Programme of study for **Year 12 Information Technology**

Pearson BTEC Level 3 National Extended Certificate in Information Technology (AAQ) – Unit 1 (120 GLH, 2-hour exam) and Unit 3 (60 GLH, coursework)

Autumn (1st term) Topic	Autumn (2nd term) Topic	Spring (1st term) Topic	Spring (2nd Term) Topic	Summer (1st term) Topic	Summer (2nd term) Topic
Unit 1: IT Systems (exam) **A1 Digital devices and notation** Features and uses of digital devices; network diagrams and flowcharts **A2 Peripheral devices and media** Input, output and storage devices; assistive technologies; storage media; data processing **A3 Computer software in an IT system** Types and roles of operating systems; utility and application software; user interfaces; open source and proprietary; file types and formats **A4 Choosing IT systems** Factors affecting choice; systems used by organisations; impact and implications	**Unit 1: IT Systems (exam)** **A5 Emerging technologies** Concepts and implications, including AI **B1 Connectivity** Wired and wireless methods; implications and performance **B2 Networks** Topologies; types; factors in choosing; effect on performance **B3 Issues relating to transmission of data** Protocols; security; bandwidth and latency; file types and formats; compression; codecs **Unit 3: Website Development – Task 1 (coursework)** **A1 Purpose and principles of websites** Purpose and audience; layout, navigation, content, design, user experience, cross-browser compatibility, SEO **A2 Planning a website in response to a client brief** Requirements; research; legal and ethical limits; site map	**Unit 1: IT Systems (exam)** **C1 Online systems** Cloud computing models and implications; remote working **C2 Online communities** Ways of interacting; considerations for individuals and organisations **D1 Threats to data, information and systems** External and internal threats; impact **D2 Protecting data** Protection techniques; antivirus; firewalls; encryption **Unit 3: Website Development – Task 2 (coursework)** **B1 Website design** Wireframing tools and techniques; visual style; reviewing fitness for purpose **B2 Asset management** Creating, sourcing, preparing and managing assets	**Unit 1: IT Systems (exam)** **E1 Online services** Features and implications for individuals and organisations **E2 Using and manipulating data** Sources; reliability; collection; accuracy; user interfaces for data collection **F1 Moral and ethical issues** Moral and ethical factors in the use of IT **F2 Legal issues** Legislation protecting IT systems, users and data **Unit 3: Website Development – Task 3 (coursework)** **C1 Tools and techniques** HTML, CSS and JavaScript **C2 Website development processes** Accessibility; SEO; self-review; publishing **C3 Testing** Functionality and usability testing	**Unit 1: IT Systems (exam)** **Revision and exam preparation** Content areas A–F; command words; short- and long-answer technique; applying knowledge to scenarios **Unit 1 mock examination** 90 marks, 2 hours	**Unit 1: IT Systems (exam)** **External examination** May/June series (90 marks, 2 hours) **Unit 3: Website Development** **Resubmission window** Only if authorised by the Lead Internal Verifier **Next steps** **Results and resit planning** January series is available for any Unit 1 resit

