

ICT curriculum Map

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Year 6	Notes	Possible outcomes and activities
Objectives		
<p><u>Multimedia and Word processing</u> <u>Comp KS2 6 (7)</u></p> <ol style="list-style-type: none"> 1. Select appropriate software for the task/audience 2. Plan structure and layout of presentation 3. evaluate and select suitable information and media from a range of electronic resources 4. organise, refine and present information for a specific audience 5. Create a range of hyperlinks to produce a non-linear presentation 6. Through peer assessment and self evaluation, make suitable improvements 7. choose appropriate techniques to create an effective and well polished presentation considering intended audience. 8. Discuss and evaluate the presentations and give reasons for the chosen styles and techniques <p>When word processing children should:</p> <ul style="list-style-type: none"> • be able to use various display features to communicate to an audience: e.g. 	<p>Suggested Resources</p> <p>Multimedia Authoring packages: Powerpoint – Create slides and add pictures, text, WordArt, Video</p> <p>Word processing packages: Word – Word processor</p> <p>Photostory 3 (as whole class) - combines photos into a slideshow and allows sound, voice commentary and titles to be added.</p> <p>Touch Typing Course – create links on Fronter which included BBC Dance Mat Typing (www.bbc.co.uk/schools/typing)</p>	<p>Plan a presentation including appropriate software, combine from a range of sources, organise and refine to suit purpose and audience</p> <p>Literacy – create a leaflet about something whilst having a literacy focus, i.e. using a variety of persuasive language within the leaflet.</p> <p>Science – create a document explaining a science concept that another year group could use to learn from.</p> <p>Talks – create a presentation for a talk.</p>

<p>fact/definition boxes, annotated illustration, leaflet layout.</p> <ul style="list-style-type: none"> • delete/insert and replace text to improve clarity and mood. • make corrections using a range of tools (eg spell check, find and replace) • develop confidence using both hands when typing 		(Link to RE)
<p><u>Digital Imagery</u> Comp KS2 6 (7)</p> <ol style="list-style-type: none"> 1. explore all the features of a given video editing or animation package 2. plan a storyboard for a video or animation to suit a purpose 3. film, create, edit and refine to ensure quality; present to an audience 	<p>Suggested Resources</p> <p>Digital camera - Flip Cameras – Simple filming device which allows for videos to be quickly and easily played on screen</p> <p>Windows Movie Maker - Video editing software which allows</p> <p>2Aimate – Simple animation program</p> <p>Photostory 3 (as whole class) - combines photos into a slideshow and allows sound, voice commentary and titles to be added.</p>	<p>Plan and produce a video or animation. Evaluate and improve work, aiming at high production standards.</p> <p>Literacy – Create scenes with multiple camera angles and shot types</p> <p>Topic – Alter a piece of drama to make it appear to be from the past e.g. use green screen and add effects in Movie Maker.</p>
<p><u>Programming</u> Comp KS2 1,2,3 (7)</p> <p>Unit 1: Espresso Coding</p> <ol style="list-style-type: none"> 1. Navigate the Espresso Coding programming environment. 2. use variables and formulae in code to create an area calculator 3. to code functions which use formulae to convert one measurement into another 4. to use variables in more complex ways to make a unit conversion app, converting miles to kilometres 5. to use variables and loops to solve maths challenges. 6. to find the current time and create clock apps. 	<p>Espresso Coding</p> <p>Login: student21791 Password: saintjoseph</p> <p>*Code Kingdom – introduced Spring Term 2015</p>	<p>Complete units on Espresso Coding</p> <p>Create own apps/games</p> <p>City Learning Centre Visit</p>

<p>7. to program your own app, choosing your own objects and events; practise using formula in your code.</p>		
<p><u>Programming</u> Comp KS2 1,2,3 (7) Unit 2: Programming Robots 1. To build own robot 2. To control robot using variables and formula</p>	<p>CLC visit</p>	<p>Program robots at the CLC</p>
<p><u>Programming</u> Comp KS2 1,2,3 (7) Unit 3: HTML 1. Create a basic page with head and body sections. 2. Open and test pages in internet explorer 3. Add frames to give the page structure 4. Add text, pictures and video and be able to change these. 5. Create hyperlinks to other pages and websites.</p>	<p>Click on View and source or Ctrl+U in Internet Explorer to view the source code for a website. Children could compare similarities which need to be in all websites as a starting point. There are lots of online guides for learning HTML a list of them can be found at http://www.gradeinfinity.com/?p=3839</p>	<p>Link to Topic Create an information page about Rivers. Create a Grammar guide with links to online games to help other pupils improve their understanding of grammar.</p>
<p><u>Communication and Collaboration</u> Comp KS2 4, 6 (7) Blogging 1. Alter the theme and appearance of their blog, adding background images etc. 2. Create a new post, save it as a draft and publish it. 3. Embed photos, hyperlinks and videos into posts. 4. Reorganise posts and remove posts they no longer want. 5. Like/follow other blogs and build up their blog content over the year. Understand about syncing files using cloud computing folders.</p>	<p>Use blog such as http://kidblog.org/home/</p>	<p>Regularly update a blog during a term. Add photos and links to related sites or other blogs.</p>
<p><u>Handling Data</u> Comp KS2 6 (7) Simulation 1. To identify and enter the correct formulae</p>	<p>Suggested Resources Spreadsheet program e.g. Excel – Start to use as a spreadsheet; adding formulas.</p>	<p>Design and use a spreadsheet to solve a mathematical problem by reviewing rules and</p>

