# Computing Curriculum Overview 2024-2025

## Computing Topics / Areas of Study 2024-25

| Year Group | Block 1 | Block 2 | Block 3 | Block 4 | Block 5 | Block 6 |
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| Nursery & Reception | • As computing isn't explicitly in the Early Years Development Matters framework, the EYFS children explore computing as a standalone subject There are links to personal, social and emotional development, physical development, understanding the world and expressive arts and design which have elements of information computing technology included. <br>• Children in EYFS encounter a range of electronic devices from electronic toys: robots and caterpillars, talking devices such as phones and walkie talkies, tills, remotes, toasters ect… Children will explore technology in their everyday settings through cross curricular links. <br>• EYFS classes have 10 Ipads in each class with apps on for the children to use, should it lend itself to what the children are going. <br>• Towards the end of the year, Reception children can visit the suite to become familiar with Simple Software on a computer. <br>• This should begin to develop the children's understanding of our computing hardware in the suite. | | | | | |
| | **Basic Skills- Digital Literacy** | **E-safety-Digital Literacy** | **Computing- Programming and algorithms** | **Computing- Programming and algorithms** | **ICT-Information Technology-** <br>**Using current curriculum topic for inspiration** | |
| Year 1 | Children should be shown pictures and real-life examples of computer hardware e.g. mouse, monitor, keyboard etc… <br>**All of the above plus** <br>*Can click the save icon to save work on selected software (see software sheet) <br>*Can login to a computer <br>*Understand how to log off a computer <br>*Begin to use the mouse to draw images- paint tool <br>*Is aware of safety when using the computer | -Children will use Hector's world to explore the idea of E-safety. <br>https://www.esafety.gov.au/educators/classroom-resources/hectors-world/your-personal-information-online <br>-All children should learn the SMART rules and understand the importance of having a password when using devices. | -Can look at programming using toys to help aid the children's understanding. <br>-Begin with teaching children about inputs and outputs, identifying examples of these. <br>-Children will use Scratch Jr to complete their checklist goals e.g. making something grow and shrink. Making something grow and shrink using Scratch on the iPad and thinking about the input and output. | -Children will begin to use Scratch on the computers and try to complete similar tasks such as growing and shrinking. <br>-Children can try to follow a basic set of instructions from the teacher to create their own sequence of instructions leading to an output. <br>Children assemble these instructions into a simple algorithm. | -Children should be introduced to a range of different devices, such as Ipads, computers, laptops and other digital devices. <br>-Using their current curriculum topic as inspiration, children should be able to type letters on Microsoft Word and create a piece of digital art using paint software. This will allow the children to develop mouse control through dragging, clicking and resizing their work, also allowing them to be introduced to different software tools. <br>-Relating to their current curriculum topic, children should also be able to view data on digital devices. This can be data presented in tables, charts, pictograms and will allow the children to begin developing an understanding of digital data. The teacher should make reference to the fact that this data can be stored on paper but sometimes it is better to store them on digital device. <br>-This time is also important for the children to recognise common uses of information technology in and beyond school. | |
| Year 2 | All of the above plus <br>*Understand the different file icons | Children will use Saferinternet to understand how to be safe | -Discuss the word 'algorithms' to the children and explain that | Kodable/Kodu <br>-Children should use what they know about | Looking at how computers are used in the wider world, the children will | Children should develop their typing (word processing) skills. Children |

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|  | *Can select text and make changes (italics, bold and font size)<br>*Building on from their work the prior year, children should be able to use 2 Simple to draw more detailed pictures and write a more detailed sentence below.<br>*Begin to understand files – how they store information and what the file icon looks like. | online and where to report their concerns.<br>https://www.saferinternet.org.uk/advice-centre/young-people/resources-3-11s<br>-All children should learn the SMART rules | they're just like a set of instructions, if we take out one part it may not work successfully. E.g. Making cereal.<br>-Children to explore instructions. Instructions should be specific to give the correct result.<br>-Children should start to explore Scratch and the different icons/terminology (on assessment sheet).<br>-Children should then move on to making simple algorithms- when clicked, move forward, repeat. | programming and algorithms to try and complete a task on the new app.<br>-Teacher can set new tasks each lesson, such as 'can you make this go forward and then come back'.<br>-Check if children can spot why their algorithm doesn't work (debug). | discuss what animation is https://www.bbc.co.uk/bitesize/topics/zbhgjxs/articles/zskthyc This can be linked to their algorithm work that they have completed last term. The children will use Pivot Animator to create their own animation. | should complete a word document about their current curriculum topic. This will take time as children are to explore altering text, this can be changing font or text colour etc… After completing their document, children can add a clip art image that they should label using word.<br>Create their own tally chart or pictogram on Paint software about their topic.<br>*Save work in their own folder<br>*Load work from their own folder<br>*Can uses the undo tool to fix mistakes<br>*Can use the shift and punctuation keys<br>*Can add images to a word document |
| Year 3 | All of the above plus<br>*Can save and amend work with a different file name<br>*Can use print preview<br>*Can select a printer<br>*Can choose an appropriate program to use for a specific task<br>*Change page orientation | -Children will Use CEOP video to create a how to be safe online poster.<br>https://www.childnet.com/resources<br>-All children should learn the SMART rules<br>Focus on cyberbullying for their poster- what is it? Who can it happen to? | Children should become familiar with some of the other sprites on Scratch (See checklist)<br>Children are going to use their understanding of Scratch to create their own 10 second animation. It may be a boy kicking a ball into a net and | Children are going to use their skills on a different app. Children will use Kodu to complete a specific task.<br><br>Children will also try to make predictions on what will happen after looking at the given code. | -Children will explore the internet to find pictures and information about their current curriculum topic. This information will be used to create a Word document and a Power Point presentation with their key bits of information. | Children will learn about the purpose of emails. They will get their own email accounts and practise logging in and out, sending emails and including attachments. Finally, children will learn about databases. They will think about the pros and |

