

Computing Curriculum Map

Vision:

To create a flexible learning environment underpinned by innovative use of technology that facilitates collaboration and enhances opportunities for inquiry and learning. **Computing** should support and enhance learning promoting the involvement of the child in their own learning alongside developing their individual computing capability to prepare them for their life beyond our school. The Primary Curriculum states that ICT is an essential life learning skill if children are to become lifelong learners.

	Programmes/Apps (later)	Prog of Study	Exemplification	Suggested Context		
	Y1	Y2	Y3	Y4	Y5	Y6
Computer Science and Resources	<p>Skill: Understand and write simple algorithms. For example, use directional buttons to control character in terms of distance traveled and direction (including turns)</p> <p>Skill: Test algorithms in a variety of ways. For example, talk about whether the algorithms work.</p> <p>Programs: Bee-bot (Physical) Daisy, Alex</p>	<p>Skill: Begin to use algorithms to program For example, use directional buttons to control character in terms of distance traveled and direction (including turns) For example write an algorithm for a specific purpose or task.</p> <p>Use logical reasoning to debug programs. For example to be able to explain why their code didn't work and what they would need to change to make it work.</p> <p>Programs: Daisy the Dino, Alex (cards) light-box (debug), Fix a Factory</p> <p>Skill: Make predictions about the behavior of programs. For example task would involve suggesting what would happen if certain buttons were pressed in sequence.</p>	<p>Skill: Use debugging to refine and edit algorithms For example use of good mistakes as a teaching point which includes a screenshot of instructions. Children could discuss steps to change.</p> <p>Programs: Light-box and cargobot, Alex, Fix a Factory and Hopscotch</p> <p>Use Alex to create their own maze for others to program Alex.</p>	<p>Skill: Design and create programs that include repetition For example use Cargobot to repeat actions in lines of programming..</p> <p>Skill: Use a physical action as part of an algorithm to change on-screen actions. For example use Hopscotch to create a game where you control the movement i.e. shake the ipad or in scratch you can shout. Lightbox and cargobot (for practice) and apply in Hopscotch</p> <p>Skill: Appreciate how search results are selected. See IT.</p>	<p>Skill: To use computer networks to access multiple services. For example the use of blogging, twitter, skype, WWW. Internet challenge such as searching for a flight using specific criteria or buying a house within a specific location and price.</p> <p>Skill: Appreciate how search results are selected For example discussion on how results are ranked.</p> <p>Skill: Debug programs that accomplish specific goals For example use Tynker press to create own virtual environment through which they experiment writing successful algorithms.</p> <p>Lightbox and cargobot and Hopscotch, App Furnace, scratch/Tynker Hakitzu</p>	<p>Explain how some simple algorithms work and be able to correct errors. Solve problems by decomposing them into smaller parts</p> <p>For example create Sydney opera house using Hopscotch. Lightbox and cargobot and Hopscotch, Scratch/Tynker, App Furnace Hakitzu</p> <p>Skill: Work with variables For example to be able to recognise how algorithms interacting can alter the outcome. e.g. In hopscotch if you collide with a specified object something will happen e.g grow in size or Hopscotch – the speed which travel, rate at which things fall)</p> <p>Use GamePress to create a game and use logical reasoning to rectify your errors</p>

