Subject: ICT

Year Group: 10

Week beginning	Subject Topic	Key Learning points/big questions	Independent/Home learning	Linked Assessment	Resources
4/1	B: Use project planning techniques to plan and design a user interface B1 Project planning techniques	Project methodologies: waterfall, iterative and Agile Co-coordinating project tasks: Gantt charts, PERT charts and critical path diagrams	Students research an IT project that has failed and share their findings with the class. For example, this could be a website that had been partly developed or a large-scale system that had been partly developed and then abandoned. Students should then find out the reasons for this. Students should try to tease out the root of the problem. For example, rather than saying 'poor planning', students should look at the reasons why the planning was poor. For example, not planning the budget properly or not considering all client needs properly. Research what a project methodology is and the different project methodologies, including the waterfall model and iterative/agile model. Research the benefits and drawbacks of using each methodology and share their findings with the class. Explain why a company such as a mobile phone app developer would make use of an iterative/agile methodology when creating user interfaces for their apps rather than a waterfall methodology. Plenary activities	Coursework practice case study: https://eggbuckland.sharepoint.com/:w:/g/ict/EX5AEVgwdWpCohT7GOwM2JcBeyeTwek0l1P0XRlCRaWd5A?e=peqAUf	User Interface mini-web https://www.teach-ict.com/gcse_new/computer%20systems/user_interface/miniweb/pg6.htm ICT Knowledge Organiser Share-point Folder https://eggbuckland.sharepoint.com/:b:/g/ict/EfJuukhAZChHmHfBkV-e2bkBwO2fdLKg6EL-

			Explain the common reasons why projects fail. Give reasons why an iterative methodology would be used. Give reasons why a waterfall method would be used.		GpUZ8cweyg?e=YypsoU 'E-textbook Exploring User Interface Design' https://eggbuckland.sharepoint.com/:b:/g/ict/EfJuukhAZChHmHfBkV-e2bkBwO2fdLKg6EL-GpUZ8cweyg?e=wonYTJ 'History of the Graphical User Interface' video https://eggbuckland.sharepoint.com/:f:/g/ict/EiRImp8266pKiyQTAe0n38gB1lOM2dhs0tSUqus
11/1	Co-ordinating project tasks [Component 1, B1, Project planning techniques] B: Use project planning techniques to plan and design a user interface B2 Create a project plan	Basic project planning tools: task lists, graphical descriptions, written descriptions and mood boards Planning the project basics: aims and objectives, audience and purpose	Students think of a project they have completed in school or at a club and consider what methods – if any – they used to plan and track the progress of tasks. Students consider how useful their plan was and if they continued to work with it. If students have not made use of a project plan, then students can consider why they didn't have one and the impacts of not creating one. Research introduced to the purpose of and shown how to create Gantt charts, PERT charts and critical path diagrams. Research key terms: 'task dependency', 'task length', 'slack time' and 'critical path'. Research the following time scales and dependencies: Task A – 1 day, no dependencies; Task B – 3 days, dependency on A; Task C – 60 days, dependency on B; Task D – 1 day, dependency on A; Task F – 2 days, dependency on C and E; Task G – 15 days, dependency on F; Task H – 40 days, dependency on E and G. Students use the data to create a Gantt chart, PERT chart and critical path diagram. Research the benefits and drawbacks of each diagram.		

18/1	B: Use project planning techniques to plan and design a user interface B2 Create a project plan	Defining the project requirements: user requirements, output requirements, input requirements and user accessibility requirements Project constraints and risks: time, resources, task dependencies, security and contingency planning	Students should explore the project brief. They should read through the brief, filter out the information that is not important and then start to think about what is actually required. Students are required to use this project brief throughout the remainder of this component and therefore would benefit from having a good understanding of what is required. Students research basic tools that they can use to plan their project. These include task lists, graphical descriptions, written descriptions and mood boards. Students create their own mind map to illustrate a graphical description of the project brief. Students produce a written description of the buying page requirements given in the brief. Students then discuss the benefits and drawbacks of using graphical and written descriptions for this project. Students research different examples of mood boards on the internet.		j1etEsQ?e=TVvQMC
25/1	B: Use project planning techniques to plan and design a user interface B3 Create an initial design	Planning project timescales: overall timescales, when tasks will be completed, key milestones and resources What is a design specification: user requirements, output requirements, input requirements and user accessibility requirements	Students demonstrate their understanding of a design specification. Students explain what they should consider when creating the various elements of the specification and why these should be considered at the design stage.		

