



Skills	Online Safety		Information Technology	Computer Sciences		
Year 1	<p>Recognise common uses of information technology beyond school.</p> <p>Identify a variety of examples of technology.</p>	<p>Use technology respectfully and safely.</p> <p>Keep personal information private.</p> <p>Identify where to go to for help and support if they have concerns about contact or content on the Internet.</p> <p>Be able to save their own work in a private space online.</p>	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>Sort, collate, edit and store digital content.</p>	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Generate a simple algorithm.</p>	<p>Create and debug simple programs. Recognise what is wrong with a simple algorithm when the steps are out of order.</p> <p>Recognise when an error has been made in an algorithm and be able to fix it through being logical.</p>	<p>Use logical reasoning to predict the behaviour of simple programs.</p> <p>Read and interpret a code.</p>



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<p>Year 2</p>	<p>Recognise common uses of information technology beyond school.</p> <p>Retrieve relevant and purposeful digital content using a search engine.</p>	<p>Use technology respectfully and safely; keep personal information private; identify where to go to for help and support if they have concerns about contact or content on the Internet.</p> <p>Recognise the implications of inappropriate online searches.</p> <p>Share content digitally.</p> <p>Develop an understanding of the use of emailing and identify ways to report inappropriate behaviours and content to a trusted adult.</p>	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>Demonstrate an ability to organise data.</p> <p>Retrieve specific data for conducting simple searching.</p> <p>Edit complex digital data.</p> <p>Use a range of media in their digital content (e.g. photos, text and sound)</p>	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>Explain that an algorithm is a set of instructions to complete a task.</p> <p>Design precise algorithms that can be converted into code.</p>	<p>Create and debug simple programs</p> <p>Create a simple program that achieves a specific purpose.</p> <p>Identify and correct errors within an algorithm.</p> <p>Develop a growing awareness of the need for logical, programmable steps.</p>	<p>Use logical reasoning to predict the behaviour of simple programs.</p> <p>Identify parts of a program that respond to specific events and initiate specific actions.</p>



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<p style="text-align: center; font-size: 2em; font-weight: bold;">Year 3</p>	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concern about content and contact.</p> <p>Recognise and understand the importance of having secure passwords. Explain the negative impact of failing to keep this information secure.</p> <p>Know how to stay safe and how to conduct themselves when using communication tools.</p>	<p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>Carry out simple searches to retrieve digital content.</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, system and content that accomplish given goals, including evaluating and presenting data and information.</p> <p>Collect, analyse, evaluate and present data and information using a selection of software. Create purposeful content.</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or stimulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Turn a simple real-life situation into an algorithm. Identify an error within their coding. Fix an error in coding in an algorithm.</p>	<p>Use sequence, selection and repetition in programs; work with variables and various forms of input and output.</p> <p>Design and code a program</p> <p>Store information in different ways.</p>	<p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> <p>Program in logical and achievable steps. Identify more complex errors in algorithms and be able to correct them.</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>Recognise a range of ways the internet can be used to provide different methods of communication.</p>



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Year 4	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concern about content and contact.</p> <p>Identify a range of ways to report a concern about content and contact. Recognise acceptable and unacceptable behaviour online</p>	<p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>Explain how credible a webpage is and the information it contains. Explain how to search effectively</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, including collecting, analysing, evaluating and presenting data and information.</p> <p>Use software on a range of devices Collect data Analyse data Evaluate data Present data</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Design and write programs that accomplish specific goals Debug programs Solve problems by decomposing them into smaller parts</p>	<p>Use sequence, selection and repetition in programs; work with variables and various forms of input and output.</p> <p>Create algorithms that involve sequence, selection and repetition</p>	<p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> <p>Using logical reasoning explain how some simple algorithms work Detect and correct errors in algorithms and programs</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>Recognise that personal information is Explain how to keep their personal information safe across a range of services</p>



