purple mash

Computing Scheme of Work

Unit 4.2 –

Online Safety

Contents

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Introduction

For these sessions, the children will need to have their own individual logins to Purple Mash.

If you are currently using a single login per class or group and would like to set up individual logins yourself, then please see our guide to doing so at Create and Manage Users. Alternatively, please contact support at support@2simple.com or 0208 203 1781.

The online safety units within the Computing Scheme of Work provide in-depth coverage of computing related online safety aspects. It is also beneficial to cover aspects of online safety within whole school and PSHE contexts. Schools in England may wish to refer to the Purple Mash Education for a Connected World curriculum map. This maps the non-statutory guidance objectives by year group, giving examples of resources within Purple Mash that can be used to support the objectives that relate to Early Years, Key Stages 1 and 2.

Year 4 – Medium-term Plan

Lesson	Title	Aims (Objectives)	Success Criteria
1	Going Phishing	• To understand how children can protect themselves from online identity theft. • To understand that information put online leaves a digital footprint or trail and that this can aid identity theft.	• Children know that security symbols such as a padlock protect their identity online. • Children know the meaning of the term 'phishing' and are aware of the existence of scam websites. • Children can explain what a digital footprint is and how it relates to identity theft. • Children can give examples of things that they would not want to be in their digital footprint.
2	Beware Malware	• To identify the risks and benefits of installing software including apps.	• Children can identify possible risks of installing free and paid for software. • Children know that malware is software that is specifically designed to disrupt, damage, or gain access to a computer. • Children know what a computer virus is.
3	Plagiarism	• 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.	• Children can determine whether activities that they undertake online, infringe another's' copyright. They know the difference between researching and using information and copying it • Children know about citing sources that they have used.
4	Healthy Screen-Time	• 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.	• Children can take more informed ownership of the way that they choose to use their free time. They recognise a need to find a balance between being active and digital activities. • Children can give reasons for limiting screen time.

Lesson 1 – Going Phishing

Aims

- To understand how children can protect themselves from online identity theft.
- To understand that information put online leaves a digital footprint or trail and that this can aid identity theft.

Success Criteria

- Children know that security symbols such as a padlock protect their identity online.
- Children know the meaning of the term 'phishing' and are aware of the existence of scam websites.
- Children can explain what a digital footprint is and how it relates to identity theft.
- Children can give examples of things that they would not want to be in their digital footprint.

Resources

Unless otherwise stated, all resources can be found on the main unit 4.2 page. From here, click on the icon to set a resource as a 2Do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you do not lose this page.

- Use the 2Respond creator tool (within 2Email) to open the 2Respond Activity **SPAM** (use the search to find it). This is an Email simulation of SPAM messages, at the end of each message is a line that says '*Email Simulation 2Respond activity'. You can make this activity more realistic by editing the simulation to remove this reference. Edit each of the messages in the thread by clicking on them on the left-hand side and remove this line. Save the file and then click on the share button and set the activity as a 2Do for the class. Use the following Title and Description in the 2Do before you set it: Title = Email Practice, Description = Let's revise what you know about 2Email.
- SMART rules displayed in the classroom or as screensavers or backgrounds on devices. Resources to do this can be found in the Teacher area in Online Safety Resources.
- Digital connections 2Connect file, save a copy of this file in the class folder and enable collaboration by clicking on this button ![icon] (![icon]).
- (Optional) set the 2Respond activity: **Confidential Information** as a 2Do.
- You can select the following objectives when setting a 2Do to make future assessment easier:

Year:	Y4	∨
Subject:	Computing	∨
Strand:	Digital Literacy	∨

Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	✓

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Activities

Introduction	Display **slide 2** and outline the lesson aims. Display **slide 3** and outline the success criteria.
Vocabulary Overview	**Slide 4** This slide can be used to see key vocabulary found within this lesson. The vocabulary is repeated at the end of the lesson where it can be used to review new vocabulary.
Activity 1: Email	Use **slide 5** to direct the activity. Once children have opened this, tell them you must sort something out for a few minutes, while you are doing this, they should check any mails that they have and respond to them if necessary. The text of the first message is: *Dear Customer,* *You have been selected to enter our prize draw. You are a guaranteed winner.* *Please press reply and type in 'winner'* *Bob - Global Email Company.*
	Observe how children react to the message, some will report the message, and some will reply to everything. The details of the rest of the simulation follow: The slide shows what happens if children click the report to teacher button; show this to children after they have had a chance to complete the activity.

