Digital Nutrition:
Teachers' Guide

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MAY·2025

Introduction

This guide presents a framework of digital literacy education based upon the idea of 'Digital Nutrition'. It has been developed in consultation with the Association of School and College Leaders, School Leaders and Safeguarding Leads from our partner schools, as well as being informed by young people across the country. The guide is also informed by the wealth of existing guidance from across government, education and third sector organizations in the UK, including the NSPCC, the Children's Commission, UK Government Statutory Guidance – Keeping Children Safe in Education and UK Council for Internet Safety. It is designed to be adaptable, but primarily aimed at KS3-4.

Our approach

The Digital Nutrition takes approach that seeks to balance risk with positive guidance. While many schools are now developing their own policies about digital devices, these resources seek to be a companion to this work in order to build information in a way that empowers young people in navigating their digital lives.

Part 1 of the resources focuses on understanding the systems in which social media and technology operate. It introduces the idea of the 'attention economy', where platforms compete for your attention and how these structures which have created an environment in which addiction and harm can thrive.

Part 2 introduces key strategies for young people to take action on digital behaviours. This includes how different types of screen time can be considered encouraging students to think about what healthy digital diets look like for their own health and wellbeing.

How to use this guide

This guide is to be accompanied by the Digital Nutrition slides. In this framework, educators can approach digital education with flexibility – using case examples of online harm within each topic, adapting to specific topics of focus for the needs of your particular school or area.

As recommended in the accompanying research report[1], one of the most effective ways of delivering digital education can be to youth voice. Young people are themselves are often be the best advocates about what is unsafe, harmful or unhealthy online and support others. Integrating a 'digital leader' whether through existing structures like student council or through new initiatives can help to keep content up to date and engaging on the issues that directly matter to them and that are relevant within their own school and online communities. Consideration will need to be given to the ways in which a balance can be maintained between choice and appropriate content and mechanisms for teachers previewing what is chosen by pupils in advance. Where relevant, suggestions have been made throughout these resources for gathering the opinions of young people to inform the delivery of the session.

[1] Link to report

Structure

- **Glossary of terms**

- **Part 1:**
  Understanding the attention economy (Slides 2 -17)

    - Regulation
    - You are the product
    - Hate, Harm and Disinformation

- **Part 2:**
  Action for healthy digital habits (Slides 18-35)

    - Think quality not quantity
    - A healthy digital diet

- **Extension:**
  Ethical approaches to technology (Slides 36-39)

- **Printable resources**

Glossary of terms

Algorithm

An algorithm is a step-by-step set of instructions designed to solve a problem or perform a task, similar to a roadmap or recipe. In the context of social media, it is a computational process that uses predefined rules and data to filter, rank, and recommend content (such as videos, users, or posts) to platform users. While not all social media algorithms are forms of artificial intelligence (AI), many incorporate machine learning techniques that analyse users' past interactions to predict and personalise the content they see, continuously refining recommendations based on ongoing user behaviour.

Echo chamber

The limited exposure to a wide range of information encourages 'the formation of like-minded users framing and reinforcing a shared narrative, that is, echo chambers'.[I] These echo chambers create environments where people's opinions, political leanings and beliefs are reinforced by repeatedly interacting with others who share the same opinion.

You-loop

The way information is personalised for us online means that people are less aware of the diverse array of options and lifestyles; instead companies are using their algorithms to choose which options you are aware of. What you have clicked on in the past will determine what results you will see in future. This means that you can get stuck in a static, ever-narrowing version of yourself – an endless you-loop.[II] In this way you become stuck inside your own self-reinforcing point of view. This matters because without exposure or access to information or ideas our decision-making process is stunted as solutions to problems lie out of our sightline.[III]

Disinformation and misinformation

The UK government defines disinformation as the deliberate creation and spreading of false and/or manipulated information that is intended to deceive and mislead people, either for the purposes of causing harm, or for political, personal or financial gain. Misinformation, by contrast, is the inadvertent spread of false information.[IV]

I Cinelli, M., De Francisci Morales, G., Galeazzi, A., Quattrociocchi, W., Starnini, M. (2 March 2021), 'The echo chamber effect on social media', Proc Natl Acad Sci U S A 118(9):e2023301118. doi: 10.1073/pnas.2023301118.

II Pariser, E. (2012), The Filter Bubble: What the Internet is Hiding From You, London, Penguin

III Valentine, A., Wukowitz, L. (2013), 'Using the filter bubble to create a teachable moment', Pennsylvania Libraries: Research and Practice, p. 28, doi:10.5195/palrap.2013.1.

IV Government Response: Fact Sheet on the CDU (Government's Counter-Disinformation Unit and Rapid Response Unit) and the RRU (Rapid Response Unit), published 9 June 2023, available at https://www.gov.uk/government/news/fact-sheet-on-the-cdu-and-rru#:~:text=What%20is%20 mis%2Fdisinformation%3F,political%2C%20personal%20or%20financial%20gain accessed 12 November 2024.

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Part 1
Understanding the attention economy

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This section (Slides 2 -17) focuses on understanding the systems in which social media and technology operate. Each exercise in this section can help students to understand their own role in the attention economy, how they can resist some of the ways that algorithms work and become more aware about their own digital and data rights. For each exercise, it may also be useful for students to rate their own confidence in using these tools as a way to evaluate the impact of the resources.

