

CURRICULUM MAP (Long term plan)

SUBJECT : BTEC Digital Information Technology

YEAR GROUP: 10

	Cycle 1 Autumn	Cycle 2 Spring	Cycle 3 Summer
Substantive knowledge – Essential knowledge & conceptual understanding of the National Curriculum	<p>Component 1: Exploring User Interface Design Principles and Project Planning Techniques</p> <p>A: Investigate user interface design for individuals and organisations</p> <p>B: Use project planning techniques to plan and design a user interface</p> <p>C: Develop and review a user interface</p>	<p>Pearson’s Set Assignment: Component 1 - Exploring User Interface Design Principles and Project Planning Techniques</p> <p>Window 2: February PSA release Deadline for mark submission and upload of learner work for sampled learners is May beginning</p> <p>Deadline for amending marks following moderator feedback (where necessary) is June middle</p>	<p>Component 2: Collecting, Presenting and Interpreting Data</p> <p>A: Investigate the role and impact of using data on individuals and organisations</p> <p>B: Create a dashboard using data manipulation tools</p> <p>C: Draw conclusions and review data presentation methods</p>
Disciplinary knowledge - what skills are practised?	<p>A1: What is a user interface A2: Audience Needs A3: Design principles A4: Designing an efficient user interface A5: Investigate user interface design for individuals and organisations</p> <p>B1: Project planning techniques B2: Create a project plan B3: Create an initial design</p> <p>C1: Developing a user interface C2: Refining the user interface C3: Review</p>	<p>The assignment for this component consists of four tasks.</p> <p>In response to Task 1, learners will complete a project proposal template using a project proposal brief, taking into consideration the purpose and audience, project requirements, user accessibility needs and any constraints. They will use software to create a project plan using project planning and design methodologies and taking into consideration the project proposal brief and overall timescales for the project. 1.5 hours to complete.</p>	<p>A1: Characteristics of data and information A2: Representing information A3: Ensuring data is suitable for processing A4: Data collection A5: Quality of information and its impact on decision making A6: Sectors that use data modelling A7: Threats to individuals</p> <p>B1: Data processing methods B2: Produce a dashboard</p> <p>C1: Drawing conclusions based on the data C2: How presentation affects understanding</p>

		<p>In response to Task 2, learners will design an initial user interface for four screens of a user interface that meets user requirements and user accessibility needs and other specific hardware and software needs and design considerations. 1.5 hours to complete.</p> <p>In response to Task 3, learners will use their initial design to develop a working prototype of the four screens of the user interface that meets user requirements and user accessibility needs. 2 hours to complete.</p> <p>In response to Task 4, learners will review their user interface and project planning techniques. Their review will be against the following criteria – user requirements, ease of use, design principles and accessibility features. In addition, learners will suggest improvements to better meet audience needs. 1 hour to complete.</p>	
<p>Key questions (What is the learning about?)</p>	<p>Introduction to user interfaces: hardware features, software features and human facilitation and example uses</p> <p>Basic user interface: text-based and menu-based</p> <p>Complex user interfaces: speech/natural language-based, GUI/WIMPs and sensor-based</p>		<p>Data and information: meaning, structure, context and processing</p> <p>How to present information: text, numbers, tables, graphs/charts and infographics</p> <p>Making data suitable for processing: validation: range, type, look up, presence and length checks and verification: proofreading and double entry</p>

