

E-safety road map, Year 1

UNIT	E-SAFETY COVERAGE
Unit 1.1 We are treasure hunters	<p>The children learn to use simple programmable toys safely and sensibly, as well as showing respect for the work of their peers. Web access is supervised and safe practices are encouraged. Similarly, any filming is done with appropriate consent and assent.</p>
Unit 1.2 We are TV chefs	<p>The pupils learn how to use digital video cameras safely and to show respect to those they are filming, including recognising the need for consent and assent. The importance of not sharing videos more widely than is appropriate is considered, as is the need to exclude information that might identify individuals from video recordings. When using the web, pupils learn to turn the screen off and tell their teacher if they encounter material that concerns them. The pupils also start to learn about copyright, recognising that they own the copyright in their original work and that this cannot be published or copied without their permission.</p>
Unit 1.3 We are painters	<p>In searching for images on the web, pupils work initially from a set of carefully chosen sites. They again learn that they should turn the screen off and tell their teacher if they encounter material that concerns them. If work is uploaded to a public area, the importance of protecting the children's identities is recognised, as is their intellectual property rights over their original work. An extension activity provides an initial opportunity for the children to learn some aspects of using email safely.</p>
Unit 1.4 We are collectors	<p>As pupils will be working with the web and searching for images, they'll need to make sure they use this technology safely, as well as showing respect for others' intellectual property through observing copyright conditions. The pupils are taught to turn the screen off and let their teacher know if they have any concerns over content they encounter. The pupils are also introduced to the school's Acceptable Use Policy, if they haven't already had this explained to them.</p>
Unit 1.5 We are storytellers	<p>The pupils learn to use audio recorders or microphones and audio recording software safely and sensibly. The pupils need to be aware of copyright material, and show appropriate respect for the owners of intellectual property when using technology. Regard is shown for appropriate consent and assent, school policies and third party terms and conditions if the pupils' stories are uploaded to external websites.</p>
Unit 1.6 We are celebrating	<p>The pupils have an opportunity to search for images on the web, and again learn to use technology safely, switching off the screen if they have concerns, and reporting these to their teacher. The pupils are taught to respect the copyright conditions associated with any third party images they use. Pupils only use photos of themselves if appropriate permission is in place. If children share their work, then attention is paid to protecting their identity and copyright. If they send cards by email they use a class address and consider some aspects of using email safely.</p>

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E-safety road map, Year 2

UNIT	E-SAFETY COVERAGE
Unit 2.1 We are astronauts	<p>The pupils must let their teacher know if they encounter inappropriate material when they search the web. If the pupils use third-party images in their projects, they should use images with public domain or Creative Commons licences. The pupils may upload their projects to the Scratch website, if they have registered for accounts using a parent's e-mail address. They learn to observe MIT's terms and condition.</p>
Unit 2.2 We are games testers	<p>There are concerns about the violent nature of some games. Choosing games wisely, including observing PEGI age restrictions and playing in moderation, are aspects of the safe and respectful use of technology that pupils learn about in this unit. As in Unit 2.1, the pupils may upload their projects to the Scratch website, if they have registered for accounts using a parent's e-mail address. Comments on the Scratch website are not moderated before they appear, although the pupils can report any which are inappropriate. This provides an opportunity to learn about where to go for help and support when they have concerns about content or contact.</p>
Unit 2.3 We are photographers	<p>The children learn that once images are posted online, it's impossible to control what happens to them. Facial recognition software and geotagging mean that those posting images might inadvertently fail to keep some personal information private. The children learn how to minimise these risks, and learn what they should do if they have concerns about images they encounter on the web. The children also learn about what is acceptable and unacceptable to photograph, for example, that it is usually not a good idea to take or share photographs in which children can be identified, or that might reflect badly on the school.</p>
Unit 2.4 We are researchers	<p>The pupils consider how to stay safe while researching online, and show respect for others' ideas and intellectual property by citing their sources, and using licensed images. Safe search filters are in place for using Google or Bing and school internet access is filtered.</p>
Unit 2.5 We are detectives	<p>The pupils learn about some of the risks associated with email. They learn that attached files can contain viruses or other harmful programs, that email addresses and embedded links can be 'spoofed', and that 'spam' is a common problem. It is recommended that all emails are sent and received via a single class email address. The password for this account is not shared with children. If the children do use individual accounts, they'll need to keep their account details private and share their email address only with people they know and trust.</p>
Unit 2.6 We are zoologists	<p>The pupils again learn that when sharing photographs and geo-location information online they need to consider the importance of keeping personal information private; they achieve this by not including names or photographs of people. The pupils are taught to respect rules for using digital equipment when out of the classroom, to ensure the equipment is kept safe and that they are not so focused on using it that they become unaware of risks around them.</p>

