

## Computing

## End Points

A year 1 computer user	A year 2 computer user	A year 3 computer user
<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>I can create a series of instructions.</li> <li>I can plan a journey for a programmable toy.</li> </ul> <p><u>Information technology</u></p> <ul style="list-style-type: none"> <li>I can create digital content.</li> <li>I can store digital content.</li> <li>I can retrieve digital content.</li> <li>I can use a web site.</li> <li>I can use a camera.</li> <li>I can record sound and play back.</li> </ul> <p><u>Digital literacy</u></p> <ul style="list-style-type: none"> <li>I can use technology safely.</li> <li>I can keep personal information private.</li> </ul>	<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>I can use a range of instructions (e.g. direction, angles, turns).</li> <li>I can test and amend a set of instructions.</li> <li>I can find errors and amend. (debug)</li> <li>I can write a simple program and test it.</li> <li>I can 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>Information technology</u></p> <ul style="list-style-type: none"> <li>I can organise digital content.</li> <li>I can retrieve and manipulate digital content.</li> <li>I can navigate the web to complete simple searches.</li> </ul> <p><u>Digital literacy</u></p> <ul style="list-style-type: none"> <li>I use technology respectfully.</li> <li>I 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>	<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>I can design a sequence of instructions, including directional instructions.</li> <li>I can write programs that accomplish specific goals.</li> <li>I can work with various forms of input.</li> <li>I can work with various forms of output.</li> </ul> <p><u>Information technology</u></p> <ul style="list-style-type: none"> <li>I can use a range of software for similar purposes.</li> <li>I can collect information.</li> <li>I can design and create content.</li> <li>I can present information.</li> <li>I can search for information on the web in different ways.</li> <li>I can manipulate and improve digital images.</li> </ul> <p><u>Digital literacy</u></p> <ul style="list-style-type: none"> <li>I use technology respectfully and responsibly.</li> <li>I know different ways I can get help if I am concerned.</li> <li>I understand what computer networks do and how they provide multiple services.</li> <li>I can discern where it is best to use technology and where it adds little or no value.</li> </ul>

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A year 4 computer user	A year 5 computer user	A year 6 computer user
<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>I can experiment with variables to control models.</li> <li>I can give an on-screen robot specific instructions that takes them from A to B.</li> <li>I can make an accurate prediction and explain why I believe something will happen (linked to programming).</li> <li>I can de-bug a program.</li> </ul> <p><u>Information technology</u></p> <ul style="list-style-type: none"> <li>I can select and use software to accomplish given goals.</li> <li>I can collect and present data.</li> <li>I can produce and upload a pod cast.</li> </ul> <p><u>Digital literacy</u></p> <ul style="list-style-type: none"> <li>I recognise acceptable and unacceptable behaviour using technology.</li> </ul>	<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>I can combine sequences of instructions and procedures to turn devices on and off.</li> <li>I can use technology to control an external device.</li> <li>I can design algorithms that use repetition &amp; 2-way selection.</li> </ul> <p><u>Information technology</u></p> <ul style="list-style-type: none"> <li>I can analyse information.</li> <li>I can evaluate information.</li> <li>I understand how search results are selected and ranked.</li> <li>I can edit a film.</li> </ul> <p><u>Digital literacy</u></p> <ul style="list-style-type: none"> <li>I understand that you have to make choices when using technology and that not everything is true and/or safe.</li> </ul>	<p><u>Algorithms and programming</u></p> <ul style="list-style-type: none"> <li>I can design a solution by breaking a problem up.</li> <li>I recognise that different solutions can exist for the same problem.</li> <li>I can use logical reasoning to detect errors in algorithms.</li> <li>I can use selection in programs.</li> <li>I can work with variables.</li> <li>I can explain how an algorithm works.</li> <li>I can 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>I can select, use and combine software on a range of digital devices.</li> <li>I can use a range of technology for a specific project.</li> </ul> <p><u>Digital literacy</u></p> <ul style="list-style-type: none"> <li>I can discuss the risks of online use of technology.</li> <li>I can identify how to minimise risks.</li> </ul>

**A safe computer user in Y1 and Y2**
Knowledge and understanding

- I understand the different methods of communication (e.g. email, online forums etc).
- I know you should only open email from a known source.
- I know the difference between email and communication systems such as blogs and wikis.
- I know that websites sometimes include pop-ups that take me away from the main site.
- I know that bookmarking is a way to find safe sites again quickly.
- I have begun to evaluate websites and know that everything on the internet is not true.
- I know that it is not always possible to copy some text and pictures from the internet.
- I know that personal information should not be shared online.
- I know I must tell a trusted adult immediately if anyone tries to meet me via the internet.

Skills

- I follow the school's safer internet rules.
- I can use the search engines agreed by the school.
- 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).
- I can use the internet for learning and communicating with others, making choices when navigating through sites.
- I can send and receive email as a class.
- I can recognise advertising on websites and learn to ignore it.
- I can use a password to access the secure network.

**A safe computer user in Y3 and Y4**
Knowledge and understanding

- I understand the need for rules to keep me safe when exchanging learning and ideas online.
- I recognise that information on the internet may not be accurate or reliable and may be used for bias, manipulation or persuasion.
- I understand that the internet contains fact, fiction and opinion and begin to distinguish between them.
- I use strategies to verify information, e.g. cross-checking.
- I understand the need for caution when using an internet search for images and what to do if I find an unsuitable image.
- I understand that copyright exists on most digital images, video and recorded music.
- I understand the need to keep personal information and passwords private.
- I understand that if I make personal information available online it may be seen and used by others.
- I know how to respond if asked for personal information or feel unsafe about content of a message.
- I recognise that cyber bullying is unacceptable and will be sanctioned in line with the school's policy.
- I know how to report an incident of cyber bullying.
- I know the difference between online communication tools used in school and those used at home.
- I understand the need to develop an alias for some public online use.
- I understand that the outcome of internet searches at home may be different than at school.

Skills

- I follow the school's safer internet rules.
- 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.
- I can identify when emails should not be opened and when an attachment may not be safe.
- I can explain and demonstrate how to use email safely.
- I can use different search engines.

**A safe computer user in Y5 and Y6**
Knowledge and understanding

- I can discuss the positive and negative impact of the use of ICT in my own life, my friends and family.
- I understand the potential risk of providing personal information online.
- I recognise why people may publish content that is not accurate and understand the need to be critical evaluators of content.
- I understand that some websites and/or pop-ups have commercial interests that may affect the way the information is presented.
- I recognise the potential risks of using internet communication tools and understand how to minimise those risks (including scams and phishing).
- I understand that some material on the internet is copyrighted and may not be copied or downloaded.
- I understand that some messages may be malicious and know how to deal with this.
- I understand that online environments have security settings, which can be altered, to protect the user.
- I understand the benefits of developing a 'nickname' for online use.
- I understand that some malicious adults may use various techniques to make contact and elicit personal information.
- I know that it is unsafe to arrange to meet unknown people online.
- I know how to report any suspicions.
- I understand I should not publish other people's pictures or tag them on the internet without permission.
- I know that content put online is extremely difficult to remove.
- I know what to do if I discover something malicious or inappropriate.

Skills

- I follow the school's safer internet rules.
- I can make safe choices about the use of technology.
- I can use technology in ways which minimises risk. e.g. responsible use of online discussions, etc.
- I can create strong passwords and manage them so that they remain strong.
- I can 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.
- I can competently use the internet as a search tool.
- I can reference information sources.
- I can 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 with different websites or other non ICT resources.
- I can 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.