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Year 5	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concern about content and contact.</p> <p>Apply knowledge of online safety rules</p> <p>Demonstrate the safe and respectful use of different technologies</p> <p>Relate online behaviour to their own right to privacy and mental wellbeing of themselves and others</p>	<p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>Search with greater complexity for digital content when using a search engine.</p> <p>Explain in some detail how credible a webpage is and the information it contains.</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, including collecting, analysing, evaluating and presenting data and information.</p> <p>Make appropriate improvements to digital solutions based on feedback received. Review solutions from others. Create content and solutions using digital features within software such as collaborative mode.</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Create algorithms from more complex real-life situations for a program by deconstructing it into manageable parts.</p> <p>Test and debug programs as they go and can use logical methods to identify the approximate cause of any bug.</p>	<p>Use sequence, selection and repetition in programs; work with variables and various forms of input and output.</p> <p>Translate algorithms that include sequence, selection and repetition into code with increasing ease. Combine sequence, selection and repetition with other coding structures to achieve their algorithm design.</p>	<p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> <p>Debug and interpret code</p> <p>Organise code</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>Use the value of computer networks</p> <p>Show an awareness of the main dangers on computer networks. Recognise what personal information is and explain how this can be kept safe</p> <p>Select the most appropriate form of online communications contingent on audience and digital content</p>



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<p>Year 6</p>	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concern about content and contact.</p> <p>Demonstrate the safe and respectful use of a range of different technologies and online services.</p> <p>Identify more discreet inappropriate behaviours through critical thinking.</p> <p>Recognise the value in preserving their privacy when online for their own and other people's safety.</p>	<p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>Apply filters when searching for digital content.</p> <p>Explain in detail how credible a webpage is and the information it contains.</p> <p>Compare a range of digital content sources.</p> <p>Rate webpages in terms of content, quality and accuracy.</p> <p>Think critically about using every day online communication.</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, including collecting, analysing, evaluating and presenting data and information.</p> <p>Design digital content for a particular audience.</p> <p>Create blogs to become a content creator on the internet,</p> <p>Evaluate the quality of digital solutions and make refinements.</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Turn a more complex programming task into an algorithm:</p> <ul style="list-style-type: none"> -identify the important aspects of the task (abstraction) -decompose the task in a logical way -apply knowledge of coding structures -test and debug using logical tests and systematic working to identify causes 	<p>Use sequence, selection and repetition in programs; work with variables and various forms of input and output.</p> <p>Translate and design algorithms that include sequence, selection and repetition into code</p> <p>Write code that allows for user input and feedback.</p>	<p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> <p>Interpret a program in Parts.</p> <p>Make logical attempts to combine the separate parts of a complex algorithm together as a whole.</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>Explain in some depth the difference between the internet and the World Wide Web.</p> <p>Explain what a WAN and LAN are.</p> <p>Describe how they access the Internet in school.</p>



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Year 1	<ul style="list-style-type: none"> To know how to login safely to Purple Mash. To know how to find saved work in the Online Work area and find teacher comments. To know how to search Purple Mash to find resources. To understand the importance of logging out when they have finished. To recall what technology they use or have seen at home or in the local environment. 	<ul style="list-style-type: none"> To recall how to sort items using a range of criteria. To recall how to sort items on the computer using the 'Grouping' activities in Purple Mash. To understand that data can be represented in picture format. To demonstrate how to use a pictogram to record the results of an experiment. 	<ul style="list-style-type: none"> To know the importance of following instructions. To know that computers follow instructions we give them. To understand what coding means in computing.
Knowledge Year 2	<ul style="list-style-type: none"> To know how to refine searches using the Search tool. To know how to share work electronically using the display boards. To have some knowledge and understanding about sharing more globally on the Internet. To understand how we talk to others when they aren't there in front of us. To understand that information put online leaves a digital footprint or trail. To identify the steps that can be taken to keep personal data and hardware secure. To understand the terminology associated with searching. To gain a better understanding about searching on the Internet. 	<ul style="list-style-type: none"> To know when to use copying and pasting tools To recall what a spreadsheet is To explain how to create a block graph using Purple Mash To know that artwork can be created using the computer 	<ul style="list-style-type: none"> To understand what an algorithm is. To understand how use the Repeat command. To understand how to use the Timer command. To know what debugging means. To understand the need to test and debug a program repeatedly. To demonstrate how to debug simple programs
Knowledge Year 3	<ul style="list-style-type: none"> To know what makes a safe password, how to keep passwords safe and the consequences of giving your passwords away. To understand how the Internet can be used to help us to communicate effectively. To understand how a blog can be used to help us communicate with a wider audience To know what PEGI restrictions are. 	<ul style="list-style-type: none"> To know how to create pie charts and bar graphs. To recall some typing terminology. To demonstrate how to sit correctly when typing To know we can use technology to communicate and recall some ways of how we can do this To know how to send an email safely 	<ul style="list-style-type: none"> To demonstrate how to create code To understand what a variable is in programming. To know what debugging means and explain this with increasing detail. To understand the need to test and debug a program repeatedly. To demonstrate how to debug simple programs. To understand the importance of saving periodically as part of the code development process.
Knowledge	<ul style="list-style-type: none"> To understand how children can protect themselves from online identity theft. 	<ul style="list-style-type: none"> on the search results page. To recall how to use search effectively to 	<ul style="list-style-type: none"> To know coding vocabulary. To know what decomposition and abstraction are in