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E-safety road map, Year 3

UNIT	E-SAFETY COVERAGE
Unit 3.1 We are programmers	<p>The pupils need to consider copyright when sourcing images for their programs and/or uploading their own work to the Scratch community site. Searching for content for programs or viewing others' cartoons also offers an opportunity to develop safe search habits. If the pupils participate in the Scratch community, they need to think about what information they can share and how to participate positively in an online community, as well as obtaining parental permission.</p>
Unit 3.2 We are bug fixers	<p>The pupils could consider the implications of bugs in software. Participating in the Scratch community would enable the pupils to help others with their projects as well as allowing them to receive help on their own. Participation requires parental permission, and the pupils should consider what behaviour is acceptable online.</p>
Unit 3.3 We are presenters	<p>In filming one another, the pupils need to ensure that the appropriate permission has been obtained, and that they act respectfully and responsibly when filming, editing and presenting their work. The pupils should think through the implications of videos being made available on the school network or more widely via the internet. They should discuss why schools and other organisations have strict policies over filming.</p>
Unit 3.4 We are network engineers	<p>The pupils learn about how networks, including the internet, operate. They learn that data transmitted via the internet is not always encrypted. They consider some of the implications for privacy, e.g. their 'digital footprint' associated with using the internet. They become aware of the importance of DNS for safe use of the internet. They learn to use command line diagnostic tools safely and responsibly.</p>
Unit 3.5 We are communicators	<p>The pupils should think about the safe use of email. They learn how email can be used positively. They become aware of some of its risks, including malware attachments, hacked accounts, spam and spoofed links, but also learn how their exposure to such risks can be reduced. They consider the importance of introductions in extending circles of trust. They learn how video conferencing can be used positively, to support learning with a known partner.</p>
Unit 3.6 We are opinion pollsters	<p>The pupils learn some of the legal and ethical requirements for designing online surveys and processing data. They also consider what information it would be appropriate for them to give in an online survey, and some implications of data processing. The pupils can use online tools for collaborating on survey design and analysis, considering how to use these appropriately. The survey itself could address issues of the pupils' attitudes to online safety.</p>

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E-safety road map, Year 4

UNIT	E-SAFETY COVERAGE
Unit 4.1 We are software developers	<p>The pupils need to consider copyright when sourcing images or media for their programs and/or uploading their own work to the Scratch community site. Searching for content for their programs or viewing others' games also offers an opportunity to develop safe search habits. If the pupils participate in the Scratch community, they need to think about what information they can share and how to participate positively in an online community, as well as obtaining parental permission.</p>
Unit 4.2 We are toy designers	<p>The pupils again need to think carefully about copyright in sourcing images and other media for their toy prototypes and presentations, or if uploading their own work to the Scratch community. If the pupils do participate in the online Scratch community, they should think through how to do so in a safe and responsible manner, and should obtain their parents' consent. If the pupils link their programs to hardware, they need to take care to work safely with a range of tools and electronic equipment.</p>
Unit 4.3 We are musicians	<p>The pupils need to think about copyright when sourcing audio or publishing their own compositions. They are encouraged to use Creative Commons licensed content if working with others' audio files. There's an opportunity to discuss how copyright relates to music performed in school as well as illegal downloading and sharing of copyrighted music.</p>
Unit 4.4 We are HTML editors	<p>The pupils learn how easy it is to create content for the web. The unit provides an opportunity to address some of the risks of using the web, and how pupils could best keep themselves safe while doing so. They learn how easily web pages can be modified, which provides an opportunity to consider the reliability of web-based content.</p>
Unit 4.5 We are co-authors	<p>The pupils learn about Wikipedia, considering some strategies for evaluating the reliability of online content as well as the rules and processes that the Wikipedia community has evolved. The pupils develop a shared wiki, thinking carefully about how to do so safely and responsibly, and considering what conduct is appropriate when collaborating on a shared resource.</p>
Unit 4.6 We are meteorologists	<p>The pupils consider the importance of obtaining and using accurate data for any information-processing work. If the pupils film one another, they need to ensure appropriate permission is obtained and that recordings are made, edited and shown in safe, respectful and responsible ways. The pupils should think carefully about the implications of uploading their films to the school network or to the internet.</p>