Subject	Contents
Apply today to receive your free gift	*We recently sent you an email regarding a prize draw. We thought you might also be interested in a free gift.* *Instructions on how to claim your free gift will be sent to you if you reply to this email stating you would like a free gift.* *Kind regards,* *Bob - Global Email Company.* **Email Simulation 2Respond activity*
Tick tock - time is running out!	*Dear Customer,* *We would like to inform you that a special offer is available to you.* *We have 200 gold watches which have to be given away free. Every single watch just has to go by next week. Don't delay and reply today!* *Yours sincerely,* *Bob - Global Email Company Customer Manager.* **Email Simulation 2Respond activity*
URGENT Get your money	*Dear Customer,*

back by replying today!	*Do you fancy some cash in your pocket? Are you tired of having to save up to buy the things you want?* *Now you can get 50% of your money back you spent this year in shops and online stores.* *Reply YES to get this amazing unbelievable offer.* *Yours sincerely,* *Bob - Global Email Company Customer Manager.* **Email Simulation 2Respond activity*
SMART PHONE FOR YOU	*Dear Customer,* *Due to our warehouses being so full up with smart phones we have decided to give some of them away. YOU have been selected to receive a free smart phone.* *Please press reply if you wish to receive the latest smart phone completely free.* *Yours sincerely,* *Bob - Global Email Company Customer Manager.* **Email Simulation 2Respond activity*
ALERT - SPAM!	*Dear 2Respond user,* *I hope by now you have carefully thought about the SMART rules and the importance of following them. Remember to never ACCEPT emails from unknown senders or organisations.* *Not only is SPAM annoying to get but it can be very harmful to users and can even spread computer viruses.* *Take care,* *Cyber Cop*

Activity 2: SMART Rules	Use **slide 6**. Direct children to the resources, they will need. Clicking will display the rules on the slide and some questions and answers.
Spam Emails in Detail	Use **slides 7- 10** to examine the spam emails in more detail.
	Slides 11-13 move to emails in external mail systems. If you have them, replace the images on slide 10 with some of your own.
Activity 3: Digital Footprints	**Slide 14** relates to digital footprints, if the class have followed the scheme, they will have learnt about this in year 2. If they need a reminder then you can use the quiz **from the year 2 unit** Digital Footprint Quiz. By clicking on the icon. Go through the questions together

	Slide 15 provides an opportunity for children to consider the influences on their digital footprint. If time allows, or if you wish to follow this up for homework, children could complete the Confidential Information 2Respond activity using their improved knowledge of online safety and digital footprint influence to advise someone else.
Activity 4: Extension	**Slide 16** contains an extension. Example answers will be revealed by clicking.
Vocabulary Overview	**Slide 17** can be used to review lesson vocabulary. Click on the words to reveal the definitions.
Review Success Criteria	Review the success criteria from **slide 3.** Children could rate how well they achieved this using a show of hands.

Lesson 2 – Beware Malware

Aim

- To identify the risks and benefits of installing software including apps.

Success Criteria

- Children can identify possible risks of installing free and paid for software.
- Children know that malware is software that is specifically designed to disrupt, damage, or gain access to a computer.
- Children know what a computer virus is.

Resources

Unless otherwise stated, all resources can be found on the main unit 4.2 page. From here, click on the icon to set a resource as a 2Do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you do not lose this page.

- Set the 2Respond activity **'Downloading Software'** as a 2Do for your class, as in the previous session, change the name of the activity to 'Waremal Virus Update' and the description to 'Email installation practice'.