	Y1	Y2	Y3	Y4	Y5	Y6
<p>IT and Resources</p> <p>To maximize the children's application and to ensure regular use of all IT equipment children should use ipods, ipads and macbooks. Children should be able to adapt their IT understanding to any technology given to them.</p>	<p>Skill: Create digital content. For example, writing, recording video, blog, drawing a picture. Programmes: Poplet, camera, artset, guided blogging and doodlebuddy.</p> <p>Skill: Store digital content. Use macbooks and windows PC to practise file>save / puppet pals (because most APPs auto-save your work/ puppet pals needs to be exported to save)</p> <p>Skill: Retrieve digital content. Open a variety of APPs to find saved work e.g Finding popplet with their name on. This should also include modelling how sometimes content can be accessed through a variety of points e.g. a photo through camera or photos programme.</p>	<p>Skill: Manipulate digital content. For example, take photo and change the colours, crop or resize it, remove red eye, copying text from a website, changing the size and colour of the text. Morfo Booth, Strip design, chrome, Photo Edit, Photo Booth.</p> <p>Skill: Organise digital content. Choosing how and where to store work (pupil share folder, personal folder). Choosing the order in which you put information into an app (for a purpose). Macbooks, guided blogging sessions, Strip design</p>	<p>Skill: Use a search engine to find info. For example using the most simplistic words, always separating words with a space and not using punctuation. Google Search</p> <p>Skill: Use a variety of software to accomplish given goals. Children choose from powerpoint or keynote to create a presentation, this could include using clipart images or importing from the camera roll. This may include: Keynote and power point (children may choose to use a variety of other apps to add objects or clips into their presentation).</p> <p>Skill: Design and create content. Add pictures and animation. Change layout options and create links to move to another page. This would be a good opportunity to link up the iPads to the IWB to showcase.</p> <p>** Designing and creating content should be taught as part of a project using a variety of software</p>	<p>Skill: Use a search engine to find specific information quickly. For example using "" to look for exact words or using OR. Macbooks or iPads.</p> <p>Skill: Select a variety of software to accomplish given goals. Children make informed choices about the apps and programmes they use to reach an outcome. This may include: Book creator (photos, video, voice recordings), Imovie. Almost all apps could be used for this purpose if the children chose to use them.</p> <p>Skill: Design and create content. Create an end product with book creator or IMovie. Edit their work for greater visual effect- add/ edit pictures or animation. AS ABOVE</p>	<p>Skill: Select a variety of software to accomplish given goals. Children combine apps/programmes/ content to create an end product, this may include importing GIFs from an internet search or inserting a link a video or website.</p> <p>Skill: Design and create content. Confidently edit a range of features including; layout, pictures, size, font, background and page size. Import content from a variety of sources to create content.</p> <p>Skill: Analyse and evaluate info. Decide which websites are most useful and appropriate for the purpose. Investigate the accuracy of the information. Google and Bing search engines.</p> <p>Skill: Select, use and combine internet services Investigate the most effective ways of finding and sharing information. Email, twitter, blogs and various search engines.</p> <p>Skill: Collect data. Use</p>	<p>Skill: Select use and combine software on a range of digital devices. Use the cloud to save and retrieve various content which can be combined to reach an outcome. For example upload animation clips from the iPad to the cloud, access them from the Macbook and import into IMovie. iPads, Macbooks, associated apps.</p> <p>Skills: Analyse and evaluate data Good opportunity for problem solving- start with a pre-made spreadsheet and a question. They evaluate effectiveness.</p> <p>Skills: Present data for a specific audience. Present the information to parents via the blog, by uploading the progress of their investigation. This should involve inputting data onto a spreadsheet to keep track (upload spreadsheet to blog with summary). This could be in the context of awareness of a local or global issue.</p> <p>Skill: Design and create systems. Use virtual villager to create their</p>

					<p>apps and measuring devices to collect data.</p> <p>Data collection software.</p> <p>Skill: Present data.</p> <p>Use excel/ spreadsheet to input data into a pre-made spreadsheet for the purpose of collecting said data.</p> <p>Excel/ spreadsheet</p>	<p>own world in which they have to edit and adjust according to changing circumstances in the game. Virtual villager or minecraft</p>
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<p>Digital Literacy and Resources</p> <p>Use technology safely and respectfully, identifying where to go for help</p>	<p>Recognise common uses of information technology beyond school (phones, TV, credit cards)</p> <p>Use technology safely (don't leave your ipad on the floor)</p> <p>(don't tell a stranger your name) Start to be aware of 'closed environments' like a school Learning Platform and social networks</p>	<p>Use technology safely and respectfully (don't leave your ipad on the floor, take care when you walk around school, make sure you phrase your comments politely)</p> <p>Keep personal information private</p> <p>Identify where to go for help and support what they should do if an inappropriate website / image flashes up</p> <p>Start to be aware of online identities through own logon to a network or Learning Platform.</p> <p>Create simple presentations using different applications, redrafting to improve where necessary</p>	<p>Use technology safely and responsibly (make sure you switch off / log off before you put your ipad back, close your ipad open, don't pass your log in on to anyone else, plug your ipad in after you have used it)</p> <p>Keep personal information private</p> <p>Identify where to go for help and support what different things can I do if an inappropriate website / image flashes up. Only write positive comments on the class blogs.</p> <p>Begin to make choices about when and when not to use ICT and in what form. Start to independently select ways to communicate their own ideas.</p>	<p>Use technology safely and responsibly (make sure you switch off / log off before you put your ipad back, close your ipad open, don't pass your log in on to anyone else, plug your ipad in after you have used it)</p> <p>Keep personal information private</p> <p>Identify where to go for help and support – Identify different ways to report concerns about a contact.</p> <p>What different things can I do if an inappropriate website / image flashes up. Only write positive comments on the class blogs.</p> <p>Recognise acceptable and unacceptable behavior e.g. when you take a photo of someone you should gain their consent first.</p> <p>Begin to understand about online identities and differences between private (Learning Platform) or public presence (social networks). Start to find ways of validating information to ensure it is correct</p>	<p>Understand the opportunities that computer networks offer for communication and collaboration (email, blog, skype, forums, save work to server).</p> <p>Keep personal information private</p> <p>Identify where to go for help and support what different things can I do if an inappropriate website / image. What information can I share online with people I don't know</p> <p>Use collected data to convey how they solved a problem (links to Communicating in the Digital World).</p> <p>Finding, retrieving & validating information</p> <p>Evaluate some safe online games to know what makes a good game. What does the game need? What would their own game look like? What would it do?</p>	<p>Appreciate how search results are ranked. (use of boolean, the amount of people that visit a website, if you pay for the website). Be discerning in evaluating digital content. Keep personal information private</p> <p>Identify where to go for help and support what different things can I do if an inappropriate website / image. What information can I share online with people I don't know</p>

