

## 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 3	Notes	Possible outcomes and activities
<b>Objectives</b>		
<p><u>Multimedia and Word processing</u> <u>Comp KS2 6 (7)</u></p> <ol style="list-style-type: none"> <li>1. Evaluate a range of printed and electronic texts, appropriate to task e.g newspaper, poster, webpage, Photostory, and recognise key features of layout and design</li> <li>2. Select and import graphics from digital cameras, graphics packages and the Internet</li> <li>3. if multimedia, select suitable sounds (including recording with a microphone) and visual effects</li> <li>4. organise and present information for a specific audience</li> <li>5. Through peer assessment and self evaluation, evaluate design and make suitable improvements</li> <li>6. Recognise the difference and the advantages and disadvantages between electronic media and printed media and select key features when designing publications</li> </ol> <p><b>When word processing children should:</b></p> <ol style="list-style-type: none"> <li>1. use font sizes and effects appropriately to fit purpose of text</li> <li>2. recognise key features of layout and design such as text boxes, columns, borders, WordArt</li> <li>3. develop further basic drafting and editing skills</li> <li>4. cut, copy and paste between applications</li> <li>5. use spell checker</li> <li>6. delete, insert and replace text using mouse or arrow keys</li> </ol>	<p><b>Multimedia Authoring packages: Powerpoint – Create slides and add pictures, text, WordArt, Video</b></p> <p><b>Word processing packages: Word – Word processor</b></p> <p><b>Photostory 3</b> (as whole class) - combines photos into a slideshow and allows sound, voice commentary and titles to be added.</p> <p><b>Touch Typing Course</b> – Create links on Fronter which included BBC Dance Mat Typing (<a href="http://www.bbc.co.uk/schools/typing">www.bbc.co.uk/schools/typing</a>)</p>	<p><b>Combine text, graphics and possibly other features to create both printed documents and multimedia presentations</b></p> <p>Literacy – Write up your Greek Myths</p> <p>Topic – Create a multimedia presentation about the Ancient Greeks.</p> <p>Poetry – make a poster for a poem with text, images, relevant colours etc.</p> <p>Topic – email questions to children at another school for them to research and answer. I can help you find a link school if needed.</p>

<p>7. begin to use more than two fingers to enter text</p> <p><u>Digital Imagery</u>  <u>Comp KS2 6 (7)</u></p> <ol style="list-style-type: none"> <li>To use still and video cameras, independently</li> <li>To take photographs with a digital microscope</li> <li>To evaluate quality of footage taken</li> <li>To understand the need to frame shots and keep the camera still</li> <li>To download still images and video</li> <li>to sequence still images and video and use simple editing techniques to create a presentation</li> <li>create a simple animation either by using stop-motion techniques with a webcam, or by using animation software</li> </ol>	<p>Suggested Resources:</p> <p><b>Digital camera - Flip Cameras</b> – Simple filming device which allows for videos to be quickly and easily played on screen</p> <p><b>Windows Movie Maker</b> - Video editing software which allows</p> <p><b>2Animate</b> – Simple animation program</p> <p><b>Photostory 3</b> (as whole class) - combines photos into a slideshow and allows sound, voice commentary and titles to be added.</p>	<p><b>Use digital cameras and camcorders independently, considering purpose and quality of footage; review, edit and sequence</b></p> <p>Topic – Take a picture through the class windows and edit pictures to show changes. Keep photos as separate pictures and the play together using Photostory or Windows Movie Maker.  -More able could add music and voice over to explain the changes.</p> <p>Literacy – Stop motion animation of a story.</p> <p>Literacy – Record drama with more than one scenes and put together using video editing software.</p> <p>Science – Create animation to explain a science idea.</p>
<p><u>Music and Sound</u>  <u>Comp KS2 6 (7)</u></p> <ol style="list-style-type: none"> <li>use ICT to select and record sounds in multimedia software</li> <li>use music software to organise and reorganise sounds</li> <li>locate, record, save and retrieve sounds</li> <li>To begin to layer sounds using music composition software, Audacity or Podium</li> <li>Add sounds from different sources.</li> </ol>	<p><b>Suggested Resources:</b></p> <p><b>EasiSpeak Microphone</b> - Simple microphones which allow recording of sounds</p> <p><b>2 Simple Music Toolkit</b> - A range of music related programs for adding sounds, creating phrases etc...</p> <p><b>Podium</b> – Simple sound editing program in which sound clips can be added</p> <p>Online sources of sounds: <a href="http://www.findsounds.com">www.findsounds.com</a>; Audio Network <a href="http://audio.lgfl.org.uk">http://audio.lgfl.org.uk</a> ; Microsoft ClipArt Online</p>	<p><b>Compose music for a specific purpose</b></p> <p>Topic – create music for an Ancient Greece dance.</p> <p>Once upon a time – create music to go with a written story.</p>
<p><u>Programming</u>  <u>Comp KS2 1,2,3 (7)</u></p>	<p>Espresso Coding</p>	<p>Complete units on Espresso Coding</p>

