

## Computing

### Year Group / Theme

### Knowledge & Skills Progression

### Safer Internet Use

<u>Year Group / Theme</u>	<u>Knowledge &amp; Skills Progression</u>	<u>Safer Internet Use</u>
<u>Year 1</u>	<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>• create a series of instructions.</li> <li>• plan a journey for a programmable toy.</li> </ul> <p><u>Information technology</u></p> <ul style="list-style-type: none"> <li>• create digital content.</li> <li>• store digital content.</li> <li>• retrieve digital content.</li> <li>• use a website.</li> <li>• use a camera.</li> <li>• record sound and play back.</li> </ul> <p><u>Digital literacy</u></p> <ul style="list-style-type: none"> <li>• know how use technology safely.</li> <li>• know how to keep personal information private.</li> </ul>	<p><u>Knowledge and understanding</u></p> <ul style="list-style-type: none"> <li>• I understand the different methods of communication (e.g. email, online forums etc).</li> <li>• I know you should only open email from a known source.</li> <li>• I know the difference between email and communication systems such as blogs and wikis.</li> <li>• I know that websites sometimes include pop-ups that take me away from the main site.</li> <li>• I know that bookmarking is a way to find safe sites again quickly.</li> <li>• I have begun to evaluate websites and know that everything on the internet is not true.</li> <li>• I know that it is not always possible to copy some text and pictures from the internet.</li> <li>• I know that personal information should not be shared online.</li> <li>• I know I must tell a trusted adult immediately if anyone tries to meet me via the internet.</li> </ul> <p><u>Skills</u></p> <ul style="list-style-type: none"> <li>• I follow the school's safer internet rules.</li> <li>• I use the search engines agreed by the school.</li> </ul>
	<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>• use a range of instructions (e.g. direction, angles, turns).</li> <li>• test and amend a set of instructions.</li> <li>• I find errors and amend. (debug)</li> <li>• I write a simple program and test it.</li> <li>• predict what the outcome of a simple program will be (logical reasoning).</li> <li>• I understand that algorithms are used on digital devices.</li> <li>• I understand that programs require precise instructions.</li> </ul>	

<p><u>Year 2</u></p>	<p><u>Information technology</u></p> <ul style="list-style-type: none"> <li>• organise digital content.</li> <li>• retrieve and manipulate digital content. navigate the web to complete simple searches.</li> </ul> <p><u>Digital literacy</u></p> <ul style="list-style-type: none"> <li>• know how to use technology respectfully.</li> <li>• know where to go for help if I am concerned.</li> <li>• I know how technology is used in school and outside of school.</li> </ul>	<ul style="list-style-type: none"> <li>• I know what to do if I find something inappropriate online or something I am unsure of (including identifying people who can help; minimising screen; online reporting using school system etc.).</li> <li>• I use the internet for learning and communicating with others, making choices when navigating through sites.</li> <li>• I send and receive email as a class.</li> <li>• I recognise advertising on websites and learn to ignore it.</li> <li>• I use a password to access the secure network.</li> </ul>
<p><u>Year 3</u></p>	<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>• design a sequence of instructions, including directional instructions.</li> <li>• write programs that accomplish specific goals.</li> <li>• work with various forms of input.</li> <li>• work with various forms of output.</li> </ul> <p><u>Information technology</u></p> <ul style="list-style-type: none"> <li>• use a range of software for similar purposes.</li> <li>• collect information.</li> <li>• design and create content.</li> <li>• present information.</li> <li>• search for information on the web in different ways.</li> </ul> <p>manipulate and improve digital images</p> <p><u>Digital literacy</u></p>	<p><u>Knowledge and understanding</u></p> <ul style="list-style-type: none"> <li>• I understand the need for rules to keep me safe when exchanging learning and ideas online.</li> <li>• I recognise that information on the internet may not be accurate or reliable and may be used for bias, manipulation or persuasion.</li> <li>• I understand that the internet contains fact, fiction and opinion and begin to distinguish between them.</li> <li>• I use strategies to verify information, e.g. cross-checking.</li> <li>• I understand the need for caution when using an internet search for images and what to do if I find an unsuitable image.</li> <li>• I understand that copyright exists on most digital images, video and recorded music.</li> </ul>