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| | *Copy and paste text and images<br>*Can use spellchecker | How do we prevent/report it? | celebrating or a dancer performing on stage.<br>-Children can try and make Sprite (character) in their animation speak.<br>-Children should all learn how to debug their algorithm if it is not working correctly. | | -This presentation will be used when the children create their news report. Children will use images and information they have found online to record their own reports. They will use the computers to view and edit these videos. | cons of digital versus paper databases and look at how they can retrieve information from a database. Children will also begin to learn information associated with databases: field, record, date etc…<br>https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z8yk87h |
| Year 4 | All of the above plus<br>*Can save work and create their own folder<br>*Can change printer properties<br>*Can delete files<br>*Can find information using a range of ICT sources<br>*Can explain choices of layout and formatting<br>*Can use a wide range of tools on paint<br>*Can create a three-page multimedia presentation | *Children will look at false accounts and false information using the Zapatopi, tree octopus information.<br>https://zapatopi.net/treeoctopus/<br>-All children should learn the SMART rules | -Children are going to create their own flowcharts on Scratch with different inputs and outputs.<br>-Children will begin to create a flow chart to discuss their favourite band/food etc.<br>-Children will come across errors and should be able to solve these by breaking the problem down into smaller parts.<br>(Design and write programs) | Computing- Programming and algorithms Kodable/Kodu/Kodeshark<br><br>Children will use the different apps to begin more increasingly difficult tasks. Children should be able to talk through each step that they have took to get their end product. | | |
| Year 5 | All of the above plus<br>*Be able to select appropriate software to use<br>*Change colour size and font of a text<br>*Understand how to search the internet safely and appropriately | *Children will use DigiZen to create their own E-safety videos.<br>https://www.digizen.org/<br>-All children should learn the SMART rules<br>-For their poster they should focus on learning ways to check the validity | -Children are going to debug programs and spot errors in an algorithm that may make a program not run as smoothly.<br>-Children are going to improve already made algorithms to make them more user friendly. E.g. | Kodable/Kodu/Kodeshark<br>-Children will begin to use programs with increasing complexity. Making predictions and point out errors in code that may interfere with the results.<br>-Children should be able to 'fix' algorithms that are | This topic children will focus on refining searches. Using their current curriculum topic children will search for information and images, thinking about how it will be found. They will look at refining search criteria to get more | Explore software- Children will use TinkerCAD software to create animation. Children should edit an improve animation before creating final product.<br><br>-Using software to create |

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| | *Understand the different search engines and how pages are ranked when searched<br>*Realise that not all of the information we read is true and understand that this information can easily be changed by users.<br>*Independently create work on the computer, selecting the correct software, font, images and information. | of information they find online and learning how to join online communities safely. | When mouse is clicked rather than when 'W' key is clicked. | not working correctly. | appropriate images. A focus will be put onto different search engines, how/ why do images not appear in the same place on different search engines?<br>Children should be able to present information found online on Microsoft Word, Publisher, Powerpoint and Excel. | <mark>music</mark> |
| Year 6 | All of the above plus<br>*Can independently complete tasks using the computer<br>*Can use the internet (computer networks WWW) to search for appropriate information and images<br>*Shows an understanding of different icons and can use shortcuts on office e.g. ctrl and z for undo<br>*Can understand the different website extensions e.g., a.c.uk, .org and appreciate how [search] results are ranked.<br>*Can consider the reliability of information on a website by comparing with other sites as well as | -Children will explore social media and how quickly images / information travels through social media.<br>-Children will look at the school website and evaluate the effectiveness of the website and discuss how we know if we can trust the information we receive from it.<br>-Children will also discuss their emails and how secure passwords protect us when online.<br>-Children need to know what makes a secure password.<br>-Children should recognise that updating software can help to prevent data corruption and hacking. | -Children are going to use Scratch to create their own interactive quiz. Children should create a range of questions and use the blocks to give correct and wrong answers to participants.<br>*Children should be able to discuss which software is better at accomplishing their specific goal, including collecting, analysing, evaluating and presenting data and information.<br>-BBC Microbit | **Kodable/Kodu/Kodeshark**<br>-Children should be able to use a range of different apps to create their own game/app/creation.<br>-Children should be able to accurately explain what happens at each step of the algorithm and how to fix any errors that may occur. Children should know why their algorithm produces the end result that it does. | -Children will look at the use of hashtags and the meaning of it on the internet. Make predication about what they would find if they put #StAlban etc…<br>-Children will use their knowledge of hashtags to search for information on their current curriculum topic.<br>-Children should be able to present this information on Microsoft Word, Publisher, PowerPoint and Excel. Choosing which one is most appropriate for their set task.<br>-Children should use Excel to create formulas and sort data within spreadsheets. | -Children should plan, record and edit their own radio play.<br>-Children will use microphones to do this.<br>-They will focus lots on multimedia and should create and edit videos, adding multiple elements: music, voiceover, sound, text, and transitions to create an advert/presentation.<br>-Children can use Weebly to upload these to a website on a chosen topic- adding embedded links and multiple pages. |

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| | looking at its authorship. | -Children should also think about how to use search engines effectively and safely.<br>-All children should learn the SMART rules | | | -Can also link how hashtags work to how barcodes and QR codes work. | |

**ORANGE**: E-Safety, Basic Skills, Digital Networks (Digital Literacy)

**PURPLE**: Computing / Computer Science

**BLUE**: ICT / Information Technology