DIGITAL SCHOOLHOUSE
together with
NINTENDO SWITCH

+44 (0) 207 534 0586
contact@digitalschoolhouse.org.uk

Teaching Guide.

Cyber Safe

Introduction

The ‘Cyber Safe’ workshop was developed by Estelle Ashman at the Gildredge House School Digital Schoolhouse to incorporate unplugged activities into the teaching of e-safety and introduce the Duke of York’s iDEA badges.

The workshop begins with creating ‘digital footprints’ containing the logos of the internet services used by the pupils. It then introduces the iDEA program and the badges they will be completing. Pupils then complete their first badge, ‘safe online’, which introduces setting a safe password, responding to trolls and spotting phishing emails.

Next, pupils are encouraged to think about what else might make up their digital footprint and take part in an interactive quiz to demonstrate how safety savvy they are in terms of the information they share. They are then introduced to the idea of location tagging. If resources allow, pupils will then investigate how iPads tag the location of photos taken around their school and consider the importance of privacy settings. They then complete the ‘e-safety’ badge to demonstrate their understanding.

The next badge is introduced with a DSH version of the popular game Guess Who in order to illustrate that people may not be what they seem online. They then complete the ‘social media set-up’ badge to find out about the different social media sites available to them and how each one works.

The final section of the workshop looks at what respect is and who pupils can go to if they are worried about something that happens online – pupils then make ‘helping hands’ to remind them who they have identified as people they could talk to. This then leads into the final badge ‘social media ethics’ which allows pupils to further investigate how to behave ethically on social media.

There is also an extension badge if time permits for pupils to find out about digital ethics more generally.

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Computing Programmes of Study Links

Key stage 2

2.4 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

2.5 use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

2.6 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

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

Key stage 3

3.5 understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems

3.7 undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users

3.9 understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns

Key stage 4

4.3 understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to identify and report a range of concerns

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Progression Pathway bands covered

COM = Communcation & Networks: Pink, Yellow, Orange, Blue, Red, Black(B*)

IT = Information Technology: Pink, Yellow, Blue, Purple, Red, Black(B*), White

Reference

PC1	Obtains content from the world wide web using a web browser
PC2	Understands the importance of communicating safely and respectfully online, and the need for keeping personal information private
PC3	Knows what to do when concerned about content or being contacted
YC1	Navigates the web and can carry out simple web searches to collect digital content
YC2	Demonstrates use of computers safely and responsibly, knowing a range of ways to report unacceptable content and contact when online
OC1	Understands the difference between the internet and internet service e.g. world wide web
OC2	Shows an awareness of, and can use a range of internet services e.g. VOIP
OC3	Recognises what is acceptable and unacceptable behaviour when using technologies and online services
BC2	Selects, combines and uses internet services
BC3	Demonstrates responsible use of technologies and online services, and knows a range of ways to report concerns
RC2	Uses technologies and online services securely, and knows how to identify and report inappropriate conduct
B*C3	Recognises that persistence of data on the internet requires careful protection of online identity and privacy

Reference

PI2	Understands that people interact with computers
PI4	Knows common uses of information technology beyond the classroom
YI4	Shares their experiences of technology in school and beyond the classroom
BI3	Understands the potential of information technology for collaboration when computers are networked

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PI2	Recognises ethical issues surrounding the application of information technology beyond school
RI3	Identifies and explains how the use of technology can impact on society
B*I5	Explains and justifies how the use of technology impacts on society, from the perspective of social, economical, political, legal, ethical and moral issues
WI1	Understands the ethical issues surrounding the application of information technology, and the existence of legal frameworks governing its use e.g. Data Protection Act, Computer Misuse Act, Copyright etc.

