













Year One

Online safety road map

Unit	Online safety coverage
<p>1.1 We are treasure hunters</p> 	<p>Pupils learn to use simple programmable toys safely and sensibly, as well as showing respect for the work of their peers.</p> <p>Web access is supervised and safe practices are encouraged.</p> <p>Similarly, any filming is done with appropriate consent and assent.</p>
<p>1.2 We are TV chefs</p> 	<p>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.</p> <p>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.</p> <p>When using the web, pupils learn to turn off the screen (or turn over the tablet) and tell their teacher if they encounter material that concerns them.</p> <p>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>
<p>1.3 We are digital artists</p> 	<p>Pupils learn that that filters should be in place when searching for images on the web. Internet access is supervised and safe practices are encouraged.</p> <p>Pupils learn that they own the intellectual property in their work and their parents' or carers' consent is needed to publish this. The school may address this through a letter securing parental consent on a number of matters.</p> <p>Pupils learn that they should provide positive, constructive feedback to one another on their work, establishing from an early age the value of commenting positively on work in digital media.</p>
<p>1.4 We are publishers</p> 	<p>Pupils learn about how to keep personal information private, recognising that the extent to which they need to protect their privacy is determined by the audience to which they are exposed.</p> <p>In preparing their eBooks, pupils could make use of the school's photo collection – this provides a good opportunity to teach them about what images the school collects and their use.</p> <p>Pupils learn to use audio recorders or microphones and audio recording software safely and sensibly.</p> <p>Pupils learn that filters should be in place when searching for images on the web. Internet access is supervised and safe practices are encouraged.</p> <p>Pupils need to be aware of copyright material and show appropriate respect for the owners of intellectual property when using technology. They learn about the issues around copying images without permission and that it is best to use Creative Commons licensed or public domain images.</p>
<p>1.5 We are rhythmic</p> 	<p>Pupils learn to use audio recorders or microphones and audio recording software safely and sensibly.</p> <p>If searching the web, pupils learn that safe search settings and web filters need to be in place.</p> <p>Pupils need to be aware of copyright material and show appropriate respect for the owners of intellectual property when using technology. They learn that digital music can be copied and the need to respect the rights of the owner of the work and the original creator when doing so.</p>
<p>1.6 We are detectives</p> 	<p>Pupils are introduced to the idea of databases being used to collect, store, process and retrieve personal information. The unit provides an opportunity to make pupils aware that they have their data held in databases used by the school and to discuss some of the issues raised by this.</p> <p>Pupils learn about the dangers of giving personal information on online forms, particularly if we have no clear idea of where this data is held and to what purposes it might be put. They should only give information if they know it is safe to do so.</p>







Year Two

Online safety road map

Unit	Online safety coverage
<p>2.1 We are astronauts</p> 	<p>Remind parents/carers about their responsibility to monitor their children's use of technology and advise them to set sensible limits on the amount of screen time they have.</p>
<p>2.2 We are games testers</p> 	<p>Although the games mentioned in this unit are appropriate for pupils in Year 2, 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.</p> <p>The Scratch online community is generally a safe, well moderated space, but if pupils encounter content or comments which cause distress, make sure they know what to do: typically turn off the screen/ turn over the tablet over and let an adult know straight away. Content and comments on the Scratch site can be flagged as inappropriate to the moderators. This provides an opportunity to learn about where to go for help and support when they have concerns about content or contact.</p>
<p>2.3 We are photographers</p> 	<p>Pupils learn that once images are posted online, it is 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. Pupils learn how to minimise these risks and learn what they should do if they have concerns about images they encounter on the web.</p> <p>They also learn about what is acceptable and unacceptable to photograph, for example, that it is not a good idea to take or share photographs in which children can be identified, or that might reflect badly on the school.</p>
<p>2.4 We are safe researchers</p> 	<p>Pupils learn about Internet filters and Safe search, and how to stay safe while researching online. They are encouraged to think about whether the information they read online is reliable, and develop some strategies for being able to check.</p> <p>They show respect for others' ideas and intellectual property by using Creative Commons licensed images and crediting their sources.</p>
<p>2.5 We are animators</p> 	<p>Pupils could source character designs or view animations online. If they do, remind pupils what to do if they encounter content that is inappropriate or makes them feel uncomfortable.</p> <p>If pupils upload their work to share with a wider audience, they should do so in accordance with your school's policy, typically ensuring that pupils are not shown or identified in the videos. They should make sure that any third-party content in their animations is credited.</p>
<p>2.6 We are zoologists</p> 	<p>Pupils learn that when sharing photographs and geo-location information online, they need to consider the importance of keeping personal information private, for example not including names or photographs of people.</p> <p>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>







Year Three

Online safety road map

Unit	Online safety coverage
3.1 We are programmers 	<p>Pupils need to consider copyright when sourcing images for their programs and uploading their own work to the Scratch community site.</p> <p>Searching for content for programs or viewing others' cartoons also offers an opportunity to develop safe search habits. Exploring online animation galleries may expose pupils to inappropriate content. Talk about what to do if they see something inappropriate – turn their iPads over (or turn screens off/close laptop lids) and tell a teacher/adult.</p> <p>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>
3.2 We are bug fixers 	<p>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. If 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. If pupils upload screencasts of their solutions, make sure you take the usual precautions to protect their identity.</p>
3.3 We are presenters 	<p>Pupils should know what to do if they encounter inappropriate images or other content while searching online.</p> <p>Pupils should respect the intellectual property of others. Show them how they can restrict their search to Creative Commons licensed content.</p> <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>
3.4 We are who we are 	<p>Pupils should know what to do if they encounter inappropriate images or other content while searching online.</p> <p>Pupils should think about what is appropriate to share online, even when the intended audience is well known to them. It is important that pupils recognise their rights not to share information that they consider private.</p>
3.5 We are co-authors 	<p>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.</p> <p>Pupils develop a shared wiki, thinking carefully about how to do so safely and responsibly, considering what conduct is appropriate when collaborating on a shared resource.</p>
3.6 We are opinion pollsters 	<p>Pupils learn some of the legal and ethical requirements for designing online surveys and processing data.</p> <p>They also consider what information it would be appropriate for them to give in an online survey, and some implications of data processing.</p> <p>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>







