Unit 2.4: We are safe researchers
Researching a topic

Software: Popplet, Google Slides, Google custom search (alternatives: FreeMind, Microsoft PowerPoint, Keynote)

Hardware: iPads (alternatives: desktop/laptop/Chromebook computers or Android tablets)

Overview

In this unit, pupils retrieve digital content from the Internet for a particular purpose and use **mind mapping** software to organise their questions and answers about a topic. They use **presentation** software to present their findings to an audience. In:

- **Session 1** they start to think about the topic they are going to research and structure their research questions in a **mind mapping** tool, such as Popplet
- **Session 2** they draw on their research questions to conduct independent research, using a custom **search engine** on a small number of pre-selected websites. They add the information they find to their mind map. They learn about taking care when using information from the Internet
- **Session 3** they think about Internet safety and what they should do if they are concerned about any content on the Internet. They use **Google SafeSearch** and other search engines to answer their research questions and to add information to their mind map.
- **Sessions 4 and 5** they draw on their research to create a short (two minute) presentation on their research
- **Session 6** they deliver the presentation to an audience and review the key online safety messages from the unit.

Alternatives

The unit sessions give step-by-step guidance on using Popplet and Google Slides. Instead of Popplet, you could use other mind mapping software, such as FreeMind. Instead of Google Slides, you could use Microsoft PowerPoint or Apple Keynote.

Differentiation

See each session (pages 43–47) for ways to increase support and add challenge to this unit.

Knowledge, skills and concepts

In this unit, pupils will learn to:

- develop collaboration skills through working as part of a group
- develop research skills through searching for information on the Internet
- think through privacy implications of their use of **search engines**
- be more discerning in evaluating online information
- improve note-taking skills through the use of mind mapping
- develop **presentation** skills through creating and delivering a multimedia presentation.

Progression

In Key Stage 1:

- In **Unit 1.4: We are publishers** pupils learned about online safety and searching safely.
- In **Unit 1.6: We are detectives** pupils worked using Popplet.
- In **Unit 1.4: We are publishers** and **Unit 2.3: We are photographers** pupils searched the Internet for Creative Commons images.

In Key Stage 2:

- In **Unit 3.3: We are presenters** pupils create green screen videos to explain ideas.
- In **Unit 3.6: We are opinion pollsters** pupils design and deliver a longer presentation, using charts and graphics along with data they have collected themselves.

Cross-curricular opportunities

English: Pupils practise effective note taking.

History: The concept of reliability of evidence and how holidays have changed over time.

Other: You could integrate this research with a topic that pupils are already studying, such as in science, geography or RE.

Assessment – by the end of the unit:

All pupils can:
- add questions and information from independent research to a mind map
- locate information from relevant websites
- search for information on a small number of sites using a custom **search engine**
- know how to report concerns over content when searching the Internet
- create a short **presentation** on their findings.

Most pupils can:
- organise questions on a mind map
- cite the sources of the information they include
- find information using a general-purpose search engine

- add appropriate images to a presentation
- present their findings to an audience.

Some pupils can:
- use only public domain or **Creative Commons** licensed images
- structure a presentation effectively to teach others about their topic
- present their findings in a lively and engaging way
- discuss search engine provider differences
- discuss the implications of search engines tracking an individual's use
- explain how search engines select and rank results.

Background information

- Both web-based research and computer-based **presentations** are examples of common uses of information technology beyond school.
- When teaching online safety, you should be aware of *Teaching Online Safety in Schools* (DFE, 2019) and *Education for a Connected World* (UK Council for Child Internet Safety, 2018). The latter has age-related expectations about what pupils should know and understand.
- Pupils consider how to stay safe while researching online, and how to show respect for others' ideas and intellectual property by citing sources. The Internet makes it possible for anyone to publish content online: some content can be commercial, some can be unreliable and other content can be harmful or obscene in nature. Pupils learn to distinguish between sponsored, advertising results in **search engine** listings and other content. They start to develop skills in discerning whether content might be reliable. If pupils encounter content they are concerned about, they should report their concerns to an adult.
- Pupils are taught to use search engines with **Safe search filters** in strict mode. They are taught that search results are based on the occurrence of the keywords they search for in the engine's index of web pages. They think about some of the implications of search engines knowing everything they search for.
- Remind pupils about respecting other people's intellectual property. They should credit the sources they have used, and should use **Creative Commons** or public domain images.
- You may want to give pupils access to resources not available via the open web, e.g. those provided by the local authority, commercial content providers, through the RBC (Regional Broadband Consortium) or the NEN (National Education Network).