1/2	B: Use project planning techniques to plan and design a user interface B3 Create an initial design	Designing the visuals: sketches and storyboarding Defining the hardware, software and testing strategy	Students explain the purpose of a storyboard and storyboard features. Students explain the benefits of using sketches and storyboards.		
8/2	B: Use project planning techniques to plan and design a user interface B3 Create an initial design	Designing the visuals: sketches and storyboarding Defining the hardware, software and testing strategy	Learning aim B: assessment practice Developing a functional user interface: showing the outputs, inputs and the navigational methods		
Feb Half-term					

Subject: Computer Science

Year Group: 11

Week beginning	**Subject Topic**	**Key Learning points/big questions**	**Independent/Home learning**	**Linked Assessment**	**Resources**
4/1	1.6 System Software	• Explain the different types of malware • Discuss a real life malware-related event • Understand how phishing operates • Discuss how data can be intercepted • Understand the meaning of DDOS and brute force attacks • Explain the effects of a DDOS attack • Explain how to be protected against DDOS attacks • Understand the concept of SQL injection • Explain how a vulnerability can be exploited. • Explain what is meant by 'network forensics' • Understand the legalities and consequences of unlawfully intercepting data • Understand the concept of penetration testing	Smart Revise – spend 1 hour answering questions on topic. Time can be split into blocks i.e. 2 x 30 minutes or 3 x 20 minutes, to suit.	Complete Learning Grid for each paper 1 topic https://eggbuckland.sharepoint.com/:w:/g/ict/EX6KZetInSJMsrNx4qvUKi8Byu7ZlzCea1uCSmArMLiaBw?e=4VwQbN	Resources for all paper 1 units https://eggbuckland.sharepoint.com/:f:/g/ict/Ep0_UrVWpUFKvF_JYRKBN0MB_UTSLqRN8c-kjR8YEL-

		• Explore network policies and how they can help protect networks • To understand the effects of user access levels on a system • To understand how and why passwords must be kept secure and the levels of complexity • To learn how encryption can have a negative effect on law enforcement and investigations • To understand how encryption works • To demonstrate a knowledge of a cypher and its' key.		Paper 1 practice questions https://eggbuckland.sharepoint.com/:w:/g/ict/EZkBGODU0xpOizPCZKtTQAIBvbP8VD80OGOY2QYYjSqDXg?e=vT4jhA	fCA?e=T4QJrW
11/1	1.7 System Software	• To understand what is meant by Systems Software • To be able to describe the role and purpose of an Operating System including: o User Interface o Memory Management / Multitasking o Peripheral Management and Drivers o User Management o File Management • To understand the need for Utility Software • To be able to describe the purpose of o Encryption Software o Defragmentation o Data Compression • To understand the role and methods of backup o Full o Incremental	Smart Revise – spend 1 hour answering questions on topic. Time can be split into blocks i.e. 2 x 30 minutes or 3 x 20 minutes, to suit.	Complete Learning Grid for each paper 1 topic https://eggbuckland.sharepoint.com/:w:/g/ict/EX6KZetInSJMsrNx4qvUKi8Byu7ZlzCea1uCSmArMLiaBw?e=4VwQbN Paper 1 practice questions https://eggbuckland.sharepoint.com/:w:/g/ict/EZkBGODU0xpOizPCZKtTQAIBvbP8VD80OGOY2Q	Resources for all paper 1 units https://eggbuckland.sharepoint.com/:f:/g/ict/Ep0_UrVWpUFKvF_JYRKBN0MB_UTSLqRN8c-kjR8YEL-fCA?e=T4QJrW Revision Guide Paper 1 and Paper 2: Paper 1 practice questions
18/1 + 25/1	1.8 – Ethical, legal, cultural and environmental concerns	1. Understand what is meant by a key stakeholder 2. Identify stakeholders in a range of scenarios	Smart Revise – spend 1 hour answering questions on topic. Time can		

		3. Recognise and discuss issues related to Environmental, Cultural, Morals & Ethics 1. Understand what is meant by open source software 2. Understand what is meant by proprietary software 3. Understand what they are legally allowed to do with open source and proprietary software 1. Understand what environmental issues could arise through the use of technology 2. Understand what privacy issue could arise through the use of technology	be split into blocks i.e. 2 x 30 minutes or 3 x 20 minutes, to suit.	YYjSqDXg?e=vT4jhA Paper 1 practice questions https://eggbuckland.sharepoint.com/:w:/g/ict/EZkBGODU0xpOizPCZKtTQAIBvbP8VD80OGOY2QYYjSqDXg?e=vT4jhA Paper 2 practice questions https://eggbuckland.sharepoint.com/:w:/g/ict/EbZ2Um4rqNdGkNz6-tATdZoBhkvTMefQdamCuqfvUzOdkQ?e=eQqi1u		
1/2	Paper 1 Exam Question Practice	Exam Question Practice paper 1 Mix of topics Review Theory Exam Question Check Answers	Smart Revise – spend 1 hour answering questions on topic. Time can be split into blocks i.e. 2 x 30 minutes or 3 x 20 minutes, to suit.			
8/2	Paper 2 Exam Question Practice	Exam Question Practice paper 2 Mix of topics Review Theory Exam Question Check Answers	Smart Revise – spend 1 hour answering questions on topic. Time can be split into blocks i.e. 2 x 30 minutes or 3 x 20 minutes, to suit.			
Feb Half-term						