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Computational Thinking Strands

AL – Algorithmic Thinking

Ref.	Activity
A1	Writing instructions that if followed in a given order (sequences) achieve a desired effect
A3	Writing instructions that store, move and manipulate data to achieve a desired effect
A9	Writing a set of rules to achieve a desired effect

EV - Evaluation

Ref.	Activity
Ev1	Assessing that an algorithm is fit for purpose
Ev2	Assessing whether an algorithm does the right thing
Ev3	Designing and running test plans and interpreting the results
Ev4	Assessment whether the performance of an algorithm is good enough
Ev5	Comparing the performance of algorithms that do the same thing
Ev6	Making trade-offs between conflicting demands
Ev7	Assessment of whether a system is easy for people to use
Ev8	Assessment of whether a system gives an appropriately positive experience when used

DE - Composition

Ref.	Activity
De1	Breaking down artefacts (whether objects, problems, processes, solutions, systems or abstractions) into constituent parts to make them easier to work with

AB - Abstraction

Ref.	Activity
Ab1	Reducing complexity by removing unnecessary detail
Ab2	Choosing a way to represent artefacts (whether objects, problems, processes or systems) to allow it to be manipulated in useful ways

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Ab3	Hiding the full complexity of an artefact, whether objects, problems, processes, solutions, systems
Ab5	Identifying relationships between abstractions
Ab6	Filtering information when developing solutions

GE - Generalisation

Ref.	Activity
Ge1	Identifying patterns and commonalities in problems, processes, solutions, or data
Ge2	Adapting solutions or parts of solutions so they apply to a whole class of similar problems
Ge3	Transferring ideas and solutions from one problem area to another

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Learning Outcomes

1. To understand what an internet service is
2. To understand how the internet services we use impact our digital footprint
3. Understand what makes a strong password and how easy it is to crack a simple one
4. How to recognise dodgy links designed to steal your data
5. How to deal with trolls online
6. How to make informed choices around what you post to your social media and the etiquette around this
7. How crooks use social media to steal your data and identities online
8. How to set privacy settings to control the data shared to apps from your smart phone or tablet
9. How copyright and intellectual property relates to content shared on the internet
10. To understand that people in real life may not be what they seem online
11. To understand the differences between the six most popular social networks
12. To understand the restrictions of each of the six most popular social networks
13. To understand how to safely set-up accounts for six of the most popular social networks
14. To understand what is meant by respect when communicating online
15. How to respond to something you are not happy with online
16. To understand what constitutes ethical, respectful behaviour on social media
17. To understand how to keep yourself and your account safe
18. How to spot fake news

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Session Overview

Pre-workshop set-up

Prior to running this workshop a teacher account must be set up and an organiser code needs to be requested – see iDEA-set-up.pdf

Profiles.pdf should be printed in colour, the profiles placed around the room and the grid on slide 9 copied to allow 1 per pupil.

Guess-who.pdf should be printed in colour.

SESSION 1

Session Content / Activity	Resources Used	Prog. Pathway	Comp. Thinking	Computing POS Link
Welcome, Introductions – slide 1 General information about the day, including any Health and Safety information.	DSH-teacher-presentation-cyber-safe.ppt			
Digital footprint - Work through slides 2 – 5 Discuss: What is an internet service, what internet services do the pupils use, what is a digital footprint, why is it important to keep your footprint healthy Activity: create digital footprints on paper by drawing around feet and then creating a collage of app and website logos to fill in the footprint	DSH-teacher-presentation-cyber-safe.ppt Plain A4 paper, coloured pencils / pens (or can be done digitally)	COM PC1, PC2, YC1, YC2, OC1, OC2, BC3, B*C3 IT PI2, PI4, YI4, BI3, RI3	A1, De1, Ab1, Ab2, Ab3, Ab6	2.4, 2.5, 2.6, 2.7 3.5, 3.7, 3.9 4.3
Introduce iDEA – slide 6 Set up pupil accounts: pupils should use the same nickname provided to them when completing the pre-workshop survey. They should use this nickname with the rest of the	DSH-teacher-presentation-cyber-safe.ppt iDEA-set-up.pdf	COM PC1, YC1, YC2, OC2, BC2, BC3, RC2	A1, Ev1, Ev2, Ev4, Ev7, Ev8	2.4, 2.5, 2.6, 2.7 3.7, 3.9 4.3

