

CURRICULUM ANCHORS	LANDING POINT 1 (YEAR 1 & 2)	LANDING POINT 2 (YEAR 3 & 4)	LANDING POINT 3 (YEAR 5 & 6)
<p style="text-align: center;">Computational Thinking Understanding Concepts and Applying Approaches</p>	<p>Understand:</p> <ul style="list-style-type: none"> - algorithms are a set of instructions/ steps/ rules a computer programme follows. - how algorithms are implemented as programs (Bee-Bot, Scratch Jr.) - that programs execute by following precise and unambiguous instructions. <p>Create a sequence of instructions (algorithm) and debug simple programs, tinkering to find errors (debugging). Use Hopscotch/ Scratch Jr.</p> <p>Use logical reasoning to explain and predict the behaviour of simple programs; Programme a Bee Bot to achieve specific tasks (including the Bee Bot app).</p> <p>Recognise common uses of information technology beyond school.</p>	<p>Design, write and debug programs that accomplish specific goals; use a block based system (Hopscotch/ Scratch Jr).</p> <p>Use sequence, selection and repetition in programs (Bee-Bots/ Sphero).</p> <p>Begin to use variables when writing programmes.</p> <p>Solve problems by decomposing them into smaller parts.</p> <p>Collaborate with others on a project and plan this using different methods.</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> <p>Learn the difference between local and cloud-based storage and collaboration software.</p>	<p>Design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems (Scratch Starter Tasks/ Swift Playgrounds inc Spheros).</p> <p>Use sequence, selection and repetition in programs; work with variables and various forms of input and output.</p> <p>Solve problems by decomposing them into smaller and more accurate parts.</p> <p>Learn some of the syntax of a text-based programming language use commands to control on screen graphics.</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> <p>Collaborate, evaluate and propose next steps when taking part in a coding project.</p> <p>Understand computer networks including the internet; how they can provide multiple services, such as the world wide web, and the opportunities they offer for communication and collaboration.</p>

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"> Computational Thinking (Understanding Concepts and Applying Approaches) FURTHER GUIDANCE </p>	<p>Key Concepts: Logic – Predicting and Analysing Algorithms- Making steps and rules</p> <p>Key Approaches: Debugging – finding and fixing errors Tinkering – changing and seeing what happens</p> <p>Key Language Sequence - An ordered list containing successive steps or functions that perform an action. Function - A group of instructions, used by programming languages to return a single result or a set of results.</p> <p>Activity Suggestions: Learn to program BOTH a basic floor turtle (Bee-Bot) and an on-screen app (Scratch Jr) to navigate increasingly complex routes and be able to debug their instructions when the turtle/ sprite does not reach the intended destination.</p> <p>Pupils use a more complex turtle (Blue-Bot) with standard units to navigate increasingly complex routes, and are able to debug their instructions when the turtle does not reach the intended destination.</p>	<p>Previous Key Concepts and: Patterns – Spotting and using similarities Decomposition – Breaking down into parts Evaluation – Making judgements</p> <p>Key Approaches Persevering – keeping going Collaboration – working together</p> <p>Key Language Programming – A stored set of instructions, in a language a computer can understand</p> <p>Activity Suggestions: Learn to use graphical programming language, such as Scratch to draw regular 2D shapes. Add loops or procedures to create a repeating pattern</p> <p>Learn to sequence instructions, for instance, to create an animation using Scratch, or by using the timing features in PowerPoint.</p> <p>Write a simple algorithm, for instance, to create a basic traffic light sequence. They then use flowcharting software (such as Go or Flowgo) to create a simple program to control an onscreen icon.</p>	<p>Previous Key Concepts and: Abstraction – Removing necessary detail Creating – designing and making Inputs – Data sent to a computer system from a keyboard or sensor. Outputs – Data sent from a computer to the outside world e.g displayed on a computer.</p> <p>Key Approaches: Creating – Designing and Making Collaboration – working together</p> <p>Key Language Syntax - the structure of statements in a computer language</p> <p>Activity Suggestions: Write a simple algorithm, for instance, to create a basic traffic light sequence. Then use flowcharting software (such as Go or Flowgo) to create a simple program to control an onscreen icon. Articulate how their program works</p> <p>Pupils create a computer game, using a graphical language such as Scratch, Kodu or Swift Playgrounds.</p>
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<p style="text-align: center;">Information Technology (Confident Communicators)</p>	<p>Use technology purposefully to create, manipulate, organise, store and retrieve digital content.</p> <p>Use a range of applications and devices in order to communicate ideas, work and messages.</p>	<p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals of: collecting, analysing, evaluating and presenting data and information</p> <p>Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration.</p>	<p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create increasingly complex and multifaceted programs, systems and content that accomplish given goals of: collecting, analysing, evaluating and presenting data and information</p> <p>Use some of the advanced features of applications and devices in order to communicate ideas, work or messages professionally.</p>
<p style="text-align: center;">Information Technology (Confident Communicators) FURTHER GUIDANCE</p>	<p>Digital Publishing use basic word processing software to write and illustrate a short story.</p> <p>Presentation: create simple presentations, using given templates.</p> <p>Graphics: create a simple digital painting.</p> <p>Animations: Make a simple animation using Puppet Pals.</p> <p>Media: Use digital cameras/ iPads and microphones for a purpose (Everyone Can Create Units).</p> <p>Working with data: Create and use a pictogram.</p>	<p>Digital Publishing: Use software to create an e-book (iBook), brochure or poster on a given subject in Pages, Keynote or Word.</p> <p>Presentations: Write and deliver a presentation on a given subject using transition features and movement. (Powerpoint and Keynote).</p> <p>Graphics: Take, adapt or create images to enhance or further develop their work. Use Logitech Crayons to enhance this further through Sketchnoting.</p> <p>Animations: Develop a storyboard and then create a simple animation using for instance ‘Puppet Pals’ or ‘Stop Motion Animation’.</p> <p>Sound and video: Record and edit media to create a short sequence (Clips and iMovie).</p> <p>Working with data: Search, sort and graph information.</p>	<p>Digital Publishing: Create an e-book, brochure, poster or App design on a given subject, using increasingly complex features in pages/ keynote.</p> <p>Presentations: Write and deliver a presentation, incorporating a range of media and slide transitions. (Powerpoint/ Keynote/ Prezi).</p> <p>Graphics: Take, adapt or create images to enhance or further develop their work and incorporate it in a wider project using Clips.</p> <p>Animations: Develop a storyboard and then create a simple animation ‘Stop Motions Animation’ - this may be extended by editing the final product in using video editing software (iMovie).</p> <p>Sound and video: Record and edit media to create a short sequence - extended by editing the final product in iMovie.</p> <p>Working with data: Use Excel and Numbers to create a correct data sheet.</p>