<p>into cells, modify the data, make predictions of changes and check them</p> <ol style="list-style-type: none"> 2. to identify formulae and enter them into a spreadsheet 3. Copy formulae to create tables of results 4. to use a spreadsheet to draw a graphs and answer questions 5. to change the data and formulae in a spreadsheet to answer 'what if ...?' questions and check predictions 		<p>variables.</p> <p>Answer 'what if questions'</p> <p>Create spreadsheet for business plan</p>
<p><u>Handling Data</u> Comp KS2 6 (7) Database</p> <ol style="list-style-type: none"> 1. to identify a problem which can be solved by collecting data 2. to identify which data to collect 3. to collect data in an efficient and accurate way 4. to organise data by designing fields and records in a database 5. to interpret data by using a range of searches and graphs 6. to draw conclusions from data 7. to use conclusions to solve the original problem 	<p>Suggested Resources Database software (eg. Textease Database,). Excel- Create graphs and spreadsheets</p>	<p>Solve a problem by planning and carrying out data collection, by organising and analysing data using a database, and by drawing conclusions and presenting findings to a specific audience</p> <p>Maths – use data they've collected in maths to create a spreadsheet and graphs/charts and to answer questions.</p> <p>Topic – Create a database about different Rivers around the world and compare.</p> <p>Science – use collected data to answer questions and make charts/graphs.</p> <p>Create a business plan for money making project</p>
<p><u>E-Safety</u> Comp KS2 7</p>	<p>Children's search engines;</p>	<p>This could be taught as a</p>

<p>Online Research</p> <ol style="list-style-type: none"> Children use a range of sources to check the validity of a website. Children recognise that different viewpoints can be found on the web. They critically evaluate the information they use, and understand some of the potential dangers of not doing so. Children are aware of the issues of plagiarism, copyright and data protection in relation to their work. Children select copyright free images and sounds from sources such as the Audio Networks and NEN image gallery. 	<p>www.kidsclick.org http://kids.yahoo.com/ www.askforkids.com</p> <p>Revisit school's 'Being SMART Online'</p> <p>CyberQuoll Episode 5– 'Trying it on' (cyber marketing) and lessons 5.1-5.6 http://www.cyberquoll.com.au</p> <p>CyberQuoll Episode 5– 'Kids in cyberspace' (the big picture) and lessons 6.1-6.4 http://www.cyberquoll.com.au</p> <p>For copyright free images; NEN image gallery Audio Network</p>	<p>separate Life Skills lesson or as part of another ICT lesson.</p> <p>Refer to the E-SMART rules.</p>
<p>E-Safety Comp KS2 7 Communication and Collaboration</p> <ol style="list-style-type: none"> Decide which online communication tool is the most appropriate to use for a particular purpose, e.g. email, discussion forums, podcast, or multi-user documents on Fronter. Discuss issues to do with Social Networking. E.g. giving too much information, people using information online, not knowing who is at the other end of the conversation. 	<p>ThinkUKnow Cybercafe Lesson 9: Social Networking – Safe Profiling</p> <p>School email system or communication tools with Fronter</p> <p>SMART Rule – Safe, Reliable</p>	<p>This could be taught as a separate Life Skills lesson or as part of another ICT lesson.</p> <p>Refer to the E-SMART rules.</p>
<p>E-Safety Comp KS2 7 Communication & Collaboration</p> <ol style="list-style-type: none"> See previous. 	<p>ThinkUKnow Cybercafe Lessons: 6 – chatting with care 7 – Using text and picture messaging 8 – behaving responsibly www.thinkuknow.co.uk/8_10/</p> <p>Captain Kara and Winston's SMART Adventure (KnowITall), chapter 3, "What Should you keep safe?"</p>	<p>This could be taught as a separate Life Skills lesson or as part of another ICT lesson.</p> <p>Refer to the E-SMART rules.</p>
<p>E-Safety Comp KS2 7</p>	<p>School Internet 'Being SMART online'</p>	<p>This could be taught as a</p>

<p>E-Awareness</p> <ol style="list-style-type: none"> 1. Be aware of the issues surrounding cyberbullying and understanding the impact on an individual of sending or uploading unkind or inappropriate content. 2. Know that malicious adults use the Internet and attempt to make contact with children and know how to report abuse. 	<p>KS 2 Safer Internet Day Assembly video. http://www.thinkuknow.co.uk/teachers/ Clair's story from CEOP (11-16) http://www.thinkuknow.co.uk/teachers/ (Summer term – please note teachers need training and support to deliver this). www.thinkuknow.co.uk/8_10/ “Let’s fight it together”, Cyberbullying section, accompanied by comprehensive teaching resources and video : http://www.digizen.org/</p> <p>SMART - Reliable</p>	<p>separate Life Skills lesson or as part of another ICT lesson.</p> <p>Refer to the E-SMART rules.</p>
--	--	---