- Set the Online Safety Top Tips as a 2Do for the class. You can select the following objectives when setting a 2Do to make future assessment easier:

Year:	Y4	∨
Subject:	Computing	∨
Strand:	Digital Literacy	∨

Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. ☑

Activities

Introduction	Display **slide 2** and outline the lesson aims.
	Display **slide 3** and outline the success criteria.
Vocabulary Overview	**Slide 4** This slide can be used to see key vocabulary found within this lesson. The vocabulary is repeated at the end of the lesson where it can be used to review new vocabulary.
Introduction (cont)	Use **slide 5**: Review the SMART messages from last week; refer to the posters that you used.

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Activity 1: Downloading Software	Use **slide 6**. Ask children to complete the 2Respond activity. After having done 2Respond tasks last week, they are likely to work out that this is a simulation. Ask them to use the activity to give you some information about what installing something could do to a device.
	These are the emails in the Downloading Software thread:

Subject	Contents
FW: URGENT: Update your virus protection now!	*Hi,* *I just received the mail below, please read it. Do you think I should have followed these instructions? I'm a bit worried now.* *from Jamie.* _____ *Dear Customer,* *This mail is from your Internet Service provider. A virus has been detected on your computer* *Please press reply and type in download. You will get a message that a file is being downloaded and you can safely ignore it. You might get warning messages from your virus software. It is safe to disable the software and download this program.* *Bob - Global Email Company.* **Email Simulation 2Respond activity*
Oh, dear what have I done?	*Hi,* *Things have gone really strange on my computer; programs keep popping open asking me to input my details. I can't close them so I've emailed you from my mum's phone. She doesn't know my computer has gone wrong.* *I searched for a virus help app on her phone and found something free from our usual virus protection company, should I download it onto her phone and see if it can help me?* *I'm panicking a bit now.* *from Jamie.*
Trying to be sensible!	*Hi,* *I realised that even though that is a reputable app, it won't help me to fix my computer and I shouldn't install things on my mum's phone without her knowing. It was asking me to share her login details.* *What should I do?* *from Jamie.*
Thanks for your advice	*Hi,*

	Thank you for your advice I remembered the SMART rules and decided the best thing was to TELL. So, I told my mum and she has managed to turn the proper virus protection back on. She ran a scan and it removed a virus from my computer. She says it's very good that I didn't have any important logins saved on my machine as the virus could have shared them with people. I'm only going to install things if I've checked with a trusted grown-up now. from Jamie.
ALERT - SPAM!	Dear 2Respond user, I hope by now you have carefully thought about the SMART rules and the importance of following them. Remember to never ACCEPT emails from unknown senders or organisations. Not only is SPAM annoying to get but it can be very harmful to users and can even spread computer viruses. Take care, Cyber Cop

Malware, Downloading and Viruses	Use **slides 7-13**. Clicking reveals further points for discussion. On **slide 11** discuss the WannaCry virus; you might be able to find a video about the effects of this online. Discuss the impact of such an attack; it could mean a life-or-death situation to patients.
Activity 2: Online Safety Tips	Use **slide 14**. You could ask children to hand in the file, mark it and set it as a redo for children to refine next lesson.
Activity 3: Extension	**Slide 15** contains an extension.
Vocabulary Overview	**Slide 16** can be used to review lesson vocabulary. Click on the words to reveal the definitions.
Review Success Criteria	Review the success criteria from **slide 3.** Children could rate how well they achieved this using a show of hands.

Lesson 3 – Plagiarism

Aims

- 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.

Success Criteria

- Children can determine whether activities that they undertake online, infringe another's copyright.
- Children know the difference between researching and using information and copying it.
- Children know about citing sources that they have used.

Resources

Unless otherwise stated, all resources can be found on the main unit 4.2 page. From here, click on the icon to set a resource as a 2Do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you do not lose this page.

- Completed Writing Template about Tim Berners Lee. This file contains two pages, the first is plagiarised, the second is not. This will be used as a whiteboard resource.
- Access to Wikipedia.
- Plagiarism Quiz
- Print the Screen-Time Record Card. Each child will need a copy (each sheet has two record cards and can be cut in half), this is to hand out at the end of the session for children to complete over the week in preparation for the next lesson.

