

Computing Overview: Knowledge and Vocabulary from EYFS to Key Stage 2



Class	Topic	Knowledge	Vocabulary
Nursery	Computer Science	<ul style="list-style-type: none"> - Follow simple oral algorithm - Spot simple patterns - Sequence simple familiar tasks 	pull, turn, follow
	Information Technology	<ul style="list-style-type: none"> - Use a mouse, touch screen or appropriate access device to target and select options on screen 	button, headphones, computer, mouse, tablet, click
	Digital Literacy	<ul style="list-style-type: none"> - Recognise what to say to somebody who asks me to do something that makes me feel sad, embarrassed or upset - Recognise how people can be unkind and understand how that can make others feel - Identify rules that help keep us safe and healthy in and beyond the home when using technology - Identify some simple examples of my personal information (e.g. name, address, birthday, age, location). 	safe
Reception	Computer Science	<ul style="list-style-type: none"> - Following a set of instructions - How to use technology around the classroom - Creating a sequence - Ordering numbers - Grouping items with similarities - Know the difference between a photograph and video 	movement, image
	Information Technology	<ul style="list-style-type: none"> - Fine motor skills develop to use keyboards - Use computers/keyboards/mouse in role play - Recognize simple parts of the classroom computer 	monitor, speaker, type, technology, equipment, screen, keyboard
	Digital Literacy	<ul style="list-style-type: none"> - Recognise what to say to somebody who asks me to do something that makes me feel sad, embarrassed or upset - Explain how this could be either in real life or online. - Recognise some ways in which the internet can be used to communicate. - Understand how information can be put on the internet (through the use of SeeSaw) - identify some simple examples of personal information (e.g. name, address, birthday, age, location) and then identify who can be trusted to share this information with. - Identify devices used to access information on the internet. 	choices, internet, safety

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Year 1	Computer Science	<ul style="list-style-type: none"> - Understand the functionality of the direction keys. - Understand how to create and debug a set of instructions (algorithm). - Use code to make a computer program. - Begin to understand how code works when a program is run 	algorithm, create, command, organise, sequence, software, store, program
	Information Technology	<ul style="list-style-type: none"> - Type words quickly and correctly on a digital device - Sort items using a range of criteria. - Use a paint/drawing app to create a digital image - Compare the effects of following instructions to completing tasks without complete instructions - Use Purple Mash to group items - Be able to follow instructions on the computer 	digital content, digital devices, computer, network
	Digital Literacy	<ul style="list-style-type: none"> - Log in to a site safely and keep the passwords safe - Be able to save work completed and locate at a later date - Make an avatar/icon - Understand why the search bar is efficient - Understand that data can be represented in picture format. - Use the computer to make a story and share with the class - Understand the importance of logging out 	personal information, world wide web
Year 2	Computer Science	<ul style="list-style-type: none"> - Create a program using a given design - Understand that algorithms follow a sequence - Understand that codes may have problems that need to be fixed (debug) - Predict what a program will do based off the code 	blocks, debug, execute, manipulate, scripted, sprite, predict, retrieve, reverse, engineer, function
	Information Technology	<ul style="list-style-type: none"> - Know how to copy and paste - Begin to use a spreadsheet to collect data - Produce a graph 	data, spreadsheet
	Digital Literacy	<ul style="list-style-type: none"> - Use "yes/no" questions to separate information - Use the search tool to find information - Begin to look at emails and communication online - Understand that a Digital Footprint is made using information online 	password, private
Year 3	Computer Science	<ul style="list-style-type: none"> - Understand what a flowchart is - Use the repeat command within a code - Design and create an interactive scene using coding 	language, input-output loops, repetition, simulation, physical system
	Information Technology	<ul style="list-style-type: none"> - Understand how to best sit to type - Use both hands to type 	slideshow, PowerPoint, Google Slides, timer

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		<ul style="list-style-type: none"> - Begin to explore how to make slideshows - Understand the use of slideshows - Add timers to presentations - Add media to presentations 	
	Digital Literacy	<ul style="list-style-type: none"> - Understand the importance of safe searching on the Internet - Look at different websites and how to be able to evaluate the truthfulness - Learn about age restrictions on games and apps - Understand how blogs can be used to communicate with the wider world 	evaluating digital content, safe search mode, search technologies software
Year 4	Computer Science	<ul style="list-style-type: none"> - Use the “repeat until” command when creating a code - Create variables in codes to achieve different outcomes - Create a playable game 	repeat until, variable, “IF” statement,
	Information Technology	<ul style="list-style-type: none"> - Be able to add in currency, decimals and percentages to a spreadsheet - Use a spreadsheet for real life situations (eg party planning) - Use a spreadsheet to create a times-table game - Discuss what makes a good animation - Design an animation by hand and then on a digital device 	data, digital content, digital devices, network
	Digital Literacy	<ul style="list-style-type: none"> - Know how to change the size and colour of a font - Understand how to use the different fonts for different audiences - Locate information on a search page - assess whether an information source is true and reliable - Understand how children can protect themselves from online identity theft - Identify the risks and benefits of installing software including apps - Understand that copying the work of others and presenting it as their own is called ‘plagiarism’ and to consider the consequences of plagiarism - Identify appropriate behaviour when participating or contributing to collaborative online projects for learning - Understand the importance of balancing game and screen time with other parts of their lives 	acceptable/unacceptable behaviours, plagiarism, URL, HTTP, cookies, malware, copyright
Year 5	Computer Science	<ul style="list-style-type: none"> - Begin to simplify code - Understand that abstraction is the process of removing unnecessary detail - Create a playable game - Understand what a simulation is and code one - Use different types of variables within one code 	decomposition, simulation, abstraction, friction, string, concatenation

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	Information Technology	<ul style="list-style-type: none"> - Use formulae within a spreadsheet to convert measurements of length and distance - Use formulae to calculate the area and perimeter of shapes - Use the sharing capabilities in Google Docs - Know how to search for information within a database - Know how to phrase questions so they can be correctly answered using a search of database 	formulae, collaborative
	Digital Literacy	<ul style="list-style-type: none"> - Understand how a concept map can be used to retell stories and information - Understand who can support when using technology and children's responsibility to one another in their online behaviour - Understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this - Reference sources in their work - Understand that encryption allows information to be sent securely 	cached, encryption, acceptable/unacceptable behaviours, image manipulation, phishing, spoof, validity
Year 6	Computer Science	<ul style="list-style-type: none"> - Design a playable game, with a timer and score board - Use the launch command - Use flowcharts to create and debug code - Alter existing programs with their own ideas - Create a text-adventure game - Know the difference between the World Wide Web and the internet - Understand the history of the internet 	text based adventure, World Wide Web, Internet, Tim Berners Lee, launch command
	Information Technology	<ul style="list-style-type: none"> - Use a spreadsheet to investigate probability - Plan a story based adventure game - Create a picture quiz for younger children 	data analysis
	Digital Literacy	<ul style="list-style-type: none"> - Identify the features of a successful blog - Design and create a blog, thinking about the audience and how to cater for them - What WAN and WLAN are (WANs are used for connecting devices over a large geographic area, while WLANs are used for connecting devices within a limited area wirelessly) - Think about what the future of the internet might hold - Identify secure sites by looking for privacy seals of approval - Identify the benefits and risks of mobile devices broadcasting the location of the user/device. 	responsibility, WAN, WLAN, privacy seal of approval