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<p>Digital Literacy (Safer Citizens) Active, safe and responsible participants.</p>	<p>Use technology to organise, store and retrieve digital content.</p> <p>Use technology to create and manipulate digital content.</p> <p>Use technology safely and respectfully, keeping personal information private.</p> <p>Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies</p> <p>Participate in class social media accounts</p>	<p>Use technology to organise, store and retrieve digital content.</p> <p>Use technology safely, respectfully and responsibly;</p> <p>Recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p> <p>Give examples of the risks posed by online communications.</p> <p>Understand online risks and age rules of sites and games.</p>	<p>Use technology to organise, store and retrieve digital content.</p> <p>Use technology safely, respectfully and responsibly;</p> <p>Recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p> <p>Use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content</p> <p>Understand the term Copyright</p> <p>Understand that comments made online that are hurtful or offensive are the same as bullying</p>
	<p align="center">Understand the Safety Pillars of being an 'Internet Legend': Think Before You Share (Be Internet Sharp); Check it's For Real (Be Internet Alert); Protect Your Stuff (Be Internet Secure); Respect Each Other (Be Internet Kind); When in Doubt, Discuss (Be Internet Brave)</p>		

<p style="text-align: center;">Digital Literacy (Safer Citizens) Active, safe and responsible participants.</p>	<p>Know that the internet is a great place to develop rewarding online relationships</p> <p>Recognise websites that are good to visit; but they also learn to be cautious and to check with a trusted adult before sharing private information</p> <p>Introduce to the concept that real people send messages to one another on the internet and learn how messages are sent and received.</p> <p>Recognise that it may be difficult to distinguish between someone who is real and someone who is not</p> <p>Introduce the basics of online searching</p> <p>Explore websites and say whether they like them or not and why</p>	<p>Recognise websites that are good for them to visit; but also, be cautious and check with a trusted adult before sharing private information</p> <p>Make good passwords for their accounts, learn about spam and how to deal with it.</p> <p>Begin to understand the implications for the information that they share online and how some websites might use that information without their knowledge (Cookies)</p> <p>Understand their roles as digital citizens in an online community, where they reflect on how they are responsible not only for themselves but for others, in order to create a safe and comfortable environment</p> <p>Know the internet is a public space and then develop the skills to protect their privacy and respect the privacy of others</p> <p>Explore how they interact with others and are introduced to the concept of cyberbullying.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content</p> <p>Know the basics of online searching, including how to use effective keywords. Conduct searches that provide the most helpful and relevant information</p>	<p>Compare and contrast online friends and real life, face to face friends and learn how to respond if an online friend asks a personal question</p> <p>Create secure passwords for accounts, learn about spam and how to deal with it, and decode website privacy policies, understanding the implications for the info that is shared online</p> <p>Explore roles as digital citizens in an online community, reflecting on their responsibilities and learning that good digital citizens are responsible and respectful in the digital world</p> <p>Reflect on how to interact with others online and understand how to prevent and respond to cyberbullying and how to communicate effectively to prevent miscommunication</p> <p>Explore the nature of online audiences and permanency of information online. Begin to understand the significance of published information and personal information.</p> <p>Pupils begin to consider the impact of their online presence on their own self- image and the way others see them and explore how to construct a positive online profile.</p> <p>Pupils develop skills for evaluating searches, websites, online information and advertising by rating the trustworthiness and usefulness of websites.</p>
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