

Key Stage 4 Subject Timeline

Subject: ICT (BTEC Tech Awards in Digital Information Technology)

Exam Board: Pearson

Note: From Sept 2021 there is no Y9 ICT class due to the move to Creative iMedia

Year 10						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Topic 1, Learning Aim A: Investigate user interface design for individuals and organisations	Topic 1, Learning Aim B: Use project planning techniques to plan and design a user interface	Topic 1, Learning aim C: Develop and review a user interface	Topic 2, Learning aim A: Investigate the role and impact of using data on individuals and organisations	Topic 2, Learning aim B: Create a dashboard using data manipulation tools	Topic 2, Learning aim C: Draw conclusions and review presentation methods
Key skills and Concepts	<ul style="list-style-type: none"> - Types of interface - Hardware and software influences - Audience needs - Accessibility issues - Application of design principles - Design for efficiency 	<p>Learners will investigate different planning tools and design methodologies that can be used to plan, monitor and execute projects.</p> <p>Planning tools (task lists, Gantt charts, mindmaps, mood boards).</p> <p>Methodologies (waterfall vs iterative).</p> <p>SMART aims / objectives</p> <p>Risks / contingencies</p>	<p>Learners will demonstrate their skills to create, refine and review a user interface. To include:</p> <p>Awareness of intended device, e.g. touchscreen, watch</p> <p>How the user requirements have been met</p> <p>Outputs, e.g. error messages, sounds</p> <p>Navigation methods</p>	<p>Learners will understand the concepts of data and that data is meaningless without converting it into information by adding structure and context.</p> <p>Learners will understand the methods that can be used to ensure data input is valid and within boundaries so that it is ready to be processed.</p> <p>They will understand the different ways of representing information and will be able to explain situations where they would be used.</p>	<p>Learners will develop an understanding of how data can be imported from an external source. They will then explore how to apply data processing methods.</p> <p>Learners will be able to apply a range of data manipulation skills to identify patterns within large data sets.</p> <p>Learners will learn to create and use a dashboard to select and display information summaries based on a given large data set.</p>	<p>Learners will learn to draw conclusions on a data set, using a data dashboard in order to make recommendations.</p> <p>Learners will develop their understanding of how they can avoid:</p> <ul style="list-style-type: none"> - information being misinterpreted - information being biased - inaccurate conclusions being made
Threshold Concepts	An understanding of types and features of user interfaces was covered in Year 9 Spring 1.	Students will have worked through increasingly detailed versions of the project life cycle in KS3 and to this point in KS4, enabling them to tackle this more substantial, structured project.	Students will have developed skills in creating user interfaces in a range of software applications throughout KS3 and Year 9 (notably in Spring 2 and Summer 2).	The importance of data and consideration of data management is covered in Summer 1 of Year 9.	This element will require students to draw upon the practical spreadsheet skills developed throughout KS3 and in Autumn 2 and Summer 1 of Year 9.	Students will have developed skills in converting data to information and drawing meaning from it in spreadsheet and database units in KS3, and in Summer 1 of Y9.

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Endpoints	Students will have created a report analysing two different types of user interface. In doing so they will have covered all elements covered in the Concepts above.	Students to have fully planned and designed a user interface. In doing so they will have met the requirements of Learning Aim B: Use project planning techniques to plan and design a user interface.	Students to have created, refined and reviewed a user interface. In doing to they will have met the requirements of Learning aim C: Develop and review a user interface.	Students to have fully investigated, described and reviewed two large data sets. In doing so they will have met the requirements of Learning aim A: Investigate the role and impact of using data on individuals and organisations.	Students to have created a fully functional data dashboard using a range of complex data analysis tools. In doing so they will have met the requirements of Learning aim B: Create a dashboard using data manipulation tools.	Students will have drawn conclusions based on the use of their data dashboard, and will have reflected on the quality of conclusions drawn. In doing so they will have met the requirements of Learning aim C: Draw conclusions and review presentation methods.
Assessment	Formal CA assessment, Topic 1, Learning Aim A: Investigate user interface design for individuals and organisations.	Formal CA assessment, Topic 1, Learning Aim B: Use project planning techniques to plan and design a user interface.	Formal CA assessment, Topic 1, Learning aim C: Develop and review a user interface.	Formal CA assessment, Topic 2, Learning aim A: Investigate the role and impact of using data on individuals and organisations.	Formal CA assessment, Topic 2, Learning aim B: Create a dashboard using data manipulation tools.	Formal CA assessment, Topic 2, Learning aim C: Draw conclusions and review presentation methods
Cultural Capital	Students invited to attend video editing club as enrichment activity. Although video editing is not a requirement of the specification, skills in this area can be used to enhance Controlled Assessment work and to engage learners with the subject.	Students invited to attend video editing club as enrichment activity. Although video editing is not a requirement of the specification, skills in this area can be used to enhance Controlled Assessment work and to engage learners with the subject.	Consideration of different cultures and different social groups when planning solutions to meet client requirements.	This unit requires students to develop strong data analysis and data processing skills. Such skills will be of use in most future careers. Enrichment clubs providing students with the opportunity to add complexity to the solutions developed.	This unit requires students to develop strong data analysis and data processing skills. Such skills will be of use in most future careers. Enrichment clubs providing students with the opportunity to add complexity to the solutions developed.	This unit requires students to develop strong data analysis and data processing skills. Such skills will be of use in most future careers. Enrichment clubs providing students with the opportunity to add complexity to the solutions developed.
Equality, Inclusion and Diversity	Much of this unit of work centres on consideration of the needs of others in designing user interfaces.	Much of this unit of work centres on consideration of the needs of others in designing user interfaces. Case study of 'Rocky No-Hands' looked at to understand the value of assistive technologies.	Much of this unit of work centres on consideration of the needs of others in designing user interfaces.	Controlled Assessment introduction ensures inclusivity by ensuring all students can access the task but that they are also able to extend the complexity and depth of their work to work towards reaching and exceeding predicted grades.	Controlled Assessment introduction ensures inclusivity by ensuring all students can access the task but that they are also able to extend the complexity and depth of their work to work towards reaching and exceeding predicted grades.	Controlled Assessment introduction ensures inclusivity by ensuring all students can access the task but that they are also able to extend the complexity and depth of their work to work towards reaching and exceeding predicted grades.

