

KS4 Computing-History of Computing

Students will learn how ICT has developed over time and the key developments that has enabled ICT to progress. Students will discuss how ICT has impacted our society and they will look to the future and endeavour to predict future developments within ICT and how that will impact upon our lives.

Students must complete all their work within Word to continue to develop their word processing skills.

	B2 P 5-6	B2 P 7-8	B2 step 1	B2 step 2	B2 step 3
Theme-Understanding the history of key computing developments					
<u>Subject specific knowledge</u>	<p>Understands that as a society we use computers on a daily basis.</p> <p>Is able to recognise that the following computer related products. Is able to state what they are used for.</p> <p>Mouse Computer keyboard Monitor Base unit Headphones Power cable Plug / plug socket</p> <p>Is able to recognise old and new versions of computer/digital hardware:</p> <p>Desktop PC's Mobile phones Games consoles Televisions Cameras Shop tills</p>	<p>Understands that as a society we use computers on a daily basis.</p> <p>Is able to recognise (within the context of non-computerised products) that the following contain computerised technology.</p> <p>Smart phones Tablets, laptops, desktops Smart TV's ATM's Digital cameras Washing machines Dishwasher Games console Cars Shop tills Coffee machines / vending machines</p> <p>Is able to recall the following timeline</p> <p><i>(note for teachers-this is a succinct timeline based upon key computing events)</i></p> <p>In order to help students process the timeline choose a famous figure who is approximately 50 years of age</p>	<p>Understands that as a society we use computers on a daily basis.</p> <p>Is able to recognise (within the context of non-computerised products) that the following contain computerised technology.</p> <p>Smart phones Tablets, laptops, desktops Smart TV's ATM's Digital cameras Washing machines Dishwasher Games console Cars Shop tills Coffee machines / vending machines Contactless pay/banking</p> <p>Is able to discuss their personal use of the above.</p> <p><u>Students understand the concept of the microchip and how its invention enabled us to develop digital technology</u></p> <p>Is able to recall the following timeline</p> <p><i>(note for teachers-this is a succinct timeline based upon key computing events)</i></p>	<p>Understands that as a society we use computers on a daily basis.</p> <p>Is able to recognise (within the context of non-computerised products) that the following contain computerised technology.</p> <p>Smart phones Tablets, laptops, desktops Smart TV's ATM's Digital cameras Washing machines Dishwasher Games console Cars Shop tills Coffee machines / vending machines Contactless pay/banking</p> <p>Is able to discuss how computerised technology supports these products.</p> <p><u>Students understand the concept of the microchip and how its invention enabled us to develop digital technology</u></p> <p>Is able to recall the following timeline</p> <p><i>(note for teachers-this is a succinct timeline based upon key computing events)</i></p>	<p>Understands that as a society we use computers on a daily basis.</p> <p>Is able to recognise (within the context of non-computerised products) that the following contain computerised technology.</p> <p>Is able to discuss how computerised technology supports these products.</p> <p>Is able to discuss non computerised alternatives to the below.</p> <p>Smart phones Tablets, laptops, desktops Smart TV's ATM's Digital cameras Washing machines Dishwasher Games console Cars Shop tills Coffee machines / vending machines Contactless pay/banking</p> <p><u>Students understand the concept of the microchip and how its invention enabled us to develop digital technology.</u></p> <p>Is able to recall the following timeline</p>

