

Computing Knowledge and Language Progression

(Equality of opportunity, inclusion, diversity and Cultural Capital – when appropriate, teach children about some of the computer pioneers who have – and do – have an impact on the world. Include people from a range of backgrounds, countries, ethnicities, genders and sexualities – e.g. Ada Lovelace, Alan Turing, Tim Berners-Lee, the ‘Hidden Figures’ who worked for NASA.)

	Use of ICT and basic skills	Researching, Presenting and Communicating	Programming	Online safety
FS2	<p>Basic Skills Know the names and functions of some of the parts of a computer – e.g. keyboard, mouse</p>	<p>Know that computers can be used to draw pictures, type words and sentences and watch and create videos.</p>		<p>Know that we can use the internet to find information.</p> <p>Know that we should always ask a trusted adult before using the internet.</p> <p>Know that we should always ask a trusted adult for help if we are worried or confused about something we see online.</p>
Y1 and Y2	<p>Use of ICT Know the functions of IT systems in a bank (e.g. Cash machine), a library (e.g. scanner) and a supermarket (e.g. till, barcode reader, scanner)</p> <p>Basic Skills Know the names and functions of some of the keys on a computer keyboard – spacebar, backspace, shift, enter.</p> <p>Language Bank, ATM / Cash machine, Database, Library, PIN, Scanner, Credit / Debit card</p> <p>Language</p>	<p>Presentations (e.g. Powerpoint and Prezi)</p> <p>Know that presentation software, such as Powerpoint, can be used to share information with an audience.</p> <p>Researching and using search engines</p> <p>Know that websites can be used to find information but that the information is not always reliable.</p> <p>Language Presentation, slide, design, layout</p> <p>website, search</p>	<p>Know that an algorithm is a specific set of instructions.</p> <p>Know the functions of the BeeBot buttons.</p> <p>Language Algorithm, BeeBot, instructions, Forwards, Backwards, Left, Right, Program, Repeat, Command, Instruction, Create and debug, Predict, Sequence, Test, Scratch, Sprites, Script</p>	<p>Use technology safely Identify potentially risky content.</p> <p>Know that some websites and computer games are not suitable for children of their age.</p> <p>Understand the meaning of ‘personal information’ and the need to keep this private.</p> <p>Know which information should not be divulged on-line.</p> <p>Report concerns Know that they go to a trusted adult for help and support when</p>

	<p>Passwords, Keyboard, Backspace, Spacebar, Shift, Enter</p>	<p>Text, Caps lock, Photographs, Images</p> <p>Graphics, Captions, Labelling, Layout, Template, font, delete</p> <p>data, axis title, undo, animation</p>		<p>he/she has concerns about content on the internet or other online technologies.</p> <p>Language Internet, Online safety, gaming, videos, chatting online, personal information, YouTube</p>
Y3 and Y4	<p>Basic Skills Knows the difference between saving work to the desktop, the Documents folder and the LAN folder.</p> <p>Use of ICT Know that ICT is used widely across a range of jobs and can list and explain some of these.</p> <p>Language LAN, local area network, Documents, desktop, retrieve</p>	<p><u>Presentations (e.g. Powerpoint and Prezi)</u></p> <p>Know that presentation software is used widely in the world of work.</p> <p><u>Researching and using search engines</u></p> <p>Know that search engines enable them to find specific information from millions of websites.</p> <p>Know that search engines can sometimes lead to websites containing inappropriate, risky or untrue information.</p> <p>Language search engine, results, ranked, evaluate, digital, content, networks</p> <p>presentation software, slide, buttons</p> <p>copy, paste, undo and delete</p> <p>data, Excel, axes titles</p>	<p>Know that an algorithm is a sequence of well-defined instructions.</p> <p>Know how algorithms are related to programming.</p> <p>Know that coding is the process of writing computer programmes.</p> <p>Know that debugging is the process of identifying and removing errors from a computer programme.</p> <p>Language Programming, Algorithm, Coding, Debugging, Inputting, Predictions, sequence, errors, Rapid Router</p>	<p><u>Use technology safely</u> Identify potentially risky messages and content.</p> <p>Can list examples of personal information and understands why this should not be shared online.</p> <p>Know that YouTube can often contain inappropriate content for children.</p> <p>Knows about the age restrictions on computer games.</p> <p><u>Report concerns</u> Knows the appropriate action when faced with risky messages and content – understand the roles of trusted adults and the police.</p> <p>Can explain what cyberbullying is and knows what to do if they or a friend feel they are being bullied online.</p> <p><u>Online Behaviour</u> Knows how to behave respectfully and politely online.</p>