	<p>Choosing a user interface: performance/response time, ease of use, user requirements, user experience, accessibility and storage space</p> <p>How hardware and software affects user interfaces: operating systems/platforms, screen type/size, types of user input, hardware resources available and emerging technologies</p> <p>User accessibility needs: visual, hearing, speech, motor and cognitive needs</p> <p>User skills: expert, regular, occasional and novice user skills and demographics: age, beliefs/values, culture and past experiences</p> <p>Design principles: visual elements: colour and font style/size</p> <p>Design principles: text elements: language and amount of information</p> <p>Design principles: layout: consistency, placement of items, user expectations, grouping related items, navigational components and input controls</p> <p>Design principles: keeping the user engaged: uncluttered screens, tip text, labels, default values and autofill</p> <p>Design principles: intuitive design: graphics denoting actions, helpful messages, easy reversal of actions, help features and consistency</p>		<p>Collecting data: data collection methods, data collection features and big data</p> <p>Why quality is important: source, accuracy, age, completeness, amount of detail, format/presentation and volume</p> <p>Who uses data modelling: types of sectors and data modelling in decision making</p> <p>Threats: privacy, fraud, targeting vulnerable groups and inaccurate data</p> <p>What is a dashboard?</p> <p>Data manipulation methods: importing data and text to columns, formulae and decision making functions</p> <p>Data manipulation methods: lookup functions and count functions</p> <p>Data manipulation methods: logical operations/sorting, using outlines and string operation functions</p> <p>Other processing methods: macros, multiple and linking worksheets and alternative views</p> <p>Other processing methods: conditional formatting</p> <p>Showing information summaries: totals, counts and percentages</p> <p>Breaking information down: sales breakdowns, departmental breakdown, time allocation and budget allocations</p>
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	<p>Improving the speed of user interfaces: keyboard shortcuts, reversal of actions, informative feedback and distinguishable objects</p> <p>Reducing the user selection time: appropriate object sizes, object emphasis, grouping related objects</p> <p>Project methodologies: waterfall, iterative and Agile</p> <p>Co-coordinating project tasks: Gantt charts, PERT charts and critical path diagrams</p> <p>Basic project planning tools: task lists, graphical descriptions, written descriptions and mood boards</p> <p>Planning the project basics: aims and objectives, audience and purpose</p> <p>Defining the project requirements: user requirements, output requirements, input requirements and user accessibility requirements</p> <p>Project constraints and risks: time, resources, task dependencies, security and contingency planning</p> <p>Planning project timescales: overall timescales, when tasks will be completed, key milestones and resources</p> <p>What is a design specification: user requirements, output requirements, input requirements and user accessibility requirements</p>		<p>Presentation methods: form controls, graphs/charts, pivot tables, conditional formatting and select data/range</p> <p>Presentation features: font size/style/colour, cell borders/shading, graphics, axis label and titles</p> <p>Drawing conclusions: e.g. trends, patterns, anomalies and possible errors</p> <p>Making recommendations: e.g. who to target advertisements at, where to deploy staff and how to adapt transport schedules</p> <p>The impact of presentation: information being misinterpreted, information being bias and inaccurate conclusions being made</p>
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<p>Assessment Live marking is conducted throughout lessons with verbal feedback and feedback cards given out to students. <i>This is not conducted during PSA's</i></p>	<p>Mock Pearson's Set Assignment</p>	<p>Non-exam internal assessment set by Pearson, marked by the centre and moderated by Pearson. The Pearson-set Assignment will be completed in approximately 6 hours of supervised assessment. 60 marks.</p>	<p>Mock Pearson's Set Assignment</p>
<p>Literacy (L), Numeracy (N), Oracy (O) opportunities</p>	<p>Digital IT terminology (L) Time and Project Planning (N)</p>	<p>Digital IT terminology (L) Time and Project Planning (N)</p>	<p>Digital IT terminology (L) Microsoft Excel for mathematical calculations (N)</p>

	<p>Writing and presenting information suitable for audience and purpose (L,O)</p> <p>Research skills (L)</p>	<p>Writing and presenting information suitable for audience and purpose (L,O)</p>	<p>Visualisation of data to identify patterns and trends (N)</p> <p>Writing and presenting information suitable for audience and purpose (L,O)</p>
Cross Curricular Opportunities	<p>Art and design - considering the format and layout of texts and images used for an audience.</p> <p>Citizenship - computer laws, privacy laws, data laws, being safe online.</p>	<p>Art and design - considering the format and layout of texts and images used for an audience.</p> <p>Citizenship - computer laws, privacy laws, data laws, being safe online.</p>	<p>Business - the value of data</p> <p>Maths - use of arithmetic and logic expressions.</p> <p>Art and design - considering the format and layout of texts and images used for an audience.</p>
Super curriculum	<p>KS3/4 Computing Club</p> <p>YouTube Channels: Craig n Dave - https://www.youtube.com/channel/UCOHzEBLJxlwBAHJ5S9JQg</p> <p>MrBrownCS - https://www.youtube.com/@ComputerScienceTutor</p> <p>Know it All Ninja – https://www.knowitallninja.com</p> <p>BBC Bitesize - https://www.bbc.com/bitesize/subjects/z34k7ty</p>		
Careers	<p>Digital Marketer</p> <p>Web developer</p> <p>User Interface design</p> <p>App Designer</p> <p>Digital Content Manager</p>		<p>Data scientist</p> <p>Data Analyst (Market, Retail, H&S)</p> <p>Risk Manager</p> <p>Data Architect</p>
Equality and Diversity Gender Disability Religion Race Sexuality	<p>Unit covers accessibility and inclusion required in IT software, hardware and interfaces in particular</p>	Pearson's Set Assignment	<p>Unit covers accessibility and inclusion required in IT software, hardware and interfaces in particular</p>
Local Community Links			
British Values British Values Democracy The rule of Law Individual Liberty Mutual Respect and Tolerance of others SMSC	<p>Within lessons learners have the opportunity to contribute to discussions, have their opinions heard, view other learners' work and give them feedback.</p> <p>Students are encouraged to allow everyone to have their say on particular</p>	Pearson's Set Assignment	<p>Within lessons learners have the opportunity to contribute to discussions, have their opinions heard, view other learners' work and give them feedback.</p> <p>Students are encouraged to allow everyone to have their say on particular</p>

<p>Character Education</p>	<p>topics and also how to present different pieces of work.</p> <p>Learners are taught how to use the Internet safely, at school and at home, and how to report any images/messages deemed to be inappropriate.</p> <p>Learners are encouraged to make choices, safe in the knowledge they are in a safe and supportive environment. The school provides boundaries for the children to make choices safely.</p> <p>Learners are taught about their etiquette online and how to engage in an online community positively. Pearson's Set Assignment</p>		<p>topics and also how to present different pieces of work.</p> <p>Learners are taught how to use the Internet safely, at school and at home, and how to report any images/messages deemed to be inappropriate.</p> <p>Learners are encouraged to make choices, safe in the knowledge they are in a safe and supportive environment. The school provides boundaries for the children to make choices safely.</p> <p>Learners are taught about their etiquette online and how to engage in an online community positively. Pearson's Set Assignment</p>
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