<p><b>Unit 1: Espresso Coding</b></p> <ol style="list-style-type: none"> <li>1. Navigate the Espresso Coding programming environment.</li> <li>2. program a sequence of actions, making different pieces of code execute at different times</li> <li>3. To use time to program a sequence of actions and make simple animation</li> </ol>	<p>Login: student21791 Password: saintjoseph</p>	<p>Create own apps/games City Learning Centre Visit</p>
<p><u>Programming</u> <b>Comp KS2 1,2,3 (7)</b></p> <p><b>Unit 2: Scratch animation</b></p> <ol style="list-style-type: none"> <li>1. Navigate the Scratch programming environment.</li> <li>2. Create a background and sprite for animation</li> <li>3. Change background after a specific time.</li> <li>4. Add inputs to control their sprite.</li> <li>5. Change position of sprite on screen</li> </ol>	<p>Scratch activity cards and tutorials at <a href="http://scratch.mit.edu/help/">http://scratch.mit.edu/help/</a></p> <p>Blog by Simon Haughton with lots of ideas and lesson plans <a href="http://www.simonhaughton.co.uk/scratch-programming/">http://www.simonhaughton.co.uk/scratch-programming/</a></p> <p><b>*Code Kingdom (To be introduced in Spring Term 2015)</b></p>	<p><b>Create an animation with changing slides and a sprite that moves. Use speech bubbles to add information.</b></p> <p>Topic – Create animation about children’s current topic.</p> <p>Science – Explain a Scientific process through use of slides.</p> <p>City Learning Centre Visit</p>
<p><u>Communication and Collaboration</u> <b>Comp KS2 4, 6 (7)</b></p> <p><b>Messaging</b></p> <ol style="list-style-type: none"> <li>1. In online discussion: start new threads and contribute to others relevant to the topic; consider relevance of contributions</li> <li>2. Begin to experience other forms of online discussion, such as blogs, wikis, quizzes, surveys and video conferencing</li> </ol> <p><b>Publishing:</b></p> <ol style="list-style-type: none"> <li>1. Begin to edit pages on Learning Platform adding a photo and favourite web links</li> <li>2. Access a shared space to follow web links and read instructions for work</li> <li>3. upload work to a shared space</li> </ol>	<p>Suggested Resources</p> <p><b>Frontier</b> –School’s online classroom where children’s work can be uploaded. Also has chat, vote, quiz and forum functions. Class email</p>	<p><b>Share work and work collaboratively through a shared online space</b></p> <p>Topic – email questions to children at another school for them to research and answer. I can help you find a link school if needed.</p> <p>Topic – Create a page on the Learning Platform about the term’s topic.</p> <p>Literacy – Use a brainstorm forum to collect children’s descriptions of a setting. Allow children to read other’s contributions</p>

