

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 4	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. Evaluate a range of electronic multimedia, appropriate to task e.g website, photostory, leaflet, and recognise key features of layout and design 2. With support, plan structure and layout of document/ presentation 3. Select and import graphics from digital cameras, graphics packages and other sources and prepare it for processing using ICT 4. If project is multimedia, select and import sounds (eg own recording, sound effects bank created by teacher) and video/ visual effects 5. Through peer assessment and self evaluation, evaluate work both during and after completion, and make suitable improvements 6. Develop increasing sense of audience <p>When word processing children should:</p>	<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, design and create and improve their own multimedia presentation showing awareness of audience.</p> <p>Literacy – type a literacy story or newspaper report and send it to a friend / someone in another school for them to review.</p> <p>Science/Topic – Create a presentation about a topic area.</p> <p>PSHE – Create a PhotoStory presentation that addresses Bullying and strategies to deal with it.</p>

<ol style="list-style-type: none"> 1. choose freely from a range of text styles, to suit audience 2. hold two hands over different halves of the keyboard 3. use more than two fingers to enter text 		
<p><u>Music and Sound</u> Comp KS2 6 (7)</p> <ol style="list-style-type: none"> 1. use ICT to select and record sounds in multimedia software 2. use music software to organise and reorganise sounds 3. locate, record, save and retrieve sounds 4. To begin to layer sounds using music composition software, Audacity or Podium 5. Add sounds from different sources. 	<p>Suggested Resources</p> <p>EasiSpeak Microphone - Simple microphones which allow recording of sounds</p> <p>2 Simple Music Toolkit - A range of music related programs for adding sounds, creating phrases etc...</p> <p>Podium – Simple sound editing program in which sound clips can be added</p> <p>Audactiy – Sound editing program with more features than Podium. Also allows multiple layers of sound</p> <p>Online sources of sounds: www.findsounds.com; Audio Network http://audio.lgfl.org.uk ; Microsoft ClipArt Online</p>	<p>Plan and record material for a radio programme</p> <p>Topic – Report on events during Boudicca’s revolt. Post work onto Fronter</p> <p>Literacy – Create a question and answer podcast in role (e.g. interview and animal about their habitat) and layer sound effects to the background.</p>
<p><u>Graphics</u> Comp KS2 6 (7)</p> <ol style="list-style-type: none"> 1. import a photograph and explore the effects which can be created 2. use a range of visual effects such as filters, hues and painting over photographs. 3. Create patterns and montages 4. select areas and manipulate to give different effects. 	<p>Suggested Resources</p> <p>www.getpaint.net – Picture editing program with a range of onscreen tools for different affects</p>	<p>Create digital artwork by photograph editing.</p> <p>Robots – create a picture of a robot using metallic colours.</p> <p>Literacy – Create a scene to use as a setting for a story</p> <p>Topic – Create a piece of art in the style that is tradition with your focus country.</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 	<p>Espresso Coding</p> <p>Login: student21791</p>	<p>Complete units on Espresso Coding</p> <p>Create own apps/games</p>

<p>environment.</p> <ol style="list-style-type: none"> use variables to keep track of the score in a game practise using conditional events in your code. 	<p>Password: saintjoseph</p>	<p>City Learning Centre Visit</p>
<p><u>Programming</u> Comp KS2 1,2,3 (7) Unit 2: Scratch : My first game</p> <ol style="list-style-type: none"> Navigate the Scratch programming environment. Create a background and sprite for a game. Add inputs to control their sprite. Use conditional statements (if... then) within their game. 	<p>Scratch activity cards and tutorials at http://scratch.mit.edu/help/</p> <p>Blog by Simon Haughton with lots of ideas and lesson plans http://www.simonhaughton.co.uk/scratch-programming/</p> <p>*Code Kingdom (To be introduced in Spring Term 2015)</p>	<p>Create a simple game where if a conditional statement is met then they start again or lose e.g. don't touch the edge of a maze</p> <p>City Learning Centre Visit</p>
<p><u>Communication and Collaboration</u> Comp KS2 4, 6 (7)</p> <ol style="list-style-type: none"> select from your best work to save and share through an e-portfolio use at least two online communication methods (eg online discussion, surveys, quizzes, blogs, wikis, shared online folders, web quests) through the Learning Platform in topic work discuss advantages and disadvantages of these communication methods To start to think about the different styles of language layout and format of online communications sent to different people (eg. when it is appropriate to use "text language"). 	<p>Suggested Resources</p> <p>Fronter –School's online classroom where children's work can be uploaded. Also has chat, vote, quiz and forum functions – Class email</p>	<p>Use at least two online communication methods through the Learning Platform. Understand the SMART internet safety rules.</p> <p>Topic – Create topic page on Fronter with at least two forms of online communication and then share with other classes to investigate and comment on.</p> <p>Maths – Use Stickies to find answers for data handling question</p> <p>Link to e-Safety Children use a range of communication tools to</p>

