

The ICT / Computing Curriculum- *by year group.*

Year 6

eSafety

Text and Graphics

Research & Communication

Multi-Media Authoring

Digital Creativity

Data & Programming

Learning Objectives	Key Skills	Notes
Year 6 - Text and Graphics		
<ul style="list-style-type: none"> To continue to develop typing speed and accuracy to develop competency in typing To review and evaluate the purpose of and use independently a range of different technology. To explain and justify about when to use technology, which piece(s) of technology to use, which software/tools they are going to use on the technology and be able to explain their choices to others. 	<ul style="list-style-type: none"> Continue to increase their typing speed, and be encouraged to play games at home and school that help with this. Aim to reach the accepted competency rate for children of 30WPM by the end of Year 6. Continue to become familiar with a range of devices, including tablets, desktop computers, laptops, microphones, cameras etc. and increasingly develop their independence and confidence in using these devices. Be encouraged to increasingly make sensible choices about the technology they use to help them work, and to justify their choices- for example, why they have chosen to use a <i>tablet</i> rather than a laptop, or why they have chosen to use 'PowerPoint' rather than 'Word'? Continue to regularly use word processing and desktop publishing to present their work, combing formatted text with other media and making choices about programs and features to use and justifying these choices to others. 	<p>See https://www.2simple.com/2type/</p> <p>See also typing apps in Mac app store – search under 'Typing for Kids'.</p> <p>Good 15 WPM Great 25 WPM SUPER 30+ WPM</p> <p>Typing speed refers to <i>copying</i> WPM, composition WPM will be slower.</p>

Learning Objectives	Key Skills	Notes
Year 6 – Research and		
<ul style="list-style-type: none"> Skim read and sift more information to check its relevance and modify their search strategies if necessary To check plausibility of information from a variety of sources on the same topic To use a range of sources to check validity and explain different viewpoints and the impact of incorrect data. To understand plagiarism and the importance of acknowledging sources To use collaboration tools to work together to produce and evaluate a joint piece of work with children both inside the schools and in other schools in the SLH. To store and retrieve data using QR codes. 	<p>Skim and select information checking for bias and different viewpoints. Develop more accurate keywords and enter them into a chosen search engine, using more advanced search engine features.</p> <p>Higher Order Research Skills</p> <p>Rapid searching and browsing, Assessing the quality and synthesizin Prioritising, ranking Switching attention between activities (multi-tasking)</p> <ul style="list-style-type: none"> Talk about validity and plausibility of information by checking other sources Modify searches further to find relevant information for a report. Recognise the impact of using incorrect information in their work Talk about where web content might originate from by looking at web address, author, other linked pages Continue to collaborate on a project (using a range of web 2.0 tools to support their work - both with children in their class, other classes and children from other schools within the Samphire Learning Hub) Discuss appropriateness of using different tools in different contexts and the advantages and disadvantages. To encode and label using QR codes to support and extend (with the experience of the end-user in mind) 	<p>Use safe search engines such as : SafeSearch http://primaryschoolict.com K9 http://www1.k9webprotection.com SEGFL http://www.segfl.org.uk BBC Learn Zone, See advanced searches etc. https://support.google.com/websearch/answer/136861?hl=en http://www.google.com/advanced_search</p> <p>See http://eduscapes.com/tap/topic32.htm See http://www.thinkuknow.co.uk/8_10/cybercafe/cyber-cafe-base/ See http://www.thinkuknow.co.uk/5_7/hectorsworld/ See http://www.bbc.co.uk/education/clips/zkxqxb See http://www.bbc.co.uk/education/clips/z8676sg</p> <p>Useful websites for Plausibility:</p> <ul style="list-style-type: none"> Dog Island Free Forever: A puppy dog paradise. http://www.thedogisland.com The Pacific Northwest Tree Octopus: http://zapatopi.net/treeoctopus.ht ml Victorian Robots: http://www.bigredhair.com/robot s/index.html <p>See https://itunes.apple.com/gb/app/grafter-gr-code-barcode-reader/id416098700?mt=8 Crafter App</p>