You can select the following objectives when setting a 2Do to make future assessment easier:

Year:	Y4	∨
Subject:	Computing	∨
Strand:	Digital Literacy	∨

Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	✓

Activities

Introduction	Display **slide 2** and outline the lesson aims.
	Display **slide 3** and outline the success criteria.
Vocabulary Overview	**Slide 4** This slide can be used to see key vocabulary found within this lesson. The vocabulary is repeated at the end of the lesson where it can be used to review new vocabulary.
Activity 1: Investigating Plagiarism	Use **slides 5 - 8** and Purple Mash itself as a class on the whiteboard. Click to reveal points for discussion.
Activity 2: Plagiarism Quiz	Use **slide 9** to direct the activity.
Activity 3: Home Study	Use **slide 10**. Hand out the record-cards to be completed for the next lesson (ideally in a weeks' time). Discuss how to fill in the cards. Children should record how much time they spend on screen, which device and what they were doing as well as off-screen activities that they do.
Activity 4: Extension	**Slide 11** contains an extension.
Vocabulary Overview	**Slide 12** can be used to review lesson vocabulary. Click on the words to reveal the definitions.
Review Success Criteria	Review the success criteria from **slide 3.** Children could rate how well they achieved this using a show of hands.

Lesson 4 – Healthy Screen-time

Aims

- 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.

Success Criteria

- Children can take more informed ownership of the way that they choose to use their free time. They recognise a need to find a balance between being active and digital activities.
- Children can give reasons for limiting screen time.

Resources

Unless otherwise stated, all resources can be found on the main unit 4.2 page. From here, click on the icon to set a resource as a 2Do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you do not lose this page.

- Completed record cards handed out in the end of the last session.
- Screen-Time 2Investigate Database – open this and use the 'Share' option in the menu to set this a 2Do before the lesson, with collaboration switched on – see notes in activities.
- Screen Time Study writing frame to be set as a 2Do.

Activities

| Introduction	Display **slide 2** and outline the lesson aims.
	Display **slide 3** and outline the success criteria.
Vocabulary Overview	**Slide 4** This slide can be used to see key vocabulary found within this lesson. The vocabulary is repeated at the end of the lesson where it can be used to review new vocabulary.
Activity 1: Home Study	Use **slide 5,** you might have to show children how to calculate average hours of sleep per night.
	The slide asks children to consider their personal screen-time, privately. Stress that this is not an exercise in embarrassing anyone or a competition.
Screen-Time Database	Use **slide 6-7.** Recap what a database is and explain to children that they will be creating a class database to investigate their screen time.
	Use the database design to explain how the data will be collected.

