitability of market research methods Suitability of market research methods that could help the enterprise in gaining further information to include:</p>	
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	<ul style="list-style-type: none"> finding out further information about their customers and their competitors o alternative methods based on the size of the enterprise, cost of research, time and human resources available to undertake research. <p>Learning outcome C: Understand how the outcomes of situational analyses may affect enterprises Learners will carry out research into internal and external factors for use in a PEST and SWOT analysis to help them understand how these factors affect enterprises.</p> <p>C1 PEST (Political, Economic, Social, Technological) analysis Recommendations for actions that enterprises could take based on research and analysis of the following factors:</p> <ul style="list-style-type: none"> political: governmental changes, new regulations, changes in taxation economic: consumer confidence in the economy, growth/recession, level of employment, cost of borrowing, cost of energy social: changing consumer behaviour and trends technological: social media, energy efficiency, technological trends, costs of marketing and selling. <p>Suitability of recommendations made according to the potential positive and negative impact on costs and revenues.</p> <p><i>CST - Stewardship of creation - we are all called to care for creation as stewards of it, not simply consumers, taking what we can get from the earth. How do the actions of business impact on the wider world?</i></p> <p>C2 SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis Impact of the strengths, weaknesses, opportunities and threats based on research, analysis and understanding of enterprises to include:</p> <ul style="list-style-type: none"> strengths: effective planning and financing, marketing and promoting the enterprise, location, reputation, unique selling point (USP), strong branding, competitive advantage weaknesses: unforeseen human resources costs (i.e. staff illness), lack of investment, poorly performing product/service, competitive disadvantage opportunities: growing market trends, developments in technology, gaps in the market, government policy changes, loans and grants, funding, events/holidays, development of additional products and services, adaptations to existing market offering, developing adapted marketing strategies, amendments to staffing, alternative investment decisions threats: competitors, supplier problems, developments in technology, government policy, lack of funding, market changes. <p>Ability to react to the strengths, weaknesses, opportunities and threats according to the potential positive and negative impact on costs and revenues.</p> <p><i>Assessment is via official assignment and will be assessed as per criteria – no formative marking can be done as per exam board regulations</i></p>	
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KS5 - BTEC Business Studies

Business teachers and the nature of the course. In Year 12 all must complete Units 1, 2, 3 and 4 if doing the Dip Level plus Units 8 and 27 as the preferred optional units.

In Year 13 all Dip students must complete Units 5 and 6. Unit 7 must be completed for those wishing to do the Extended Dip and they must choose 4 other optional units.

To ensure students are able to tailor their course to meet future career or further study goals, the four optional units are totally student driven and can vary from Human Resources to Accounts or Digital Marketing (because of this, multiple units will be delivered in the same lesson making it difficult to put into terms).

For the overview, units are shown as one at a time but they will overlap. Students in year 12 are currently on a mix of Extended Certificate and Diploma. In year 13 all students are currently following the Diploma or Extended Diploma route.

Year 13 Business	
Autumn Term 1a	Term 1b
<p>These units are normally completed during year 12 but have carried over into year 13 to enable students to have accesses to the correct amount of contact and re-submission time.</p> <p>Unit 1: Exploring Business - Encourage learners to research and learn about local, national and international businesses in different sectors. Learners needed to look at the key ingredients for business success – how businesses are organised, how they communicate, the characteristics of the environment in which they operate, and how this shapes them and their activities. Learners will also look at the importance of innovation and enterprise to the success and survival of businesses, plus the associated risks and benefits.</p> <p>Specific Learning Aims of this Unit:</p> <ul style="list-style-type: none"> • A1 Features of businesses. • A2 Stakeholders and their influence. • A3 Effective business communications. • B1 Structure and organisation. • B2 Aims and objectives. • C1 External environment. • C2 Internal environment. • C3 Competitive environment. • C4 Situational analysis. • D1 Different market structures. • D2 Relationship between demand, supply and price. • D3 Pricing and output decisions. <p><i>Assessment is via official assignment and will be assessed as per criteria – no formative marking can be done as per exam board regulations.</i></p> <p><i>During teaching, students’ understanding will be assessed by teacher lead Q+A and appropriate interventions.</i></p> <p>Unit 8 - Recruitment and Selection Process - This is a practical unit which allows learners the opportunity to investigate how the recruitment process is carried out in business (particularly large organisations of 250 or more staff) from job analysis through to selecting a suitable candidate. Learners will research and learn about the processes and procedures involved in recruitment and selection in different large businesses.</p> <p>Specific Learning Aims of this Unit: A: Examine how effective recruitment and selection contribute to business success. B: Undertake a recruitment activity to demonstrate the processes leading to a successful job offer. C: Reflect on the recruitment and selection process and your individual performance.</p> <p><i>Assessment is via official assignment and will be assessed as per criteria – no formative marking can be done as per exam board regulations.</i></p> <p><i>During teaching students’ understanding will be assessed by teacher lead Q+A, and appropriate interventions.</i></p> <p>Unit 27 - Work Experience in Business - Another practical unit will require learners to investigate, plan and carry out 40 hours of work related learning in an appropriate and safe manner. Again this unit helps learners to develop life skills.</p> <p>Learners should be encouraged to research a number of appropriate work experience placements before securing a final placement.</p> <p>Specific Learning Aims of this Unit: A: Investigate opportunities for work-related learning. B: Carry out work experience in an appropriate and safe manner. C: Reflect on work experience undertaken and its influence on own personal and professional development.</p> <p><i>Assessment is via official assignment and will be assessed as per criteria – no formative marking can be done as per exam board regulations.</i></p> <p><i>During teaching, students’ understanding will be assessed by teacher lead Q+A, and appropriate interventions.</i></p>	