Key vocabulary

Bing: search engine provided by Microsoft

Creative Commons: licence scheme which permits certain types of reuse for original work, without the need for further permission

DuckDuckGo: search engine which promises not to track use

Filter: means by which Internet access to sensitive or inappropriate material is prevented

Google: dominant provider of Internet search, and additional services such as Google Docs and Gmail

Google custom search: the ability, via Google, to create a customised search engine for a predefined list of websites

Mind map: visual representation of ideas, showing how these ideas can be connected to one another

Presentation: typically a sequence of slides showing text and images accompanied by a spoken commentary

Safe search: tool provided by search engines to remove inappropriate content from results

Search engine: web-based service that maintains an index of Internet pages, allowing users to identify which pages include particular terms or meet particular criteria, ranking the resulting list in a way that is helpful to its user

Wikipedia: online encyclopaedia edited by its users

Preparing for teaching the unit

Things to do

- Check you have access to Popplet and Google Slides (or the alternative you are using).
- Read pages 40–41 to get an overview of the unit.
- Read the steps in the unit sessions (pages 43–47) and look at the associated online resources, printing out the worksheets as required.
- Watch the CPD and Software in 60 Seconds videos.
- Work through the unit yourself so you know what is expected of the pupils.
- Before Session 2, prepare a Google Doc and a **Google Custom search** engine, both featuring the same six to ten sites that are appropriate for pupils and relevant to the topic being studied (or you could use the pre-prepared one on 'How have holidays changed over time?'. You could use the school learning platform or class blog to give pupils access to these.

Resources needed

- **Software:** Popplet, Google Slides
- **Hardware:** iPads
- See *Alternatives* on page 40

Online resources provided

Session resources

- Worksheet 2.4a: End-of-unit quiz
- Worksheet 2.4b: Pupil self-assessment
- Teaching slides: 2.4a–2.4f
- Walkthrough videos: 2.4a–2.4f
- Interactive end-of-unit quiz 2.4

Additional resources

- Software in 60 Seconds: Google custom search
- CPD video: Organising ideas
- Google Doc and Custom search engine for the topic: 'How have holidays changed over time?'

Online safety

- Ensure Internet **filters** are in place and are appropriate (check your school policy).
- Ensure **Safe search** is turned on, set to strict filtering (if available) and locked in place for Google, **Bing** and **DuckDuckGo**.
- If pupils encounter inappropriate material, ensure they know what to do (turn the screen off/turn the tablet over and tell an adult).
- Encourage pupils to think about whether the information they read online is reliable and to develop some strategies for being able to check, such as whether:
  - the same information is repeated in multiple places
  - the website shows where the information is from
  - it is easy to find out who has written or published the information.

Collaboration

- Pupils can collaborate on the same shared Popplet stored online. They can also work collaboratively on a shared deck of Google slides.
- Check your school's policies and parental consent about sharing access to documents online.
- Establish some rules for how to work on a shared document: pupils should only make changes that improve the shared work, and check with the author before making changes to someone else's work.

Useful links

Software and tools

- Popplet: **www.popplet.com**
- Google Slides: **www.google.com/slides**
- FreeMind: **www.freemind.sourceforge.net/wiki/index.php/Download**
- Google custom search: **cse.google.com/cse**
- DuckDuckGo: **www.duckduckgo.com**
- Safe search: **www.safesearchkids.com/google-kids**
- Swiggle: **www.swiggle.org.uk**
- Primary School ICT: **www.primaryschoolict.com**
- Simple English Wikipedia: **simple.wikipedia.org**

Online tutorials

- Popplet: **www.blog.popplet.com/tutorial-getting-started-all-about-popples**
- FreeMind: **www.freemind.sourceforge.net/wiki/index.php/Tutorial_effort**
- PowerPoint: **www.support.office.com/en-gb/powerpoint**
- Google Slides: **www.support.google.com/a/users/answer/9313043?hl=en**
- Google Custom Search: **www.support.google.com/customsearch/answer/4513751**

Information and ideas

- Google SafeSearch Kids: **www.safesearchkids.com/google-kids**
- How Google search works: **www.google.com/intl/en_uk/search/howsearchworks**
- WebQuest (information on inquiry-based lessons): **www.webquest.org**
- Image galleries: see suggestions on page 32

Unit outcomes

Below are some examples of the outcomes you could expect from this unit.