		<p>graphics tools</p> <p>title screens, credits, re-order, crop</p>		<p>Language appropriate, inappropriate, PEGI rating, online safety, age restriction, cyberbullying</p>
Y5 and Y6	<p>Use of ICT Link specific programmes to their use in the wider world – e.g. Excel for accountancy, Garage Band for Sound Engineers etc. Know about some jobs which rely on ICT skills e.g. film maker, computer game programmer.</p> <p>Know about a range of computer networks and about the opportunities they offer for communication and collaboration.</p> <p>Know that in school, we use a LAN (Local Area Network), that in their home, they may use a PAN (Personal Area Network) to connect laptops, routers, printers, tablets etc. and that the internet is a WAN (Wide Area Network)</p> <p>Language Network, internet, LAN (Local Area Network), PAN (Personal Area Network), WAN (Wide Area Network), router, hacking, firewall</p>	<p><u>Presentations (e.g. Powerpoint and Prezi)</u></p> <p>Know that a hyperlink is a word, phrase, or image that you can click on to jump to a new document or a new section within the current document.</p> <p>Know that hyperlinks are used extensively on the internet and also on most presentation software.</p> <p><u>Researching and using search engines</u> Know that a search engine is a software system that carries out web searches to enable us to gain specific information from the millions of webpages on the internet.</p> <p>Understand that some of the information on the internet is false and that it is good practice to cross-check.</p>	<p>Understand the link between real life systems and simulations.</p> <p>Know the meaning and function of the tools in a flow chart.</p> <p>Know the symbols for the tools in a flow chart.</p> <p>Language Assign Types, outcomes, flowchart, Multiple choice, branch diagram, algorithm, program, programming, debug, control, simulation, code, coding, sequence, selection, repetition, subroutine, variable, input, output, flow chart, mimic, process, decision, if/then, simulation, input, output</p>	<p><u>Use technology safely</u> Understand the meaning of 'personal information' and can explain why this should not be divulged on-line. Can list the various forms of social media and multi-media messaging that exist. Know about age restrictions on social media sites and computer games and can explain why these exist. Know about a range of issues linked to online safety, including:</p> <ul style="list-style-type: none"> • potential dangers of social media; • privacy settings; • potential dangers of online gaming; • dangers of meeting up with people they have only met online. • how to keep safe when gaming online; <p>Understand the meaning and importance of their digital footprint.</p> <p><u>Report concerns</u> Know how to report concerns about online content and contact.</p>

		<p>Know that a search engine makes an index of webpages using a webcrawler. Know that search engines use algorithms to sort the results and try to place the links which are most useful to you at the top of the page.</p> <p><u>Using Word Processing Programmes</u> Know a number of shortcuts for use in Microsoft software.</p> <p><u>Data Handling</u> Know when it is appropriate to use a line graph, scatter graph, bar chart or pie chart.</p> <p>Know that Excel is widely used in the world of work.</p> <p><u>Using art and graphics programmes</u> Know that CAD programmes, such as SketchUp are used by designers and architects.</p> <p>Language slide, transition, hyperlink</p> <p>search engine, web crawler, index, URL, keywords, algorithm, operator, browser</p>		<p>Know how to take appropriate action when faced with risky messages and content – understand the roles of trusted adults, the police and CEOP. Know to screenshot and keep necessary evidence. Know what to do if themselves or a friend are victims of cyberbullying;</p> <p><u>Online Behaviour</u> Behave respectfully and responsibly online.</p> <p>Understands when it is not appropriate to post images and videos of themselves and others.</p> <p>Language PEGI rating, trusted adult, filtering, inappropriate content, cyberbullying, CEOP, social networking site, personal information, download, upload, post, webcam, permission, app, privacy settings, virus, hacker, digital footprint</p>
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