Year Four

Online safety road map

Unit		Online safety coverage
4.1 We are software developers		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 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.
4.2 We are makers		Pupils can publish their programs to the MakeCode website. If they are to do so, parental permission will be needed. Pupils might explore the projects uploaded by others to the MakeCode website. They must let an adult know if they come across any inappropriate content when looking at these, although this is very unlikely.
4.3 We are musicians		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 is an opportunity to discuss how copyright relates to music performed in school as well as illegal downloading and sharing of copyrighted music.
4.4 We are bloggers		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. 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.
4.5 We are artists		If pupils use Google image search to study examples of artists' work, this offers an opportunity to develop safe search habits. Precautions over protecting personal information should be in place if pupils upload work they create for others to see, and pupils should think about the protection of their own copyright.
4.6 We are meteorologists		Pupils consider the importance of obtaining and using accurate data for any information-processing work. If 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. Pupils should think carefully about the implications of uploading their films to the school network or to the web.







Year Five

Online safety road map

Unit		Online safety coverage
5.1 We are game developers		Pupils need to consider copyright when sourcing images or media for their games and 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. Pupils might also consider some personal implications of playing games, perhaps including violent, costly or addictive computer games.
5.2 We are cryptographers		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.
5.3 We are architects		Pupils should observe good practice when searching for and selecting digital content. If the pupils choose to locate their 3-D models geographically, they should avoid sharing private information. Pupils should think about copyright when adding content to their model or publishing images or videos of their model.
5.4 We are web developers		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. 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. Pupils learn how easily web pages can be modified, which provides an opportunity to consider the reliability of web-based content.
5.5 We are adventure gamers		Pupils should observe good practice when searching for and selecting digital content. They should use Creative Commons licensed images in their interactive presentation and should respect the conditions attached to these. Pupils will be working collaboratively on a shared presentation, and later will be providing online feedback to other pupils. Establish ground rules of respect and kindness and ensure that pupils' contributions can be identified.
5.6 We are VR designers		The Street View activities provide an opportunity for pupils to consider privacy issues in real world contexts. Pupils should remember that the GPS sensor on smartphones/iPads automatically records location information, using this to locate their photosphere on a map. Pupils should know how to switch off location recording. Pupils should understand why photospheres uploaded to Google should have any faces, number plates or other personal information blurred. Pupils should recognise that care is needed when scanning QR codes from unknown sources. As with other online work, use of CoSpaces should be with necessary filters and monitors in place; pupils should know what to do if they encounter inappropriate content and pupils should respect copyright for any third-party content they include.

Year Six

Online safety road map

Unit	Online safety coverage
<p>6.1 We are toy makers</p> 	<p>Pupils 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 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 consent from their parents or carers.</p> <p>If pupils link their programs to hardware, they need to take care to work safely with a range of tools and electronic equipment.</p>
<p>6.2 We are computational thinkers</p> 	<p>Pupils learn about some common algorithms, recognising that more efficient solutions to the same problem can reduce the impact of computation on energy and other resources. They remix code on Scratch or Snap! websites, as permitted by Creative Commons licences for the code they work with, in much the same way as they might modify open source software. Pupils who wish to register for accounts on these sites need to observe the associated terms and conditions, which typically require parental consent.</p>
<p>6.3 We are publishers</p> 	<p>Pupils create a school magazine or yearbook. They consider carefully the implications of including photographs of pupils in their work, recognising that typically names would not be used in captions and that they should have permission to publish any pictures they use. They respect school policies and relevant legislation. They also recognise that intellectual property exists in other pupils' work and that this should be respected, so include such excerpts only with permission. They also learn that sensitive personal information should not be included in publications such as these, thinking carefully about what this means in practice.</p>
<p>6.4 We are connected</p> 	<p>Pupils consider how online debates should best be conducted, searching the Internet safely, using a blog to argue a case, responding respectfully to others, evaluating the quality of sources and considering how online bullying might best be addressed. It is important that pupils' work is not accessible outside the school. Posts and responses should be moderated. Ensure that safe search filters, Internet filters and monitoring software are in place. Make sure online bullying advice matches your school policy.</p>
<p>6.5 We are advertisers</p> 	<p>Pupils create short advertising videos. They learn the importance of observing school policy in relation to videoing, and the need to obtain consent. They think carefully about the implications of sharing content publicly on sites such as YouTube and consider how such publication would limit what they might include in their advert. They recognise the need to use video search platforms in restricted or education-specific modes and bring to mind what they should do if they encounter inappropriate content. They learn to respect the intellectual property rights of others, and the need to observe licence terms for any content they do not create themselves.</p>
<p>6.6 We are AI developers</p> 	<p>Pupils should remember not to share personal information when using online services. If Teachable Machine is used it would be best not to use pupils' own faces in the training data. You could broaden the discussion of facial recognition by machine learning systems and whether this is an invasion of privacy or needed in certain circumstances.</p>