Learning Objectives	Key Skills	Notes
Year 6 -Digital Creativity		
<ul style="list-style-type: none"> • To begin to recognise the different layers of sound in a professional broadcast and use technology to record and manipulate music/sound refining for a given audience or project. • To use technology to create a stop motion animations and add audio and video effects to these animations. • To use a computer to add complex effects to photographs and to preform common photograph edits (e.g. red eye removal) • To compare different image creation and editing tools and select the most appropriate tool to use, justifying their choices. • To take photographs and justify reasons for choices. To record video taking into account the audience and/or purpose for the image/video. 	<ul style="list-style-type: none"> • Independently choose and use an appropriate device to record sounds in order to create a sound file and use software manipulate sounds using computer software – e.g. remove unwanted silences/trimming start and end - combine to make a podcast or similar broadcast. • Create stop motion animations and combine with video and audio effects. • Apply more complex effects to photographs using a computer. (e.g. red eye removal) • Compare and contrast different image creation and editing tools across a range of platforms. • Continue to choose to independently record video for a range of purposes. Continue to take photographs for a specific reason or project and/or find appropriate images on-line. 	<p>Audio- use web based on-line tools, audacity on a computer and iPad apps. Focus on using ambient sounds.</p> <p>See: Stop Motion Studio https://itunes.apple.com/en/app/stop-motion-studio/id441651297?mt=8</p> <p>See Photoshop, GIMP, Photo editing using iPad. http://pixlr.com to edit photos online. Use Trimble Sketckup for the 3D modelling task. See http://www.sketchup.com</p>

Learning Objectives	Key Skills	Notes
Year 6 - Multi-Media Authoring		
<ul style="list-style-type: none"> • To use tools to help them design and create a web based application for smart phones/tablets, giving consideration to the market/audience for their application. • To create and improve websites for a specific purpose and improve these sites, based on user feedback. • To use technology to help them present their work, showing an increasing degree of skill and using advanced features of software and tools. • Use ICT to create a finished product or set of linked products, developing consistency in style across linked products. • Be discerning in evaluating digital content. 	<ul style="list-style-type: none"> • Create a web-based application for a smart phone or tablet with consideration for the audience- containing information about a topic, trip, the school or to support work in other areas of the curriculum. • Continue to create websites based on topics, area of interest or events, increasing the complexity of these sites. • Continue to create presentations which link into a topic, area of interest or event, choosing an appropriate tool or service. Involve peer review. • To select tools which they can use to help them achieve a specific aim and justify these choices to others. • Explain the importance of evaluation and adaptation of individual features to enhance the overall product, taking into account feedback. 	<p>See app building software like http://appshed.com http://www.ischoolbox.com http://fantastic4schools.com</p> <p>See https://www.2simple.com/2create/ Powerpoint (using hyperlinks) and Frontpage</p> <p>ie. Prezi, Keynote Video, podcast, mp3 commentary, radio broadcast, Skype, blog.</p> <p>Demonstrated in presentations, blogs, websites, Apps, using a variety of software.</p>