		<p>(the length of the timeline), compare the various stages of this person life to the developments within computing.</p> <ul style="list-style-type: none"> -1971-Personal Computers (PC's) start to become available to the general public -Microsoft was formed in 1975 Introduce Bill Gates -Apple was formed 1976 Introduce Steve Jobs -1993-the internet is available to the public - Tim Berners Lee invented the technologies that the modern internet is built upon. -1994-play station launched -1994-First smartphone released -1996 - Google search engine launched -2001 Xbox launched -2005 YouTube -first iPad released 2010 	<p>In order to help students process the timeline choose a famous figure who is approximately 50 years of age (the length of the timeline), compare the various stages of this person life to the developments within computing.</p> <ul style="list-style-type: none"> -1971-Personal Computers (PC's) start to become available to the general public -Microsoft was formed in 1975 Introduce Bill Gates -Apple was formed 1976 Introduce Steve Jobs -Microsoft Office was released in 1989 -1989-Sky TV launches in the UK -1993-the internet is available to the public - Tim Berners Lee invented the technologies that the modern internet is built upon. -email became widely used in 1993 with the launch of the internet -1994-play station launched -1994-First smartphone released -1996 - Google search engine launched 	<p>In order to help students process the timeline choose a famous figure who is approximately 50 years of age (the length of the timeline), compare the various stages of this person life to the developments within computing.</p> <ul style="list-style-type: none"> -1948 the world's first computer to be able to <u>store and re run a computer program</u> (prior to that computers had to be reprogrammed after use) called "The baby" ran its first program. It was invented in Manchester. It is the fore runner to the computers of today. -1971-Personal Computers (PC's) start to become available to the general public -Microsoft was formed in 1975 Introduce Bill Gates -Apple was formed 1976 Introduce Steve Jobs -1985-Laptops start to become popular -1985-First cellular mobile phone released in the UK -Microsoft Office was released in 1989 -1989-Sky TV launches in the UK -1993-the internet is available to the public - Tim Berners Lee invented the technologies that 	<p><i>(note for teachers-this is a succinct timeline based upon key computing events)</i></p> <p>In order to help students process the timeline choose a famous figure who is approximately 50 years of age (the length of the timeline), compare the various stages of this person life to the developments within computing.</p> <ul style="list-style-type: none"> -1948 the world's first computer to be able to <u>store and re run a computer program</u> (prior to that computers had to be reprogrammed after use) called "The baby" ran its first program. It was invented in Manchester. It is the fore runner to the computers of today. -1971-Personal Computers (PC's) start to become available to the general public -Microsoft was formed in 1975 Introduce Bill Gates -Apple was formed 1976 Introduce Steve Jobs -1985-Laptops start to become popular -1985-First cellular mobile phone released in the UK -Microsoft Office was released in 1989