NB: You will need to have set the Screen Time Database as a collaborative 2Do before the lesson – instructions to do this are as follows:
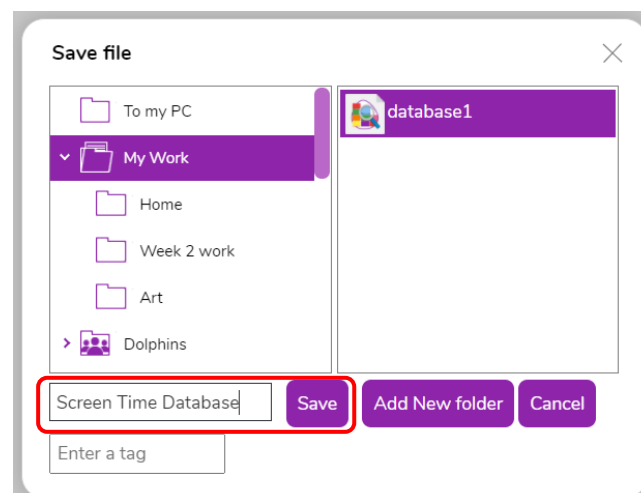
Open the Screen Time Database and click on 'Launch':
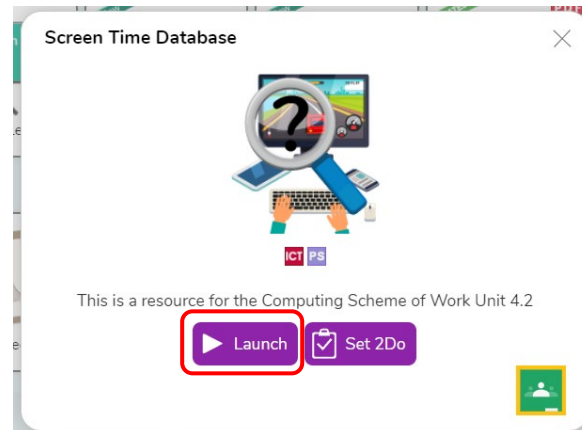
Click on the menu and select 'Share':
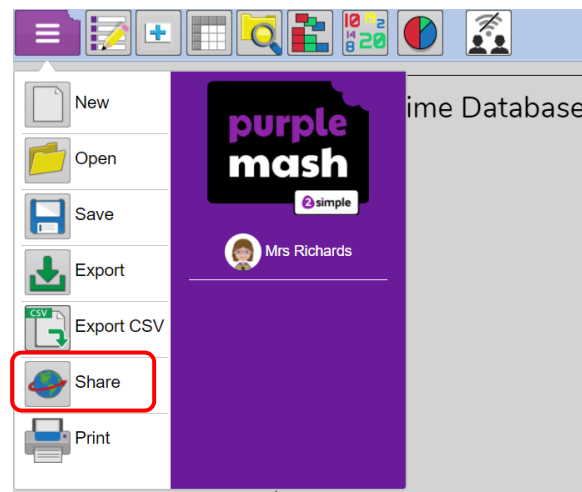
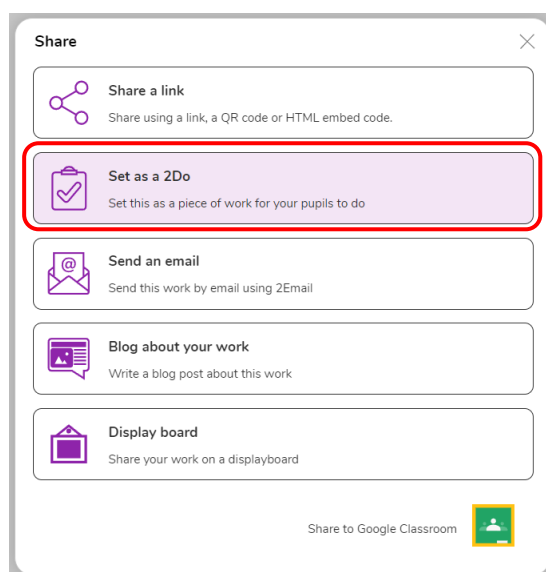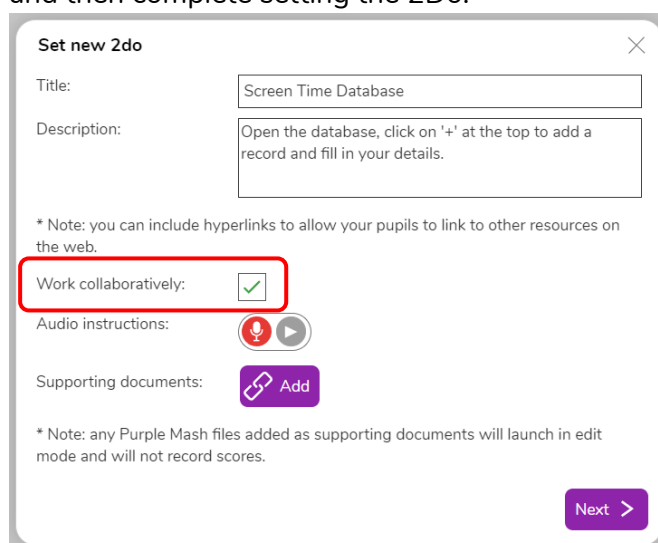Save the file to your work folder – give it a name and click on 'Save':