Spring Term 2a	Term 2b
<p>This unit is being revisited to enable students the opportunity to secure knowledge and sit the examinations which they where due to sit at the end of year 12.</p> <p>Unit 6: Principles of Management – This unit gives our learners opportunities to apply the principles of management to a variety of business situations. In doing so they will gain a greater understanding of the challenges faced by managers, and discover that different management approaches can be taken to address issues relating to aspects such as change management and motivation in the workplace.</p> <p>Learners will be introduced to the work of management theorists and investigate their influence on contemporary management practices. The suggested range of activities below will enable learners to appreciate how the functions of management can be applied in a practical setting and develop their personal skills in areas such as critical thinking and working with others.</p> <p>Topic A – The definitions and functions of management. Topic B – Management and leadership styles and skills. Topic C – Managing human resources. Topic D – Factors influencing management, motivation and performance of the workforce. Topic E – Impact of change. Topic F – Quality management.</p> <p><i>This unit is assessed externally. Learners will be given a case study two weeks prior to the supervised assessment in order to carry out research. Learners will then complete the assessment over a 6 hours examination.</i></p> <p><i>During teaching students’ understanding will be assessed by teacher led Q+A and appropriate interventions.</i></p> <p><i>Students will also complete a practise assessment which can be marked against criteria and full feedback provided.</i></p>	

Summer Term 3a	Term 3b
<p>This unit is being revisited to enable students the opportunity to secure knowledge and sit the examinations which they were due to sit at the end of year 12.</p> <p>Unit 7: Business Decision Making - This is a practical unit, which will allow learners to understand the importance of planning and decision making in running a successful business. As this is a synoptic unit, the focus should be on consolidating the understanding and skills developed in previous units.</p> <p>Learners will then be able to make rational decisions based on information given relating to complex business problems. The rationale behind this unit is to enable learners to ‘think on their feet’ which will benefit them when faced with real-life business decisions or in interview situations when learners are expected to demonstrate their ability to find solutions to given scenarios in a relatively short space of time.</p> <p>Topic A – Business plans. Topic B – Decision making in business. Topic C – Use of research to justify the marketing of a business. Topic D – Efficient operational management of the business. Topic E – Understand the importance of managing resources. Topic F – Creation and interpretation of financial forecasts. Topic G – Viability of a business. Topic H – Demonstrate business skills/IT skills.</p> <p><i>Assessment is via an external assessment and will be assessed as per criteria over a 3 hour examination, this is based on an unseen case study.</i></p> <p><i>During teaching, students’ understanding will be assessed by teacher led Q+A and appropriate interventions.</i></p> <p><i>Students will also complete a practise assessment which can be marked against criteria and full feedback provided.</i></p>	
Year 12 Business	
Autumn Term 1a	Term 1b
<p>Unit 2: Developing a Marketing Campaign – This is a practical unit that allows learners to investigate the role that marketing plays in business success.</p> <p>Learners must develop a sound understanding of marketing concepts and how a marketing campaign is developed. Learners also need to be able to interpret and use data to suggest an appropriate marketing campaign for a business and justify why the campaign will suit the needs of the business.</p> <p>Consumers are bombarded with marketing messages on a daily basis. Our learners should be exposed to a wide range of examples of successful and less successful campaigns. In this way, they will learn what works and will be able to use successful examples as inspiration when they come to develop their own rationale and plan for a marketing campaign.</p> <p>Specific Learning Aims of this Unit:</p> <ul style="list-style-type: none"> • Learning Aim A is an introduction to the principles and purposes of marketing that underpin the creation of a rationale for a marketing campaign. • Learning Aim B is using information to develop the rationale for a marketing campaign. • Learning Aim C is planning and developing a marketing campaign. <p><i>Assessment is via an external assessment and will be assessed as per criteria over a 6 hour examination.</i></p> <p><i>During teaching, students’ understanding will be assessed by teacher led Q+A and appropriate interventions.</i></p> <p><i>Students will also complete a practise assessment which can be marked against criteria and full feedback provided.</i></p>	

