



**Computing Progression of Skills & Knowledge**

Reception						
Understanding the World						
NST EYFS Curriculum:						
<ul style="list-style-type: none"> <li>Begin to use technology to support learning.</li> </ul>						
Early Learning Goal:						
<ul style="list-style-type: none"> <li>Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class.</li> </ul>						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Digital Literacy	<p><b>isafe Y1 unit</b> <i>Personal information and being safe online</i></p> <p>use technology safely and respectfully, keeping personal information private; 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>recognise common uses of information technology beyond school - to be taught through iSafe / Safer Internet Day</p>	<p><b>isafe Y2 unit</b> <i>eSafety</i></p> <ul style="list-style-type: none"> <li>use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul> <p>recognise common uses of information technology beyond school - to be taught through iSafe / Safer Internet Day</p>	<p><b>isafe Y3 unit</b> <i>Staying safe online</i></p> <ul style="list-style-type: none"> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> </ul> <p>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p><b>IConnect Y3 unit</b> <i>Learning about the Internet and the World Wide Web</i></p> <ul style="list-style-type: none"> <li>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul>	<p><b>isafe Y4 unit</b> <i>Being safe, responsible digital citizens</i></p> <ul style="list-style-type: none"> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> </ul> <p>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>	<p><b>isafe Y5 unit</b> <i>Becoming safe and responsible digital citizens</i></p> <ul style="list-style-type: none"> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> </ul> <p>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>	<p><b>isafe Y6 unit</b> <i>Staying safe in a digital world</i></p> <ul style="list-style-type: none"> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> </ul> <p>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>
Digital Literacy Vocabulary	<p><b>isafe unit:</b> Personal information Trusted adult Permission Cyberbullying</p>	<p><b>isafe unit:</b> Personal information Trusted adult Permission Cyberbullying Trustworthy Untrustworthy Internet Online</p>	<p><b>isafe unit:</b> (revisit KS1 vocabulary) like/dislike safe/unsafe public private share block privacy privacy settings online sharing consent strong password manipulation pressure Advertising</p>	<p><b>isafe unit:</b> (revisit previous vocabulary) privacy privacy settings keywords copyright strong password spam virus cyberbullying</p>	<p><b>isafe unit:</b> (revisit previous vocabulary) communication safe technology risk benefit personal private SMART trust bullying cyberbullying</p>	<p><b>isafe unit:</b> (revisit previous vocabulary) privacy privacy settings security two-factor (or step) verification encryption hack strong password personal information bullying cyberbullying conflict bystander upstander harassment</p>



			<p>Connect World Wide Web Internet Surf Search technologies Ranked Hyperlinks Browser Router Navigate Tab</p>			<p>report block abuse</p>
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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Information Technology	<p><b>iWrite Y1 unit</b> Creating, manipulating and storing digital text</p> <p>use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>[also links to digital literacy]</p>	<p><b>iPub Y2 unit</b> Creating interactive ebook</p> <ul style="list-style-type: none"> <li>- use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul> <p>[also links to digital literacy]</p> <p><b>iData Y1 Unit</b> Yr1 unit – Introduction to data representation</p> <ul style="list-style-type: none"> <li>- use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul>	<p><b>iData Y3 unit</b> Introducing databases</p> <ul style="list-style-type: none"> <li>- use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>- 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, including collecting, analysing, evaluating and presenting data and information</li> </ul>	<p><b>iData Y4 unit</b> Introduction to data representation</p> <ul style="list-style-type: none"> <li>- use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>- 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, including collecting, analysing, evaluating and presenting data and information</li> </ul>	<p><b>iWeb Y5 unit</b> Remixing and creating web content using HTML</p> <ul style="list-style-type: none"> <li>- 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</li> </ul> <p>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>	<p><b>iNetwork Y6 unit</b> Network, data and creating web content</p> <ul style="list-style-type: none"> <li>- 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</li> <li>- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</li> </ul>
Information Technology Vocabulary	<p><u>iWrite Unit:</u> text word processor key keyboard save print backspace return/enter</p>	<p><u>iPub Unit:</u> <b>World Wide Web</b> <b>network</b> <b>internet</b> <b>device</b> <b>eBook</b></p> <p><u>iData Unit:</u> <b>information</b> <b>data</b> <b>tally</b> <b>pictogram</b> <b>survey</b> <b>graph</b> <b>sort</b></p>	<p><u>iData Unit:</u> [revisit KS1 vocabulary] <b>field</b> <b>record</b> <b>database</b> data <b>search</b> sort</p>	<p><u>iData Unit:</u> [revisit previous vocabulary] record database data <b>file</b> field search sort <b>chart</b></p>	<p><u>iWeb Unit:</u> [revisit relevant previous vocabulary] World Wide Web <b>HTML</b> <b>CSS</b> <b>element</b> <b>tags</b></p>	<p><u>iNetwork Unit:</u> [revisit relevant previous vocabulary] <b>Network</b> <b>router</b> internet World Wide Web <b>IP address</b> <b>URL</b> data <b>packet</b> <b>search engine</b> <b>rank</b> HTML</p>