	Click on 'Set as a 2Do': Enter the title and description, make sure you tick 'Work collaboratively' and then complete setting the 2Do:
Activity 2: Entering Data	Use **slide 8** to guide children. Open the database on the screen by clicking 'Preview' in your 2Dos. The children will open it by clicking on 'Start' in their 2Dos.
Activity 3: Data Analysis	Use **slides 9-11** to guide children in creating and saving graphs and then analysing what they show.
Extension Activity 4: Writing Frame	Use **slide 12** to open a link to the writing frame. Talk through it and then ask children to open it from their 2Dos and complete it. Explain how to upload the graph image if necessary.

Vocabulary Overview	**Slide 13** can be used to review lesson vocabulary. Click on the words to reveal the definitions.
Review Success Criteria	Review the success criteria from **slide 3.** Children could rate how well they achieved this using a show of hands.

Assessment Guidance

The unit overview for year 4 contains details of national curricula mapped to the Purple Mash Units. The following information is an exemplar of what a child at an expected level would be able to demonstrate when completing this unit with additional exemplars to demonstrate how this would vary for a child with emerging or exceeding achievements.

Assessment Guidance	
Emerging	Children contribute their ideas to discussion of spam email (lesson 1), malware (lesson 2) and plagiarism (lesson 3). They have included appropriate content in their Top Tips for Online Safety publication (lesson 2). They have been able to share their work online.
	With support throughout, children show an understand what online safety is. In a small group, they can use 2Connect (Unit 4.2 Lesson 1) to map out the key features of online safety. Children produce a simple leaflet, postcard, or slideshow etc about online safety, which can then be used as part of presentation to parents (Unit 4.2 Lesson 1).
Expected	Children have decided upon the most important online safety messages to communicate and have shared these ideas in their Top Tips for Online Safety publication (lesson 2). They put this knowledge into action in their own online activity.
	Children can explore key concepts relating to online safety using 2Connect Unit 4.2 Lesson 1). They help others to understand the importance of online safety (Unit 4.2 Lesson 2) and apply their knowledge through the creation of online safety resources which are then used as part of presentation to parents (Unit 4.2 Lesson 1).
	Using the example from lesson 1, children can give some examples of things to look out for in an email to ensure that it from a valid source and is not a phishing scam email. They can explain what can be learnt by looking at the padlock details for a website (lesson 1).
	Most children can reflect upon positive and negative aspects of a digital footprint and can give examples of the care they would take when sharing online in relation to their and others' digital footprint (lesson 1).
	Most children can give reasons for taking care when installing apps or software. They know what Malware is and the possible impact of computer viruses and can give recommendations for how best to ensure that they only install valid software as part of their top tips document in lesson 2.
	Most children can give reasons for limiting screen time that include the effect on physical and mental health. In lesson 4, they were able to reflect on their own screen time and collective class screen time and begin to make informed decisions about when to limit their own screen time.

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Assessment Guidance

	Most children can explain how plagiarism is stealing, they are beginning to be able to identify the aspects of sharing that would be classed as plagiarism (lesson 3). In lesson 4, children were able to include actions for reporting cyberbullying or inappropriate content in their screen time study document. By completing lesson 4, most children would have saved both online and locally to a device and are able to explain the differences between the two storage types. Most children will be able to identify key messages that should be shared with other children and parents about online safety, including identification of reliable content from websites found via common search engines (Unit 4.2 Lessons 1 & 2).
Exceeding	Children have decided upon the most important online safety messages to communicate and have shared these ideas in their Top Tips for Online Safety publication (lesson 2). Children demonstrate that they are making connections between the positive possibilities that technology provides e.g., collaboration and sharing and the possible downsides of this such as malware and phishing. They actively use this knowledge to support their own online activities safely. Children demonstrating greater depth understand the key concepts and implications of the choices they make relating to online safety (Unit 4.2 Lesson 1). They help others to understand the importance of online safety (Unit 4.2 Lesson 2) and apply their knowledge and approach to staying safe online in all areas of the curriculum (Unit 4.2 Lesson 1).

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