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school email as their email address (i.e. nickname@myschool.org) to set up their accounts (a real email address is not needed for pupils). The email of the primary teacher should be used on the parent / guardian details form. Once set up pupils should then click on the circle logo in the top right corner and edit profile where they will add the organiser code for their school – this will allow teachers to track pupils' progress through badges should they wish to continue with the award NOTE: prior to running this workshop a teacher account must be set up and an organiser code needs to be requested – see iDEA-set-up.pdf Work through online tutorial and explain how iDEA works	www.idea.org.uk	IT PI2, YI4, BI3		
Complete safe online badge – slide 7	DSH-teacher-presentation-cyber-safe.ppt www.idea.org.uk	COM PC1, PC2, PC3, YC2, OC2, OC3, BC2, BC3, RC2, B*C3 IT PI2, PI4, YI4, BI3, PI2, RI3, B*I5, WI1	A9, Ev1, Ev2, Ev3, Ev4, Ev5, Ev6, Ev7, Ev8, Ab1, Ab2, Ab5, Ab6, Ge1, Ge2, Ge3	2.4, 2.5, 2.6, 2.7 3.7, 3.9 4.3
Personal info – slides 8 - 25 Discuss what else makes up a digital footprint. Pupils should consider what information they share about themselves online and why they should protect this Activity: Can you find the person who … Place the profiles from profiles.ppt around the room for pupils to find. Pupils should then	DSH-teacher-presentation-cyber-safe.ppt Profiles.pdf	COM PC2, YC2, OC3, BC3, RC2, B*C3 IT PI2, PI4, YI4, BI3, PI2, RI3, B*I5, WI1	A9, Ev1, Ev2, Ev3, Ev4, Ev5, Ev6, Ev7, Ev8, Ab1, Ab2, Ab5, Ab6, Ge1, Ge2, Ge3	2.4, 2.5, 2.6, 2.7 3.7, 3.9 4.3

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complete the grid with the names of each person they can correctly identify. Discuss: Why pupils should be careful about the data they share online, what data do they think they should share and what should they keep private? Show the answers and discuss why there may be issues with some of the information shared Activity: protect your personal info. You can either teach students a movement for keep it safe / give it away or identify places in the room. Students should then either do the movement or move to the correct part of the room for each piece of data on the slide. Discuss: what should be shared / what should be kept private and why				
Short video reminding about protecting personal info – slide 26	DSH-teacher-presentation-cyber-safe.ppt	COM PC2, YC2, OC3, BC3, RC2, B*C3 IT PI2, PI4, YI4, BI3, PI2, RI3, B*I5, WI1	Ab5, G1, Ge2, Ge3	2.4, 2.5, 2.7 3.9 4.3

SESSION 2

Session Content / Activity	Resources Used	Prog. Pathway	Comp. Thinking	Computing POS Link
Location tagging – slides 27 - 29 Introduce the concept of location tagging images	DSH-teacher-presentation-cyber-safe.ppt School iPads	COM PC2, PC3, YC2, BC2, BC3, RC2, B*C3	A9, Ev1, Ev2, Ev3, Ev4, Ev5, Ev6, Ev7, Ev8, Ab1, Ab2,	2.4, 2.5, 2.6, 2.7 3.5, 3.7, 3.9

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Discussion: how can you show your location just by taking a photo? Activity: using school iPads take some photos around the school site and then look at how they are shown on the map on the iPad (if no iPads available discuss images on slide 28). Discuss settings that prevent your location being shared.		IT PI2, PI4, YI4, BI3, PI2, RI3, B*I5 WI1	Ab5, Ab6, Ge1, Ge2, Ge3	4.3
Complete e-safety badge – slide 30	DSH-teacher-presentation-cyber-safe.ppt www.idea.org.uk	COM PC1, PC2, PC3, YC1, YC2, OC2, OC3, BC2, BC3, RC2, B*C3 IT PI2, PI4, YI4, BI3, PI2, RI3, B*I5 WI1	A9, Ev1, Ev2, Ev3, Ev4, Ev5, Ev6, Ev7, Ev8, Ab1, Ab2, Ab5, Ab6, Ge1, Ge2, Ge3	2.4, 2.5, 2.6, 2.7 3.7, 3.9 4.3
Guess Who – slide 31 - 32 Activity: give out a picture from Guess-who.pdf to each student. Explain the rules of the game that as each question is asked the photos that don't meet that criteria are placed face down on the table e.g. Does the person have red hair? If the answer is yes, all photos of people who do not have red hair will be placed face down. Complete 3 rounds of the game, the first should identify Gary, the second should identify multiple people and the third no-one. Discuss: people are not always what they seem on the internet – why?	DSH-teacher-presentation-cyber-safe.ppt Guess-who.pdf	COM PC2, YC2, OC3, BC2, BC3, RC2, B*C3 IT PI2, PI4, YI4, BI3, PI2, RI3, B*I5 WI1	A9, Ev1, Ev2, Ev3, Ev4, Ev5, Ev6, Ev7, Ev8, Ab1, Ab2, Ab5, Ab6, Ge1, Ge2, Ge3	2.5, 2.6, 2.7 3.7, 3.9 4.3
Complete social media set-up badge – slide 33	DSH-teacher-presentation-cyber-safe.ppt	COM	A9, Ev1, Ev2, Ev3, Ev4, Ev5, Ev6, Ev7, Ev8, Ab1, Ab2,	2.4, 2.5, 2.6, 2.7