		<p>PSHE – Discuss problems by adding contributions in a forum. Start a new thread for a new question.</p> <p><b>Link to E-Safety</b></p> <ul style="list-style-type: none"> <li>Children begin to use a range of online communication tools, such as forums, email and polls in order to formulate, develop and exchange ideas.</li> </ul>
<p><u>Handling Data</u> <u>Comp KS2 6 (7)</u></p> <ol style="list-style-type: none"> <li>To choose, print and annotate appropriate graphs, to answer simple questions e.g. bar charts, or pie charts and interpret data</li> </ol> <p><b>Database</b></p> <ol style="list-style-type: none"> <li>Collect information by designing and using a simple questionnaire to record numbers, text and choices.</li> <li>As a class, design what information needs to go on record cards</li> <li>Create record cards to store collected information</li> <li>Use a database to generate bar charts and graphs to answer questions</li> <li>Answer questions by searching and sorting the database</li> </ol>	<p>Database links well with Science units</p> <p>Suggested Resources <b>2Investigate – Simple program for creating databases</b> <b>Excel-</b> Create graphs and spreadsheets</p>	<p><b>Research information and enter data into a database. Use it to ask and answer straightforward questions and produce bar charts.</b></p> <p>Science – Create a database on the features and properties of rocks or materials</p> <p>Literacy – Read a story to the class involving a mystery. Pupils input key statements into a database and then use search and sort skills to identify the criminals</p>
<p><u>E-Safety</u> <u>Comp KS2 7</u> <b>Online Research</b></p> <ol style="list-style-type: none"> <li>Use child-friendly search engines independently to find information through key words.</li> <li>Understand that the Internet contains fact, fiction and opinions and begin to distinguish between them.</li> </ol>	<p>Children’s search engines; www.kidsclick.org http://kids.yahoo.com/ www.askforkids.com</p> <p>Tomato Spider spoof website</p> <p>Inaccurate information online; Captain Kara and Winston’s SMART Adventure (KnowITall), chapter 2, <a href="#">“What is Reliable?”</a></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>

	SMART Rule - RELIABLE	
<p><u>E-Safety</u> Comp KS2 7 <b>Communication &amp; Collaboration</b></p> <ol style="list-style-type: none"> <li>1. Use a range of online communication tools, such as email, forums and polls.</li> <li>2. Know how to deal with unpleasant forms of electronic communication (save the message and speak to a trusted adult).</li> <li>3. Be able to discern when an email should or should not be opened.</li> </ol>	<p>Unsolicited emails and attachments; Captain Kara and Winston's SMART Adventure (KnowITall), chapter 1, "<a href="#">What should you keep Accept?</a>"</p> <p>SMART Rule – Messages, Tell, Accepting (refer to the school's SMART Rules).</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><u>E-Safety</u> Comp KS2 7 <b>E-Awareness</b></p> <ol style="list-style-type: none"> <li>1. Develop awareness of relevant e-Safety issues, such as cyber bullying.</li> <li>2. Children understand and abide by the school's 'Being SMART Online' Rules and know that it contains rules that exist in order to keep children safe online.</li> <li>3. Understand what personal information should be kept private.</li> <li>4. Know that passwords keep information secure and that they should be kept private.</li> </ol>	<p>Use the e-SAFE Fronter page</p> <p>KS1 and 2 Safer Internet Day Assembly video <a href="http://www.thinkuknow.co.uk/teachers/">http://www.thinkuknow.co.uk/teachers/</a></p> <p><b>Dongle Stay Safe quiz</b> <a href="http://www.bbc.co.uk/cbbc/help/web/staysafe">http://www.bbc.co.uk/cbbc/help/web/staysafe</a></p> <p><b>Dongle's factsheet</b> <a href="http://www.bbc.co.uk/cbbc/help/web/factsheet.html">http://www.bbc.co.uk/cbbc/help/web/factsheet.html</a></p> <p><b>Personal information;</b> Inaccurate information online; Captain Kara and Winston's SMART Adventure (KnowITall), chapter 3, "<a href="#">What should you keep Safe?</a>"</p> <p>Schools 'Being SMART Online' poster.</p> <p>SMART Rules – 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>