Spring Term 2a	Term 2b
<p>Unit 3: Personal and Business Finance – Is a traditional external written examination unit.</p> <p>Topic A – Understand the importance of managing personal finance – Learners will develop an understanding of personal finance and how their decisions can impact their credit rating. They will look at a wide number of aspects of personal finance including debt, bank accounts and student loans.</p> <p>Topic B – Explore the personal finance sector – Learners will explore the differences between all sources of finance, methods of saving and insurance against loss.</p> <p>Topic C – Understand the purpose of accounting – Learners must grasp the importance and methods that businesses use to complete accounts. Especially the importance of accuracy and the possible negative impacts inaccuracy.</p> <p>Topic D – Select and evaluate different sources of business finance – Learners need to be able to select and critically evaluate the source of finance based on the need and circumstance of the business. Topic E – Break-even and cash flow forecasts – Learners need to be able to complete and retrieve information from financial records. Learners should then be able to make recommendations based on this.</p> <p>Topic F – Complete statements of comprehensive income and financial position and evaluate a business’s performance - this is the most technical aspect of this unit, learners must be able to use all appropriate account ratios and use these to make critical judgements about the businesses.</p> <p><i>Assessment is via an external assessment and will be assessed as per criteria over a 1hr 30 min examination.</i></p> <p><i>During teaching, students’ understanding will be assessed by teacher led Q+A and appropriate interventions.</i></p> <p><i>Students will also complete end of topic assessments, these will overlap on all previous topics.</i></p>	
Summer Term 3a	Term 3b
<p>Unit 1: Exploring Business - Encourage learners to research and learn about local, national and international businesses in different sectors. Learners needed to look at the key ingredients for business success – how businesses are organised, how they communicate, the characteristics of the environment in which they operate, and how this shapes them and their activities. Learners will also look at the importance of innovation and enterprise to the success and survival of businesses, plus the associated risks and benefits.</p> <p>Specific Learning Aims of this Unit:</p> <ul style="list-style-type: none"> • A1 Features of businesses. • A2 Stakeholders and their influence. • A3 Effective business communications. • B1 Structure and organisation. • B2 Aims and objectives. • C1 External environment. • C2 Internal environment. • C3 Competitive environment. • C4 Situational analysis. • D1 Different market structures. • D2 Relationship between demand, supply and price. • D3 Pricing and output decisions. <p><i>Assessment is via official assignment and will be assessed as per criteria – no formative marking can be done as per exam board regulations.</i></p> <p><i>During teaching, students’ understanding will be assessed by teacher lead Q+A and appropriate interventions.</i></p> <p>Unit 5: International Business – Some learners are likely to be familiar with a number of global business organisations in their role as consumers or in a workplace setting. This unit gives learners the opportunity to understand how globalisation can impact upon all businesses, regardless of their size. In approaching this unit, therefore, learners will have the opportunity to focus not only on the major players in the global economy but also those small and medium businesses in the local economy who are directly involved in international business or who are influenced by changes in international markets. Learners need to be familiar with local, national and international businesses so that they gain an appreciation of the complex network of business relationships that exist in the global economy and how technology influences these networks. Additionally, learners should also consider the risks faced by those businesses who are involved in international business in order to understand that although the global economy gives businesses opportunities for growth and profits, it also brings with it considerable challenges.</p>	

Assessment is via an external assessment and will be assessed as per criteria over a 6-hour examination.

During teaching, students' understanding will be assessed by teacher led Q+A and appropriate interventions.

Unit 8 - Recruitment and Selection Process - This is a practical unit which allows learners the opportunity to investigate how the recruitment process is carried out in business (particularly large organisations of 250 or more staff) from job analysis through to selecting a suitable candidate. Learners will research and learn about the processes and procedures involved in recruitment and selection in different large businesses.

Specific Learning Aims of this Unit:

A: Examine how effective recruitment and selection contribute to business success.

B: Undertake a recruitment activity to demonstrate the processes leading to a successful job offer. C: Reflect on the recruitment and selection process and your individual performance.

Assessment is via official assignment and will be assessed as per criteria – no formative marking can be done as per exam board regulations.

During teaching students' understanding will be assessed by teacher lead Q+A, and appropriate interventions.

Unit 27 - Work Experience in Business - Another practical unit will require learners to investigate, plan and carry out 40 hours of work-related learning in an appropriate and safe manner. Again, this unit helps learners to develop life skills.

Learners should be encouraged to research a number of appropriate work experience placements before securing a final placement.

Specific Learning Aims of this Unit:

A: Investigate opportunities for work-related learning.

B: Carry out work experience in an appropriate and safe manner.

C: Reflect on work experience undertaken and its influence on own personal and professional development.

Assessment is via official assignment and will be assessed as per criteria – no formative marking can be done as per exam board regulations.

During teaching, students' understanding will be assessed by teacher lead Q+A, and appropriate interventions.