SUBJECT: BTEC Tech Award in Digital Information Technology

NESTON HIGH SCHOOL

KS4 CURRICULUM PLAN

KS3 Knowledge and key skills

YEAR 10	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
TOPIC	*Component 1 Learning Aim A*	*Component 1 Learning Aim B*	*Component 1 Learning Aim C*	*Component One*	*Component 2 Learning Aim A*	*Component 3 Learning Aim B*
Knowledge	Understand the uses of the different types of interface, and the design principles behind them. Investigate user interface design for individuals and organisations	Use project planning techniques to plan and design a user interface. We will investigate different planning tools and design methodologies that can be used to plan, monitor and carry out projects, and then design an interface for Neston Stadium	Develop and review a user interface. We will make the interface designed in term 2 and then review both the interface and the project management techniques used to create it	Completion of, and improvements to Component One Assignment Brief. Assess the usefulness of reviewing the user interface and the project planning techniques and how this can influence the completion of future projects	Collecting Presenting and Interpreting data. We will look at the importance of data to individuals and organisations and how it is used to help decision making. Understanding of the different types of data and data collection and the importance of good quality data	Cyber Security. Understand why systems are attacked and the different types of attacks. Investigate various methods of improving system security
Skills	Able to identify the best type of interface for a given situation, and to justify that choice Communication skills, presentation skills	Use of Gantt Charts, critical path analysis, PERT charts, mood boards and mind maps Organisation skills, problem solving skills	Identification of strengths and weaknesses of the interface. Identification of the strengths and weaknesses of the project planning techniques used Commnication skills, analysis skills, evaluation skills	Ability to assess how effectively work has met the assessment criteria for this component and improve where necessary Evaluation skills	Able to distinguish between data and information, identify different presentation methods. Able to use validation and verification methods to improve quality of data. Numeracy skills, problem-solving skills	Able to answer exam style questions on these topics. Able to use command words in questions to provide the right level of detail in answers Communication skills, problem-solving skills, reading skills
Key Vocab	Interface, accessibility, intuitive. Text, Form, Menu, Graphical User Interface, Sensor, Speech	Waterfall and agile methodologies, SMART targets	Evaluation, Input, Output, Navigation, Iterative	Evaluation, strengths, weaknesses,review, effective, efficient, analyse	Data, Information, Data type, Validation, verification, Primary and Secondary data, Big data, Qualitative, Quantitative	Hacking, social engineering, phishing, physical security, two-factor authentication, firewalls, device hardening, encryption, penetration testing

YEAR 11	SUMMER 2	SUMMER 1	SPRING 2	SPRING 1	AUTUMN 2	AUTUMN 1
TOPIC	*Component 2 Learning Aim A*	*Component 2 Learning Aim D*	*Component 2 Learning Aim C*	*Component 3 Learning Aim*	*Component 2 Learning Aim B*	*Component 2 Learning Aim B*
Knowledge	Modern technologies Investigating how modern technologies are used by and have an impact on organisations and their stakeholders, and the ways in which organisations and individuals use modern technologies to exchange information, communicate, and complete work-related tasks	Planning and communication in digital system. Understanding how individuals in the digital sector plan solutions and communicate meaning and intention. Investigating how to show the flow of data and information by the use of how different forms of written descriptions and diagrams	Draw conclusions and review data presentation methods Understand how to draw conclusions on the data set, using the dashboard in order to make recommendations	The wider implications of digital systems. We will look at the responsible use of IT systems, such as environmental factors. We will also consider the legal and ethical factors, such as Data Protection, Intellectual property and the criminal use of computer systems	Produce a dashboard to select and display information summaries based on a given large data set, using appropriate presentation features	Create a dashboard using data manipulation tools Understand how data can be imported from an external source and then explore how to apply data processing methods
Skills	Able to answer exam style questions on these topics. Able to use command words in questions to provide the right level of detail in answers Communication skills, problem-solving skills, reading skills	Able to draw and understand data flow diagrams, information flow diagrams, flowcharts and system diagrams. Presentation skills, digitalskills, analytical skills	Be able to spot patterns, trends and anomalies. Be able to make recommendations based on the conclusions. Digital skills, problem-solving skills, numeracy skills, presentation skills, analytical skills	Able to answer exam style questions on these topics. Able to use command words in questions to provide the right level of detail in answers Communication skills, problem-solving skills, reading skills	Conditional formatting, form controls, percentages. Digital skills, problem-solving skills, numracy skills.	Formulae and functions, Filtering, sorting and filtering features in Microsoft Excel. Cell referencing, macros, data validation, pivot tables, form controls, graphs and charts. Digital skills, problem-solving skills, numeracy skills.
Key Vocab	Ad hoc networks, cloud technology, collaboration tools, communication tools, planning tools	Data flow diagram, information flow diagram, flowchart, system diagram	Trends, patterns, anomalies, errors	Data Protection Act, Intellectual Property, Computer Misuse Act, Copyright, Designs and Patents Act	Drop-down menus, spinners, tick boxes, radio buttons, labels	sum, max, min, if, countif, sumif, vlookup, countif, countblank, absolute and relative cell referencing

Key Knowledge Transfer