Learning Objectives	Key Skills	Notes
Year 6 - Data and Programing		
<ul style="list-style-type: none"> To continue to use, search, enter data into and create their own databases. To continue to use technology, including spreadsheets to create graphs and present data in different ways. To be able to design, construct, evaluate and modify simple models i.e. enter data, enter formulae, copy cells and use simple formatting in a spreadsheet. To continue to develop their understanding of how computer and technology works and Computer Theory. Understand computer networks including the internet. To use assisted programing software to create more complex applications and games. Understand and work with variables and various forms of input and output. To write and debug simple scripts in an international recognised coding language (i.e. Python). Use text based programing to control and monitor external sensors. To understand that ICT allows for complex situations to be modelled, or those which it would be impractical. To use software to model 3D objects, working to a scale. 	<ul style="list-style-type: none"> Continue to use, query and create their own databases as appropriate, linking into work across the curriculum. Use to analyse data and evaluate evidence. Linked into a theme, or real life application, create a spreadsheet, enter basic formulae (simple calculations and SUM) and change data in a spreadsheet to model situations and answer 'What if...' questions. Explore aspects of Computer Theory (e.g. from Simon Haughton's eBook). Use a range of visual based programing software (e.g. Scratch and Kodu) to plan and design basic software (for example a simple game), controlling the movement and responses of different elements on screen and using different variables. Begin to explore text based programing languages and create basic scripts (for example writing a Python script to identify if a number is odd or even) Use logical reasoning to explain how simple algorithms work and to detect and correct errors. Control and monitor external sensors. Think about design of software to plan out work in advance. Solve problems (or requirements) by decomposing them into smaller problems. Use software to create models of 3D objects, landscapes or items, including creating to scale 	<p>See https://www.2simple.com/2investigate/ See 2graph : http://www.2simple.com/component/virtuemart/age-group/3-5/infant-video-toolkit-downloadable-detail?Itemid=0</p> <p>See Simon Haughton's Excel spreadsheet guide http://www.simonhaughton.co.uk/introducing-spreadsheets/</p> <p>See: Simon Haughton's Computing Theory Guide http://www.simonhaughton.co.uk/computing-theory-for-7-to-11-year-olds.html</p> <p>See http://scratch.mit.edu Apps: Bee-bot https://itunes.apple.com/gb/app/bee-bot/id500131639?mt=8 Hopscotch https://www.gethopscotch.com CargoBot http://twolivesleft.com/CargoBot/ Probot: http://www.primaryict.co.uk/tts-pro-bot-windows-xp-compatible_ibot2_1778.htm Codable: http://www.codable.org KODU http://www.kodugamelab.com Python: http://www.simonhaughton.co.uk/python-programming-guide.html LEGO Mindstorms http://www.lego.com/en-gb/mindstorms/?domainredir=mindstorms.lego.com</p> <p>See BBC Science Clips: http://www.bbc.co.uk/schools/scienceclips/index_flash.shtml Bridge Constructor App: https://itunes.apple.com/gb/app/bridge-constructor-free/id507125352?mt=8</p>

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Learning Objectives	Key Skills	Notes
Year 6 - eSafety		
<ul style="list-style-type: none"> To use Social Networking – including Smart phones (as well as technology in general) safely and responsibly, recognising acceptable / unacceptable behaviour. Check personal settings on social networks. Understanding the term ‘digital footprint’ and the importance. To understand the importance of keeping personal data private including passwords. 	<ul style="list-style-type: none"> Review different social media. Use safe platform to communicate with other children (in school and around SLH) and practise esafety and responsible communication. Practice changing personal settings and discussing the differences and consequences. Discuss the consequences of irresponsible behaviour using smart phones and other web enabled devices. Create better passwords using a variety of techniques. 	<p>See http://www.superclubsplus.com See http://eduscapes.com/tap/topic32.htm See http://www.thinkuknow.co.uk/8_10/cybercafe/cyber-cafe-base/ See http://www.thinkuknow.co.uk/5_7/hectorsworld/ See http://www.bbc.co.uk/education/clips/zkxqxb See http://www.bbc.co.uk/education/clips/z8676sg</p> <p>See: Thinkuknow http://www.thinkuknow.co.uk/8_10/control/ COVERS: CHATTING, INSTANT MESSENGER, EMAIL, MOBILES, CHAT ROOMS, SOCIAL NETWORKS, FILE SHARING, GAMING, CYBER-BULLYING http://www.kidsmart.org.uk http://www.bbc.co.uk/webwise/topics/safety-and-privacy/</p> <p>See: http://www.bbc.co.uk/webwise/0/22717881 See Thinkuknow www.thinkuknow.co.uk</p>