End of term 1 evidence to cover:		End of term 2 evidence to cover:		End of year evidence to cover:	
Unit 1: exam-style assessment on content areas A and B. Unit 3: Task 1 (learning aim A) completed.		Unit 1: exam-style assessment on content areas C–F, with retrieval of A and B. All Unit 1 content taught. Unit 3: Tasks 2 and 3 completed, so all Pearson Set Assignment Brief evidence (15 hours) is ready for internal marking and verification.		Unit 1: full mock, then the external examination (90 marks, 2 hours). Unit 3: internal verification complete.	
Rationale for sequence: Unit 3 does not start yet. Unit 1 has twice the guided learning hours, and Unit 3 is assessed on underpinning knowledge from Unit 1, so students first build the foundations: devices, software and the choice of IT systems. Follows the order of the specification (A1–A4), which moves from the devices themselves to the factors that decide which system an organisation selects. File types and formats (A3.7) are taught early because they are needed again for transmission and compression in B3 and for website assets.	**Rationale for sequence:** Unit 3 coursework starts here. Task 1 is research and planning, which uses only knowledge already taught (user needs, accessibility, file formats), so it can run alongside new Unit 1 content. Unit 1 moves from devices to how they connect (B1–B3), which website development also relies on. A5 emerging technologies is kept short to leave room for Unit 3 Task 1.	**Rationale for sequence:** Task 2 (design and assets) follows the research and planning of Task 1, and students are ready to design because B3 (file types, compression, codecs) has been taught. Unit 1 moves from networks to operating online (C) and protecting data (D). D follows C because the threats are mostly to online systems, and it gives the foundation for Unit 2 in Year 13.	**Rationale for sequence:** Task 3 (build, test, publish) comes last, because it needs the plans from Task 1 and the designs and assets from Task 2. Unit 3 finishes by the end of Spring 2 so Summer 1 is free for Unit 1 revision. Unit 1 completes with the impacts of IT systems (E) and issues (F). Moral, ethical and legal issues are placed last so students can discuss them against the full range of content already studied.	**Rationale for sequence:** All Unit 1 content has been taught before the assessment, as the specification requires. This half-term is for retrieval across areas A–F, exam technique on scenario and long-answer questions, and a full mock to find gaps.	**Rationale for sequence:** Unit 1 is sat in the May/June series. The remaining time is used for Unit 3 resubmission if authorised (within 15 working days of results), and to plan a possible January resit before Year 13 starts Unit 2.

Home – Learning: Retrieval quizzes on devices, peripherals and operating systems; scenario question recommending a system for an organisation (A4).	Home – Learning: Unit 1: network diagram and flowchart practice; protocol and file-format revision cards. Unit 3: wider reading on website design principles (non-assessed).	Home – Learning: Unit 1: threats and protection matching task; cloud advantages and disadvantages for a scenario. Unit 3: wider reading on design and asset creation (non-assessed).	Home – Learning: Unit 1: moral, ethical and legal extended-response practice; data accuracy methods. Unit 3: practise HTML, CSS and JavaScript skills on non-assessed tasks.	Home – Learning: Past-paper style questions on weakest areas; revision plan built from the mock.	Home – Learning: Unit 1 results review and resit decision; independent reading for Unit 2 (cyber security).
Reading / High Quality Text: Specification: Unit 1, content area A.	Reading / High Quality Text: Specification: Unit 1, content areas A5 and B; Unit 3, learning aim A.	Reading / High Quality Text: Specification: Unit 1, content areas C and D; Unit 3, learning aim B. https://www.ncsc.gov.uk/	Reading / High Quality Text: Specification: Unit 1, content areas E and F; Unit 3, learning aim C. https://www.w3schools.com/html/ https://www.w3schools.com/css/ https://www.w3schools.com/js/ https://www.w3.org/WAI/fundamentals/accessibility-intro/	Reading / High Quality Text: Pearson sample assessment materials and past papers for Unit 1 (from the Pearson website).	Reading / High Quality Text: Specification: Unit 2, content area A. https://www.ncsc.gov.uk/
Numeracy: Storage capacity and units; comparing media on capacity and cost.	Numeracy: Bandwidth and latency; transfer time and file sizes; effect of compression.	Numeracy: Interpreting data on threats and incidents (e.g. percentages and trends in NCSC reports).	Numeracy: Data accuracy and validation; interpreting and presenting data (E2).	Numeracy: Exam practice: bandwidth, file size and data interpretation questions.	Numeracy: Reviewing exam performance data.
Enrichment / opportunities to develop cultural capital (including careers, WRL and SMSC): Careers (nationalcareers.service.gov.uk job profiles): IT support technician, web developer, systems analyst, network engineer. Progression: higher education IT and computing courses (the progression route named in each unit). WRL: link Unit 3 client briefs to local businesses or school needs. SMSC: moral and ethical issues in IT (Unit 1, F1).					