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	<p>Can use a search engine to find a specific image.</p>	<p>Understands needs a search engine to look for things online. Can make use of different search engines.</p>	<p>-2001 Xbox launched</p> <p>-2004 Facebook launched Introduce Mark Zuckerberg</p> <p>-2005 YouTube</p> <p>-Twitter launched 2006</p> <p>-what's app launched 2009</p> <p>-Instagram 2010</p> <p>-first iPad released 2010</p> <p>Understands need an ISP provider (can name different ones/idea of cost). Knows difference between a browser and a search engine.</p>	<p>the modern internet is built upon.</p> <p>-email became widely used in 1993 with the launch of the internet</p> <p>-1994-play station launched</p> <p>-1994-First smartphone released</p> <p>-1996 - Google search engine launched</p> <p>-2001 Xbox launched</p> <p>-2004 Facebook launched Introduce Mark Zuckerberg</p> <p>-2005 YouTube</p> <p>-Twitter launched 2006</p> <p>-what's app launched 2009</p> <p>-Instagram 2010</p> <p>-first iPad released 2010</p> <p>Understands need an ISP provider (can name different ones/idea of cost). Knows difference between an operating system, browser and search engine.</p>	<p>-1989-Sky TV launches in the UK</p> <p>-1993-the internet is available to the public - Tim Berners Lee invented the technologies that the modern internet is built upon.</p> <p>-email became widely used in 1993 with the launch of the internet</p> <p>-1994-play station launched</p> <p>-1994-First smartphone released</p> <p>-1996 - Google search engine launched</p> <p>-2001 Xbox launched</p> <p>-2004 Facebook launched Introduce Mark Zuckerberg</p> <p>-2005 YouTube</p> <p>-Twitter launched 2006</p> <p>-what's app launched 2009</p> <p>-Instagram 2010</p> <p>-first iPad released 2010</p> <p>Students have an understanding of some of the current developments within computing:</p> <p>-Computer driven vehicles</p> <p>-Artificial intelligence</p> <p>Understands the internet is a network of servers, people host websites on servers for users to access.</p>
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					Understands need an ISP provider (can name different ones/idea of cost). Knows difference between an operating system, browser and search engine.
<u>Subject specific skills</u>	<p>Is able to match the above computer hardware to appropriate uses (mouse, monitor etc).</p> <p>For example when prompted by a verbal clue or an audio file (i.e. what do I use to type words into the computer?) is able to choose the correct piece of hardware.</p> <p>Can pick out old and new hardware from a matrix.</p>	<p>Is able to order the timeline. Is able to notice errors in a timeline.</p> <p>Is able to match specific activities to the developments within the timeline.</p> <p>Is able to match up non-computing activities to the above area to illustrate how society functioned pre computers.</p> <p>i.e. no social media - people had speak to each other on a landline, send letters or meet up etc.</p>	<p>Is able to order the timeline and use appropriate reasoning to justify answer (i.e. email must have come after the invention of the WWW because email relies on the WWW). Is able to notice errors in a timeline.</p> <p>Is able to discuss how 3 of these developments have impacted on their lives and the lives of the people around them. Is able state if they think this impact is positive or negative and justify.</p>	<p>Is able to order the timeline and use appropriate reasoning to justify answer (i.e. email must have come after the invention of the WWW because email relies on the WWW). Is able to notice errors in a timeline.</p> <p>Is able to discuss how each of these developments have impacted on their lives and the lives of the people around them. Is able state if they think this impact is positive or negative and justify.</p>	<p>Is able to order the timeline and use appropriate reasoning to justify answer (i.e. email must have come after the invention of the WWW because email relies on the WWW). Is able to notice errors in a timeline.</p> <p>Is able to discuss how each of these developments have impacted on their lives and the lives of the people around them. Is able to state if they think this impact is positive or negative and justify.</p> <p>Is able to predict future computing developments and their impact on society.</p>