	<ul style="list-style-type: none"> <li>• know how to use technology respectfully and responsibly.</li> <li>• know different ways I can get help if I am concerned.</li> <li>• understand what computer networks do and how they provide multiple services.</li> <li>• discern where it is best to use technology and where it adds little or no value.</li> </ul>	<ul style="list-style-type: none"> <li>• I understand the need to keep personal information and passwords private.</li> <li>• I understand that if I make personal information available online it may be seen and used by others.</li> <li>• I know how to respond if asked for personal information or feel unsafe about content of a message.</li> <li>• I recognise that cyber bullying is unacceptable and will be sanctioned in line with the school's policy.</li> <li>• I know how to report an incident of cyber bullying.</li> <li>• I know the difference between online communication tools used in school and those used at home.</li> <li>• I understand the need to develop an alias for some public online use.</li> <li>• I understand that the outcome of internet searches at home may be different than at school.</li> </ul>
<p><u>Year 4</u></p>	<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>• experiment with variables to control models.</li> <li>• give an on-screen robot specific instructions that takes them from A to B.</li> <li>• make an accurate prediction and explain why I believe something will happen (linked to programming).</li> <li>• de-bug a program.</li> </ul> <p><u>Information technology</u></p> <ul style="list-style-type: none"> <li>• select and use software to accomplish given goals.</li> <li>• collect and present data.</li> </ul> <p>produce and upload a podcast.</p> <p><u>Digital literacy</u></p> <ul style="list-style-type: none"> <li>• recognise acceptable and unacceptable behaviour using technology.</li> </ul>	<p><u>Skills</u></p> <ul style="list-style-type: none"> <li>• I follow the school's safer internet rules.</li> <li>• I recognise the difference between the work of others which has been copied (plagiarism) and re-structuring and re-presenting materials in ways which are unique and new.</li> <li>• I identify when emails should not be opened and when an attachment may not be safe.</li> <li>• I explain and demonstrate how to use email safely.</li> </ul>

		<ul style="list-style-type: none"> <li>• I use different search engines.</li> </ul>
<u>Year 5</u>	<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>• combine sequences of instructions and procedures to turn devices on and off.</li> <li>• use technology to control an external device.</li> <li>• design algorithms that use repetition &amp; 2-way selection.</li> </ul> <p><u>Information technology</u></p> <ul style="list-style-type: none"> <li>• analyse information.</li> <li>• evaluate information.</li> <li>• understand how search results are selected and ranked.</li> <li>• edit a film.</li> </ul> <p><u>Digital literacy</u></p> <ul style="list-style-type: none"> <li>• understand that you have to make choices when using technology and that not everything is true and/or safe.</li> </ul>	<p><u>Knowledge and understanding</u></p> <ul style="list-style-type: none"> <li>• I discuss the positive and negative impact of the use of ICT in my own life, my friends and family.</li> <li>• I understand the potential risk of providing personal information online.</li> <li>• I recognise why people may publish content that is not accurate and understand the need to be critical evaluators of content.</li> <li>• I understand that some websites and/or pop-ups have commercial interests that may affect the way the information is presented.</li> <li>• I recognise the potential risks of using internet communication tools and understand how to minimise those risks (including scams and phishing).</li> <li>• I understand that some material on the internet is copyrighted and may not be copied or downloaded.</li> <li>• I understand that some messages may be malicious and know how to deal with this.</li> <li>• I understand that online environments have security settings, which can be altered, to protect the user.</li> <li>• I understand the benefits of developing a 'nickname' for online use.</li> <li>• I understand that some malicious adults may use various techniques to make contact and elicit personal information.</li> </ul>
<u>Year 6</u>	<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>• design a solution by breaking a problem up.</li> <li>• recognise that different solutions can exist for the same problem.</li> <li>• use logical reasoning to detect errors in algorithms.</li> <li>• use selection in programs.</li> <li>• work with variables.</li> <li>• explain how an algorithm works.</li> </ul>	

	<ul style="list-style-type: none"> <li>• explore 'what if' questions by planning different scenarios for controlled devices.</li> </ul> <p><u>Information technology</u></p> <ul style="list-style-type: none"> <li>• select, use and combine software on a range of digital devices.</li> <li>• use a range of technology for a specific project.</li> </ul> <p><u>Digital literacy</u></p> <ul style="list-style-type: none"> <li>• discuss the risks of online use of technology.</li> <li>• identify how to minimise risks.</li> </ul>	<ul style="list-style-type: none"> <li>• I know that it is unsafe to arrange to meet unknown people online.</li> <li>• I know how to report any suspicions.</li> <li>• I understand I should not publish other people's pictures or tag them on the internet without permission.</li> <li>• I know that content put online is extremely difficult to remove.</li> <li>• I know what to do if I discover something malicious or inappropriate.</li> </ul> <p><u>Skills</u></p> <ul style="list-style-type: none"> <li>• I follow the school's safer internet rules.</li> <li>• I makesafe choices about the use of technology.</li> <li>• I use technology in ways which minimises risk. e.g. responsible use of online discussions, etc.</li> <li>• I create strong passwords and manage them so that they remain strong.</li> <li>• I independently, and with regard for e-safety, select and use appropriate communication tools to solve problems by collaborating and communicating with others within and beyond school.</li> <li>• I competently use the internet as a search tool.</li> <li>• I reference information sources.</li> <li>• I use appropriate strategies for finding, critically evaluating, validating and verifying information. e.g. using different keywords, skim reading to check relevance of information, cross checking</li> </ul>
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with different websites or other non ICT resources.

- I use knowledge of the meaning of different domain names and common website extensions (e.g. .co.uk; .com; .ac; .sch; .org; .gov; .net) to support validation of information.