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	www.idea.org.uk	PC1, PC2, PC3, YC1, YC2, OC2, OC3, BC2, BC3, RC2, B*C3 IT PI2, PI4, YI4, BI3, PI2, RI3, B*I5 WI1	Ab5, Ab6, Ge1, Ge2, Ge3	3.7, 3.9 4.3

SESSION 3

Session Content / Activity	Resources Used	Prog. Pathway	Comp. Thinking	Computing POS Link
Respect: slides 34 – 35 Discuss: what is meant by respect, is respect different in a classroom compared to online?	DSH-teacher-presentation-cyber-safe.ppt	COM PC2, PC3, YC2, OC3, BC3, RC2, B*C3 IT PI2, PI4, YI4, BI3, PI2, RI3, B*I5 WI1	Ev1, Ev2, Ev3, Ev4, Ev6, Ev7, Ev8	2.5, 2.6, 2.7 3.7, 3.9 4.3
Speak-up: slides 36 – 39 Discuss: what to do if you are unhappy with something that happens online? Who could you tell? Activity: helping hands, draw around hands and then write the names of people you could speak to in each digit	DSH-teacher-presentation-cyber-safe.ppt Plain A4 paper and coloured pencils / pens	COM PC2, PC3, YC2, OC3, BC3, RC2 IT PI2, PI4, YI4, BI3, PI2, RI3, B*I5 WI1	Ev1, Ev2, Ev3, Ev4, Ev6, Ev7, Ev8	2.4, 2.5, 2.6, 2.7 3.7, 3.9 4.3

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Complete social media ethics badge – slide 40	DSH-teacher-presentation-cyber-safe.ppt www.idea.org.uk	COM PC1, PC2, PC3, YC1, YC2, OC2, OC3, BC2, BC3, RC2, B*C3 IT PI2, PI4, YI4, BI3, PI2, RI3, B*I5 WI1	A9, Ev1, Ev2, Ev3, Ev4, Ev5, Ev6, Ev7, Ev8, Ab1, Ab2, Ab5, Ab6, Ge1, Ge2, Ge3	2.4, 2.5, 2.6, 2.7 3.7, 3.9 4.3
Challenge (extension): Complete digital ethics badge – slide 41	DSH-teacher-presentation-cyber-safe.ppt www.idea.org.uk	COM PC1, PC2, PC3, YC1, YC2, OC2, OC3, BC2, BC3, RC2, B*C3 IT PI2, PI4, YI4, BI3, PI2, RI3, B*I5 WI1	A9, Ev1, Ev2, Ev3, Ev4, Ev5, Ev6, Ev7, Ev8, Ab1, Ab2, Ab5, Ab6, Ge1, Ge2, Ge3	2.4, 2.5, 2.6, 2.7 3.7, 3.9 4.3

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Files/Resources

Filename	Resource Type	Purpose/Description
DSH-teacher-presentation-cyber-safe.ppt	PowerPoint	Main teaching PowerPoint
www.idea.org.uk	Website	Website to complete iDEA badges
Profiles.pdf	PDF	Profiles and grid for Can you find the person who … game on slide 10 of main ppt
Guess-who.pdf	PDF	Images and description cards for three rounds of guess who – slide 31
iDEA-set-up.pdf	PDF	Instructions on how to set up iDEA accounts for pupils prior to workshop

PLEASE NOTE: The activities outlined in this workshop pack are a suggested outline of how the workshop can be delivered. It is envisaged that teachers will adapt the resources and the organisation of them according to the needs of their class.