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science	<p><b>Algorithm Y1 Unit</b> <i>Understanding Algorithms</i></p> <ul style="list-style-type: none"> <li>- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> </ul> <p>[also links to digital literacy]</p>	<p><b>Program Y2 Unit</b> <i>Creating simple animations</i></p> <ul style="list-style-type: none"> <li>- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>- create and debug simple programs</li> <li>- use logical reasoning to predict the behaviour of simple programs</li> </ul> <p>[also links to digital literacy]</p>	<p><b>Program Y3 Unit 1</b> <i>Games and animation development</i></p> <ul style="list-style-type: none"> <li>- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>- use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul> <p>[also links to digital literacy]</p>	<p><b>Program Y4 Unit 1</b> <i>Making shapes and navigating mazes</i></p> <ul style="list-style-type: none"> <li>- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>- use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul> <p><b>Program Y4 Unit</b> <i>Programming with Scratch</i></p> <ul style="list-style-type: none"> <li>- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>- use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul>	<p><b>Program Y5 unit1</b> <i>Designing and developing computer games</i></p> <ul style="list-style-type: none"> <li>- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>- use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>- 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, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p>[also links to digital literacy]</p> <p><b>App unit1</b> <i>Designing and developing apps</i></p> <ul style="list-style-type: none"> <li>- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>- use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>- 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, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p>[also links to digital literacy]</p>	<p><b>Program Y6 unit 1</b> <i>Designing and developing computer games</i></p> <ul style="list-style-type: none"> <li>- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>- use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>- 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, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p>[also links to digital literacy]</p> <p><b>Learn AI Y6 Unit:</b></p> <ul style="list-style-type: none"> <li>- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</li> <li>- Use sequence, selection and repetition in programs, work with variables and various forms of input and output</li> <li>- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>- 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.</li> <li>- 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, including collecting, analysing, evaluating and presenting data and information.</li> </ul>



Computer Science Vocabulary	<u>iAlgorithm &amp; iProgram Unit:</u> <b>algorithm</b> <b>instruction</b> <b>sequence</b> <b>program</b> <b>debug</b> <b>repeat</b> <b>true</b> <b>false</b> <b>output</b> [iProgram Unit only]	<u>iProgram Unit:</u> algorithm instruction sequence program debug repeat <b>test</b>	<u>iProgram Unit:</u> [revisit KS1 vocabulary] program sequence selection debug repeat test <b>coordinates</b> <b>x-y axis</b> <b>import</b>	<u>iProgram Unit:</u> [revisit previous vocabulary] program sequence <b>condition</b> repeat test selection debug instruction <b>code</b> <b>command</b> <b>variable</b> <b>execute</b>	<u>iProgram Unit:</u> [revisit previous vocabulary] sequence    selection condition    repeat <b>boolean</b>  <u>iApp Unit:</u> <b>input</b> <b>output</b> <b>events</b> <b>properties</b> <b>pseudo-code</b> <b>syntax</b> <b>assets</b> <b>parameters</b> <b>argument</b> <b>function</b> <b>procedure</b> <b>event handler</b> variable              test debug	<u>iProgram Unit:</u> [reinforce Y5 iProgram Unit] program sequence condition repeat boolean variable procedure execute test debug  <u>iLearn AI unit</u> Artificial intelligence Machine learning Input Output Algorithm Classification Dataset Prediction General intelligence
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