		collaborate and exchange information with others, e.g. email, blog, forums.
<p><u>Handling Data</u> Comp KS2 6 (7)</p> <p>Graphing</p> <ol style="list-style-type: none"> 1. Have regular opportunities to enter data into a graphing package and use it to create a range of graphs, and to interpret data across all subjects 2. To compare how different graphs can be used for different purposes <p>Branching Databases</p> <ol style="list-style-type: none"> 1. search a branching database 2. create and use a branching database to organise, reorganise and analyse information 3. compare the use of graphing software, branching database and card-based database for organising and interpreting data 4. explore some real-life examples of branching databases, such as keys for animal identification 	<p>Suggested Resources</p> <p>Excel- Create graphs and spreadsheets</p> <p>Textease Branch – Create branching databases</p>	<p>Collect, find, organise and interpret information using graphing and a branching database.</p> <p>Maths – use data collected in maths to create graphs and charts.</p> <p>Science – Create database to solve sorting problems in Science e.g. sort what material a mystery sample is.</p>
<p><u>E-Safety</u> Comp KS2 7</p> <p>Online Research</p> <ol style="list-style-type: none"> 1. Use internet search engines to gather resources for their own research work. 2. Be aware of different search engines and discuss their various features (e.g. Google image & video search). 3. Show children how to change the 'Search Settings' to Strict in Google. 4. Understand the importance of framing questions into search criteria when conducting web searches. 	<p>Children's search engines; www.kidsclick.org http://kids.yahoo.com/ www.askforkids.com</p> <p>ThinkUKnow Cybercafe Lesson 5, 'Responsible use of the internet' www.thinkuknow.co.uk/8_10/ (click on Jason for the web browsing section) KnowITall Activity 2 (The SMART Adventure); complete the website treasure hunt CyberQuoll Episode 2 – 'Finding Stuff' (safe searching) and lessons 2.1-2.5 http://www.cyberquoll.com.au Spoof website www.allaboutexplorers.com SMART Rule - 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>5. Be aware that not everything they find online is accurate and that information needs to be checked and evaluated.</p>		
<p><u>E-Safety</u> Comp KS2 7 Communication & Collaboration</p> <ol style="list-style-type: none"> 1. Children use online communication tools to exchange and develop their ideas in a range of curriculum opportunities. 2. Use sensitive and appropriate language when using online communication tools. 3. Use email as a form of communication, use the "To" box and add a subject heading. 4. Add an attachment to an email. 5. Develop understanding of when it is unsafe to open an email or an email attachment. 	<p>CyberQuoll Episode 3 – 'Making Waves' (cyber communication) and lessons 3.1-3.7 http://www.cyberquoll.com.au ThinkUKnow Cybercafe lesson 1, "Using technology to communicate" & lesson 4, "Using email safely" SMART Rules - Messages</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 E-Awareness</p> <ol style="list-style-type: none"> 1. Children understand and abide by the school's 'Being SMART Online' rules and aware of the implications of not following the rules. 2. Children understand that a password can keep information secure and the need to keep it a secret. 	<p>School Internet Acceptable Use Policy KS1 and 2 Safer Internet Day Assembly video http://www.thinkuknow.co.uk/teachers/ Top Tips for Safe Surfing poster from LGFL KS2 Internet Safety poster from KGFL KnowIT All Activity 3 (The SMART Adventure); drama activity highlighting an e-Safety issue. "Where's Klaus" video from CEOPS (teachers will need to register at the ThinkUKnow website in order to download this video). 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>