

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 2	Notes	Possible outcomes and activities
<p>Objectives</p> <p><u>Multimedia and Word processing</u> Comp KS1 3,4 (5)</p> <ol style="list-style-type: none"> 1. Begin to word process short narrative and non-narrative texts 2. Develop basic editing skills including different presentational features (font size, colour and style) 3. Select from different presentational features e.g. title, paragraph, label etc 4. Word process short narrative and non-narrative texts 5. Save, print, retrieve and amend their work 6. Use the mouse or arrow keys to insert words and sentences 7. Use appropriate editing tools to improve their work 8. Make use of graphics, video and sound to enhance their text on screen 9. Talk about their use of graphics and sound and how it may enhance or change the mood and atmosphere of their presentation and make changes where appropriate 10. Use different layouts and templates for different purposes 	<p>2Create A Story - a simple story editor that allows children to add pages and draw pictures to go with their story. Simple animations can then be chosen for the pictures.</p> <p>2Publish - many templates to include a number of pictures and sentences.</p>	<p>Combine text, images and possibly other features to create either a printable document or a simple multimedia presentation. Ensure all choices suit the purpose.</p> <p>Literacy – type a story written during literacy and add a picture.</p> <p>Literacy – Type information texts incorporating labelled pictures and diagrams linked to Where in the World Topic.</p> <p>Science – write about a concept, such as forces, and add a picture.</p>
<p><u>Graphics</u> Comp KS1 3,4 (5)</p>	<p>Suggested Resources</p> <p>2simple infant video toolkit – A range of 2Simple</p>	<p>Use a range of tools in a paint package to create a</p>

<ol style="list-style-type: none"> 1. Use ICT to source, generate and amend ideas for their art work 2. Talk about the advantages and disadvantages of using a graphics package over paper based art activities 3. Develop a variety of skills using a range of tools and techniques to communicate a specific idea or artistic style /effect 4. Create a stamp to make patterns and designs 5. Describe to others their use of a paint package and their reason for choice of tools 	<p>programs e.g. 2Paint – Simple paint program 2Paint A Picture – Can produce artwork in different styles e.g. mosaic, impressionism etc... 2Publish - many templates to include a number of pictures and sentences. 2Create A Story - is a simple story editor that includes pages and an area for pictures. Simple animations can then be chosen for the pictures.</p>	<p>picture to suit a purpose.</p> <p>PSHCE – Children to design a picture based on anything important to them.</p> <p>Geography – use a paint package to create map of a focus island</p> <p>DT – use a paint package to create a design for a project or model.</p> <p>Children could work in pairs to design half a picture each.</p>
<p><u>Digital Imagery</u> Comp KS1 3,4 (5)</p> <ol style="list-style-type: none"> 1. Develop greater control over the digital stills or video camera 2. Begin to discuss the quality of their image and make decisions (e.g delete a blurred / bad image) 3. Begin to select and edit and change images 4. Begin to change or enhance photographs and pictures (crop, re-colour) <p>Animation</p> <ol style="list-style-type: none"> 1. Create a sequence of still images which together form a short animated sequence 2. Create a simple animation to illustrate a story or idea 3. Upload their images on the learning platform 	<p>Digital camera - Flip Cameras – Simple filming device which allows for videos to be quickly and easily played on screen Windows Movie Maker - Video editing software which allows 2Animate – Simple animation program Photostory 3 (as whole class) - combines photos into a slideshow and allows sound, voice commentary and titles to be added.</p>	<p>Use a digital camcorder and camera; download with support and use for a purpose</p> <p>Topic – Take pictures of different exercises and edit and add labels to suggest how they will help.</p> <p>Literacy - use a digital camcorder to record drama work.</p> <p>Literacy – Recreate a story using stop motion animation e.g. using program like Windows Movie Maker (with support)</p> <p>Take a series of photographs to create an animation or slideshow to illustrate a</p>

		concept. Art- Manipulate photos of themselves e.g. make black and white or change colours of different parts
<u>Programming</u> <u>Comp KS1 1,2, 3 (5)</u> Unit 1: Espresso Coding 1. Navigate the Espresso Coding programming environment. 2. to make an object do simple things when keys are pressed on the keyboard 3. to code an object to move around the screen when keys are pressed 4. to code an object to change direction when different keys are pressed on a keyboard	Espresso Coding Login: student21791 Password: saintjoseph	Complete units on Espresso Coding Create own apps/games City Learning Centre Visit
<u>Programming</u> <u>Comp KS1 1,2, 3 (5)</u> Unit 2: Move the turtle 1. Generate a sequence of instructions including 'right angle' turns. 2. Create a sequence of instructions to generate simple geometric shapes (oblong /square). 3. Discuss how to improve/change their sequence of commands.	Use 2Go in Infant Video Toolkit or online turtle program such as http://www.mathplayground.com/mathprogramming.html	Create a set of online instructions to meet a challenge e.g. a shape or right angle. Maths – Create different simple shapes using program. City Learning Centre Visit
<u>Communication and Collaboration</u> <u>Comp KS1 3,4 (5)</u> Messaging 1. Compare all the different ways that messages can be sent and start to consider their advantages and disadvantages 2. Contribute and discuss ideas to compose and respond to class/group/individual e-mails, forums, blogs Publishing: (Refer to Multimedia Unit) 1. Contribute and discuss ideas to compose and respond to discussions and forums on the Learning platform	Email – Class email Frontier –School's online classroom where children's work can be uploaded. Also has chat, vote, quiz and forum functions Link to e-Safety <ul style="list-style-type: none"> Children know the difference between communicating via email and online in a discussion forum Children are aware of the different forms of online communication (email, forums, instant messaging and 	Share and comment on work online, developing understanding about appropriate behaviour and internet safety Work with another class to create a shared text through email/forums. Maths- Send questions to other