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Year 11						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	3 Effective Digital Working Practices	3 Effective Digital Working Practices	3 Effective Digital Working Practices	Revision	Revision	
Key skills and Concepts	<p>Modern technologies:</p> <p>Understand how and why modern technologies are used by organisations, to include:</p> <ul style="list-style-type: none"> - Communication technologies - Cloud technologies - Performance - Compatibility - Maintenance <p>Understand how modern technologies impact on the way organisations perform tasks.</p>	<p>Cyber security:</p> <p>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> <p>How different measures can be implemented to protect digital systems.</p>	<p>The wider implications of digital systems:</p> <p>Responsible use (location-based data, transactional data, cookies, data exchange between services).</p> <p>Impact of manufacturing, use, and disposal of IT systems (energy, waste, rare materials)</p> <p>Legal and ethical issues:</p> <ul style="list-style-type: none"> - Net neutrality - Acceptable use policies - Blurring of social and business boundaries 	Focus to be determined by analysis of individual and whole-group performance in PPEs.	Focus to be determined by analysis of individual and whole-group performance in PPEs.	
Threshold Concepts	Drawing on existing student knowledge in areas including collaborative working and cloud technology.	Students should have strong knowledge of personal cyber security through our annual online safety training. These issues need to be applied to whole organisations.	Responsible use of technology has been covered in our KS3 curriculum and in our annual online safety training.	Students should be familiar with all components of the specification.	Students should be familiar with all components of the specification.	

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Endpoints	Students to have covered all elements relating to modern technologies identified in the course specification (pages 45-46).	Students to have covered all elements relating to modern technologies identified in the course specification (pages 47-48).	Students to have covered all elements relating to modern technologies identified in the course specification (pages 49-50).	Students fully prepared to meet / exceed challenging targets.	Students fully prepared to meet / exceed challenging targets.	
Assessment	End of unit tests – on screen and written (using relevant past-exam questions).	End of unit tests – on screen and written (using relevant past-exam questions).	End of unit tests – on screen and written (using relevant past-exam questions).	Students fully prepared to meet / exceed challenging targets.	Students fully prepared to meet / exceed challenging targets.	
Cultural Capital	Students to become highly informed about modern ways of working using technology. They will be able to work using such methodologies but also able to converse with others about the relative merits and drawbacks of these approaches.	Students offered opportunity to undertake the Bebras challenge to develop their logical thinking and problem solving skills.	Students to become aware of the social and environmental impacts of technology. They will be able to converse with others about this topic. Enrichment clubs providing students with the opportunity to add to their IT skillset beyond the limits of the specification.	After school revision clubs to provide individual and group support towards achieving and exceeding target grades.	After school revision clubs to provide individual and group support towards achieving and exceeding target grades.	
Equality, Inclusion and Diversity	Students develop and demonstrate an understanding of how teleworking might impact on different groups within society.			Much of the course focuses on the impacts, benefits and issues experienced by different groups within society through their use of technology. These areas will be thoroughly revised and discussed.	Much of the course focuses on the impacts, benefits and issues experienced by different groups within society through their use of technology. These areas will be thoroughly revised and discussed.	