Theme-Creating a document in Word

<u>Subject specific knowledge</u>	<p>Knows which software icon relates to Word:</p> <p>Can identify the following editing tools:</p> <p>Bold Underline Italic Font Font size Font colour</p>	<p>Is able to locate a file on the server / save file to a specific location.</p>	<p>Is able to locate a file on the server / save file to a specific location.</p> <p>Is able to re-name documents</p>	<p>Is able to locate a file on the server / save file to a specific location.</p> <p>Is able to re-name documents</p> <p>Understands the concept of digital documents as opposed to non-digital. What are the benefits of digital documents?</p> <p>Understands the concept of digital documents as opposed to non-digital. What are the benefits of digital documents?</p>	<p>Is able to locate a file on the server / save file to a specific location.</p> <p>Is able to re-name documents</p> <p>Understands the concept of digital documents as opposed to non-digital. What are the benefits of digital documents?</p> <p>Understands the concept of digital documents as opposed to non-digital. What are the benefits of digital documents?</p>
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		<p>Knows which software icon relates to which piece of software.</p> <p>Word Publisher PowerPoint Excel</p> <p>Can identify and use the following editing tools:</p> <p>Bold Underline Italic Font Font size Font colour Insert Shape fill Shape outline Shape effects Word Art Page orientation</p> <p>Understands the key elements of a document.</p> <p>Must include a heading.</p> <p>Make good use of space.</p> <p>Images have to be relevant and appropriately sized and positioned.</p> <p>Text has to be legible.</p> <p>Coherent content</p>	<p>Knows which software icon relates to which piece of software.</p> <p>Word Publisher PowerPoint Excel</p> <p>Can identify and use the following editing tools:</p> <p>Bold Underline Italic Font Font size Font colour Insert Shape fill Shape outline Shape effects Word Art Page orientation Edit page colour/borders Insert and edit shapes (sending shape to front and back)</p> <p>Understands the key elements of a document.</p> <p>Must include a heading.</p> <p>Make good use of space.</p> <p>Images have to be relevant and appropriately sized and positioned.</p> <p>Text has to be legible.</p> <p>Coherent content</p>	<p>Knows which software icon relates to which piece of software.</p> <p>Word Publisher PowerPoint Excel</p> <p>Can identify and use the following editing tools:</p> <p>Bold Underline Italic Font Font size Font colour Insert Shape fill Shape outline Shape effects (sending shape to front and back) Word Art Edit page colour/borders Insert and edit shapes Page orientation Insert / edit graphs and tables</p> <p>Understands the key elements of a document.</p> <p>Must include a heading.</p> <p>Make good use of space.</p> <p>Images have to be relevant and appropriately sized and positioned.</p> <p>Text has to be legible.</p> <p>Coherent content</p>	<p>Knows which software icon relates to which piece of software.</p> <p>Word Publisher PowerPoint Excel</p> <p>Can identify and use the following editing tools:</p> <p>Bold Underline Italic Font Font size Font colour Insert Shape fill Shape outline Shape effects (sending shape to front and back) Word Art Edit page colour/borders Insert and edit shapes Page orientation Insert / edit graphs and tables Wrap text etc Hyperlinks Bullet points</p> <p>Understands the key elements of a document.</p> <p>Must include a heading.</p> <p>Make good use of space.</p> <p>Images have to be relevant and appropriately sized and positioned.</p> <p>Text has to be legible.</p> <p>Coherent content</p>
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	Appropriate use of colour. Grammar has to be correct.	Appropriate use of colour. Grammar has to be correct.	Appropriate use of colour. Grammar has to be correct.	Appropriate use of colour. Grammar has to be correct.
<u>Subject specific skills</u>	<p>Is able to use the above editing tools in order to create a Word presentation which details their response to computing developments.</p> <p><u>Differentiated ideas:</u></p> <p>Step 2-3-Design a board game based upon the time line / recognizing old and new equipment/predict future developments</p> <p>Step 1-2 Discuss their use of technology and how they benefit from it and how they can improve their use of technology.</p> <p>Step 1 and below-Answer a series of picture and text questions based upon the timeline and old and new technology.</p>			
<u>Personal development</u>	<p><u>Problem solving-</u> Linked to resolving hard and software issues.</p> <p><u>Communication skills-</u> Asking appropriate questions and listening to responses when troubleshooting ICT issues and discussing work.</p> <p><u>Self-belief-</u> Never giving up if unable to resolve the issues, continue to ask, listen and try different solutions.</p> <p><u>Team Work-</u> Supporting fellow classmates when appropriate.</p> <p><u>Self-management-</u> Linked to independent research tasks and the ability to following a brief for a specific presentation task.</p>			
<u>Suggested activities</u>				
<u>P5-8</u>				
<u>See Skills Section</u>				
<ul style="list-style-type: none"> -use picture sequence sheets and video tutorials to teach students how to edit within Book Creator -use quiz format to test and embed student skills (i.e. give them a challenge "insert a red triangle" and the first one to complete it wins) -Students copy the actions of teacher / TA to learn editing skills, students then take it in turn to lead the group -treasure hunts based upon having to take pictures or record videos of specific objects 				
<u>Level 1-3</u>				
<u>See Skills Section</u>				
<ul style="list-style-type: none"> -students work collaboratively to re-create slides. -use picture sequence sheets and video tutorials to teach students how to edit within PowerPoint -individually or within groups students have to model an editing technique to the class using appropriate presentation skills. -Worksheet based test based upon all aspects of the module. -Using flashcards, students quiz each other on the basic rules for creating and editing a PowerPoint as well as on the editing tools used within a presentation. -use presentation templates to assist lower level students to create their own presentations. -students use flashcards to test each other on computing timeline. -students present their opinions to the rest of the class. -students carry out picture research tasks based upon different types of PC's (modern and historic). 				
<u>Online resources</u>				
<p>https://www.manchester.ac.uk/discover/news/birth-of-first-modern-computer-celebrated-in-manchester/#:~:text=Digital%2060%20Day%20marks%20the,Tom%20Kilburn%20and%20Freddie%20Williams.</p> <p>https://www.bbc.co.uk/bitesize/search?q=history+of+computing</p> <p>https://simpletexting.com/where-have-we-come-since-the-first-smartphone/#:~:text=The%20first%20smartphone%2C%20created%20by,Simon%20Personal%20Communicator%20(SPC).</p>				
<u>Evidencing Work</u>				
<p>All work needs to be printed off and have a feedback sheet attached to it (see computing curriculum folder), completed work needs to be put in student folders</p>				