<p>Year 4</p>	<ul style="list-style-type: none"> To understand that information put online leaves a digital footprint or trail and that this can aid identity theft To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism. To identify appropriate behaviour when participating or contributing to collaborative online projects for learning. To select an appropriate website from search results and begin to consider if the content is reliable. To identify the positive and negative influences of technology on health and the environment. To understand the importance of balancing game and screen time with other parts of their lives. 	<p>find out information.</p> <ul style="list-style-type: none"> To know how to assess whether an information source is true and reliable. To understand the different parts that make up a computer. To recall the different parts that make up a computer. 	<p>computer science.</p>
<p>Knowledge Year 5</p>	<ul style="list-style-type: none"> Identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g. apps accessing location. Identify secure sites by looking for privacy seals of approval, e.g. https, padlock icon. Identify the benefits and risks of giving personal information and device access to different software To understand the meaning of a digital footprint and understand how and why people use their information and online presence to create a virtual image of themselves as a user. To understand a clear idea of appropriate online behaviour and how this can protect themselves and others from possible online dangers, bullying and inappropriate behaviour. To begin to understand how information online can persist and give away details of those who share or modify it 	<ul style="list-style-type: none"> To know why spreadsheets are used in 'real life To identify the purpose of writing a blog. To identify the features of successful blog writing To understand how to write a blog. To consider the effect upon the audience of changing the visual properties of the blog. To understand the importance of regularly updating the content of a blog. To understand how to contribute to an existing blog. To understand how and why blog posts are approved by the teacher. To understand the importance of commenting on blogs. 	<ul style="list-style-type: none"> To explain how to debug a program and organise the code into tabs. To demonstrate how to organise code into functions To demonstrate how to include interactivity in programming. To demonstrate how to use flowcharts to test and debug a program.



<p>Knowledge</p> <p>Year 6</p>	<ul style="list-style-type: none"> • Identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g. apps accessing location. Identify secure sites by looking for privacy seals of approval, e.g. https, padlock icon. • Identify the benefits and risks of giving personal information and device access to different software • To review the meaning of a digital footprint and understand how and why people use their information and online presence to create a virtual image of themselves as a user. • To demonstrate a clear idea of appropriate online behaviour and how this can protect themselves and others from possible online dangers, bullying and inappropriate behaviour. • To begin to understand how information online can persist and give away details of those who share or modify it 	<ul style="list-style-type: none"> • To know how and why spreadsheets are used in 'real life • To identify the purpose of writing a blog. • To identify the features of successful blog writing • To know what a blog is. • To know what content is appropriate for a blog. • To understand how to write a blog. To consider the effect upon the audience of changing the visual properties of the blog. • To understand the importance of regularly updating the content of a blog. • To understand how to contribute to an existing blog. • To understand how and why blog posts are approved by the teacher. • To understand the importance of commenting on blogs. 	<ul style="list-style-type: none"> • To know how to design programs using their choice of objects, attributing specific actions to each using their new programming knowledge. • To understand why they are useful in 2Code. • To know how to debug a program and explain how to organise the code into tabs. • To know how to accurately use flowcharts to test and debug a program.
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