Session 1: Using Popplet to create a mind map

Session 2: Using Google custom search
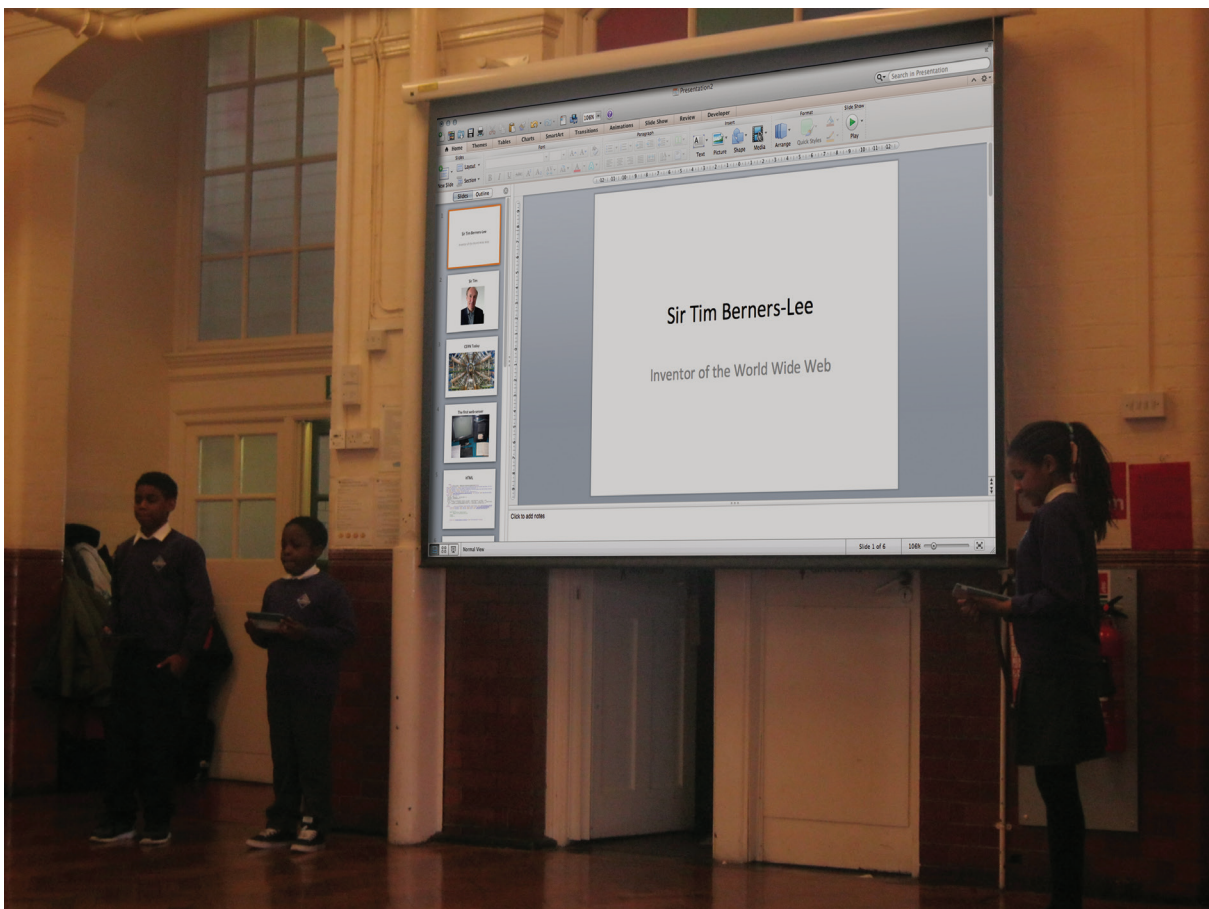

Session 3: Learning about Google SafeSearch

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Sessions 4 and 5: Creating a presentation

Session 6: Giving a presentation