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E-safety road map, Year 5

UNIT	E-SAFETY COVERAGE
Unit 5.1 We are game developers	<p>The pupils need to consider copyright when sourcing images or media for their games and/or uploading their own work to the Scratch community site. Searching for content for their games or viewing others' games also offers an opportunity to develop safe search habits. If the pupils participate in the Scratch community, they need to think about what information they can share and how to participate positively in an online community, as well as obtaining parental permission. The pupils might also consider some personal implications of playing games, perhaps including violent computer games.</p>
Unit 5.2 We are cryptographers	<p>The pupils learn how information can be communicated in secret over open channels, including the internet, using cryptography. They learn about the public key system used to sign and encrypt content on the web, and how they can check the security certificates of encrypted websites. They learn about the importance of password security for online identity and consider what makes a secure password.</p>
Unit 5.3 We are artists	<p>The unit provides an opportunity to reinforce messages around safe searching and evaluating the quality of online content. If the pupils upload their work for others to see, they should consider the importance of protecting personal information as well as recognising that they are sharing their own copyrighted work with an audience.</p>
Unit 5.4 We are web developers	<p>E-safety forms the focus of this unit, with the pupils working collaboratively to develop a website in which they present their own authoritative content on a broad range of issues around the safe and responsible use of technology. In doing so, they consider the reliability and bias of online content, how to contribute positively to a shared resource, and how to use search engines safely and effectively.</p>
Unit 5.5 We are bloggers	<p>The pupils write content for their own or a shared blog, thinking carefully about what can be appropriately shared online. They consider issues of copyright and digital footprint as well as what constitutes acceptable behaviour when commenting on others' blog posts. The pupils also think about the importance of creating high-quality online content and become more discerning in evaluating content as they review others' blogs. If the pupils' blogs are publicly accessible, it is important that any comments are moderated by their teacher; it is worth discussing with the pupils why the comments should be moderated.</p>
Unit 5.6 We are architects	<p>The pupils should observe good practice when searching for and selecting digital content. If the pupils choose to locate their 3D models geographically, they should avoid sharing private information. The pupils should think about copyright when adding content to their model or publishing images or videos of their model.</p>

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E-safety road map, Year 6

UNIT	E-SAFETY COVERAGE
Unit 6.1 We are app planners	<p>The pupils consider the capabilities of smartphones and tablet computers, and how these can be used purposefully. They become aware of some of the capabilities of these devices, including how they can be used to record and share location information; they consider some of the implications of this. They use search engines safely and effectively. The pupils could make use of their own tablets or smartphones in school, considering how they can do this safely and to good effect.</p>
Unit 6.2 We are project managers	<p>The pupils use online tools safely and effectively, considering how they can contribute positively to a shared project. Again, they use search engines safely and effectively. They may also make use of online content, respecting any copyright conditions.</p>
Unit 6.3 We are market researchers	<p>The pupils show regard for the ethical and legal frameworks around conducting interviews and online surveys, such as the need to preserve anonymity and/or confidentiality. In conducting their research, the pupils need to act safely and responsibly, as well as showing respect for those participating in the research.</p>
Unit 6.4 We are interface designers	<p>The pupils need to think carefully about copyright in relation to both sourcing and creating their own digital content and user interface components for their apps.</p>
Unit 6.5 We are app developers	<p>Pupils using their own or the school's tablets or smartphones for this unit need to consider how to do so safely and purposefully. Children participating in online communities for either of the development platforms here need to do so in a safe, responsible and respectful manner. The pupils should also think carefully about any safety implications of the apps they develop.</p>
Unit 6.6 We are marketers	<p>In marketing their app, the pupils should consider the legal and ethical frameworks around advertising across different media. They should also think about the need to protect personal information about themselves and other members of their group when marketing their app. In creating websites for their apps, the pupils need to consider the e-safety implications for the site's users as well as themselves.</p>

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