<ol style="list-style-type: none"> 2. Begin to talk about the advantages of using electronic communications in terms of sharing pages and information with a wider audience at home and school 3. Look and talk about other people's contributions on the learning platform 4. Consider who can see their contributions on the learning platform 	<p>social networking sites) and find out about their associated risks.</p>	<p>classes/children around the school and tally the results.</p> <p>Science – Create a page about Staying Alive and what has been learnt over the topic → Email to other classes to look at the created page and then respond in a forum</p>
<p><u>Handling Data</u> Comp KS1 3,4 (5)</p> <ol style="list-style-type: none"> 1. Develop different criteria and create own pictograms 2. Use a simple graphing package to record information – add labels and numbers as appropriate 3. Use ICT to edit and change the information quickly. 4. Talk about how ICT helps them to organise their information 5. Save , retrieve and amend their work 6. Use a graphs to create and answer questions <p>Branching Database</p> <ol style="list-style-type: none"> 1. Understand the difference between questions and answers 2. Ask questions that comply with the rule that it can only have a yes or no answer 3. Use a branching database to identify objects using yes or no questions 	<p>Suggested Resources</p> <p>2simple infant video toolkit – A range of programs such as 2Count which allows the creation of pictograms 2Graph – Input results and create bar, pie or line graphs 2simple infant video toolkit – A range of programs such as 2Question which allows the creation of pictograms</p>	<p>Use a graphing package and a simple database to collect, organise and classify data, asking and answering questions.</p> <p>PSHCE – collect information on favourite snacks, put it in a graph and discuss the results.</p> <p>Geog – Collect information about the weather each day for a month, organise into graphs to find out the most common weather.</p> <p>Topic – Collect information about favourite place to visit. Represent as a graph.</p> <p>Science – Collect information about minibeasts/plants.</p> <p>Science – Create a database to identify minibeasts.</p>
<p><u>E-Safety</u> Comp KS1 5 Online Research</p>	<p>Dongle Stay Safe quiz and reinforce SMART rules from CBBC Staysafe</p>	<p>This could be taught as a separate Life Skills lesson or as part of another ICT lesson.</p>

<ol style="list-style-type: none"> Children explore a range of age-appropriate digital resources. Children to know that not everything they find online is accurate. Know that some websites contain advertisements (often embedded) and learn how to ignore them. Children to know what to do if they find something inappropriate online. Children discuss, understand and abide by the school's e-Safety SMART Rules 	<p>Websites to aid research, e.g.; Barnaby website to find out about his trips and how he travels.</p> <p>School's Poster 'Being SMART Online Rules'</p> <p>SMART Rule – Know that not information online is RELIABLE and true. Ask an adult if you are unsure. SMART Rules – TELL someone if you see something that makes you feel uncomfortable.</p>	<p>Refer to the E-SMART rules.</p>
<p><u>E-Safety</u> Comp KS1 5</p> <p>Communication & Collaboration</p> <ol style="list-style-type: none"> Children are able to send suitable and purposeful emails, developing awareness of appropriate language to use. Children know that passwords help to keep information safe and secure and that they should not be shared Children contribute to a class discussion forum. 	<p>Discussion forums or messaging system on school learning platform.</p> <p>School email system</p> <p>SMART Rule – Only send and read MESSAGES with people you know. Messages should always be polite. SMART Rule – Keep passwords and other special information 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><u>E-Safety</u> Comp KS1 5</p> <p>E-Awareness</p> <ol style="list-style-type: none"> Children are aware that not everyone they meet online is automatically trustworthy. Children understand that personal information is unique to them and should not be shared without a teacher or parent's permission. Children identify characteristics of people who are worthy of their trust. 	<p>FauxPaw video from iKeepSafe.org to highlight that not everyone is trustworthy</p> <p>CEOP Thinkuknow resources, based on Hector's World. www.thinkuknow.co.uk/5_7/</p> <p>lesson 1 – personal information is special lesson 2 – not everyone is trustworthy lesson 3 – assessing trustworthiness lesson 4 – being alert to unsafe situations lesson 5 – check with an adult</p> <p>Dongle Pop video and StaySafe quiz (to introduce SMART rules- All but the rule for M is the same as our school's SMART Rules)</p> <p>SMART Rules – Know that not all information online is RELIABLE and true. Ask an adult if you are unsure.</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>

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