Discussion questions during this section could include:

- Why might someone who is under the age of 18 have been shown inappropriate content?

- Can you think of an example of targeted advertising on your own feeds?

- The news on the homepage of one website might look very different to another - why do you think that is?

- Who do you think creates and designs algorithms?

- Why do you think they have been designed in this way?

- Think about what harmful content you may have encountered online - how has this been distorted from reality to pull at your emotions? Why do you think it has been fed to your feed?

- Whose responsibility is it to make social media safe? Is it up to an individual person? Governments? Technology companies?

Exercise 1: Algorithmic resistance

This exercise describes a process which is termed 'gaming the algorithm' or 'algorithmic resistance', a term which Tiziano Bonini and Emilio Treré describe as the 'ability of the people to actively shape the outcome of algorithmic computation for their own benefit' in order to push back against the attention economy. Algorithmic resistance – or 'gaming the algorithm' – is something we can all do in order to take greater control

Go incognito:

There are tools that can stop apps and browsers tracking you. These include:

Use different browsers: It's good to use a variety of browsers for different activities. For example, if you use one browser for shopping and another for socialising and social media, then cookies – the way that websites track you – will be stored differently.

Not just Google: There are also some Google alternatives. You might want to look at DuckDuckGo or Firefox Focus.[2] These search engines do not track you to serve targeted ads. You could also look at Startpage.com which allows you to use Google without tracking your digital footprint

Turn on Do Not Track or Go incognito: Do Not Track is a feature that lets websites know that you don't want your behaviours to be tracked. They don't have to abide by it. But many will. You can find it in most browsers' settings. You can also turn on incognito browsing which stops cookie tracking. You can find instructions about how to do this in the Google Help Centre.

Digital spring cleaning

Make a choice: Make a clear choice about what you want to see on your feed. If you want cooking videos great. If you are looking for science documentaries, fab. If you want interior design and also some celeb gossip, cool. Just make a clear choice about what you want your perfect digital diet to be.

The new spring cleaning is cleaning out the uninspiring. If it no longer inspires or educates you: unfollow it. This might include old friends, TV personalities or brands. Unfollow accounts regularly to clean up your feed and narrow in on what you do want to see.

Game the algorithm

Actively interact with things you want: Dedicate a half hour a week to training the machine learning by finding content that you want to see – content that you are passionate about or that makes you feel good. Actively search for things you like.

Budget your attention: not every piece of content that is fed to you deserves your time and attention. Your time and attention is money (literally, it's being sold). Don't watch uninteresting, uninspiring content or content that makes you feel bad. Quickly move past it. And do not like, share things or comment on things that don't fit into your new healthy digital diet. According to ex-TikTok employee Andrew Kaung, even commenting they you don't like something, can count as engagement.[3]

Follow people who empower you: Don't follow accounts that make you feel bad or self-conscious. For example, this might mean unfollowing an underwear model that makes you feel bad about your own body and instead, choosing to follow someone who represents you or who inspires you.

Exercise 2:   Shared check-ins

Shared check-ins can be a useful way to be more reflective about the way our feeds are tailored to us and how this tailored content can impact us.
You can conduct a shared check in with a class either in class to prompt discussions or as a reflective activity to be completed individually at home. Alternatively, it can be used with digital leaders as a framework to amplify youth voice and gather suggestions for content and topics to be discussed in a lesson.

In a shared check in everyone shares the following:

1. One post that made you feel good

2. One post that made you feel bad

3. One post that you found interesting

4. And one post that you questioned

Exercise 3:   The misinformation toolkit

Look around: What's around the information? Do the fonts change often? Are there lots of hyperlinks to other websites? How is the information presented? You can use Link Gopher to see what hyperlinks are embedded in the page, which will give you an idea of where the creator of the page wants to send you.[4]

Spot the bot: If a user's handle or account name has lots of letters or numbers it might be a bot. Be wary if the account is only resharing content (and lots of it…) or using the same phrase posted by multiple accounts.

Image conscious: Images can be taken out of their original context and be presented as news. Zoom in to check if the street signs, advertising, car number plates and shop signs appear to be in the language of which the poster or image claims it is. Some AI created images will have writing which appears backwards. Also be aware of memes – just because a photo of a well-known person is put together with a quote doesn't mean they've actually said it. It's also important to remember that AI makes it possible for images and videos to be deepfakes. Look closely at the image and see if it has unusual components like distorted details in the background, too many fingers on hands or people with plastic looking faces.[5]

Just because you want it, doesn't make it so: Sometimes when we want something to be true, we believe it is. Just because you like and trust someone, doesn't mean that what they send or show you is factual. You yourself might forward something because it validates your opinions and beliefs - or because you think it is funny and ironic - and others may take this as fact.

Take a beat: Before you comment or react to a post, ask who else is telling this story and can you find information from another perspective? Are there experts talking on the subject elsewhere online that you can look up?

4 David Benford says that you can download Link Gopher from the Chrome Web Store or Firefox Add-ons.

5 Kelly, H, July 15th, 2024, Washington Post, How to avoid falling for misinformation and conspiracy theories, available at https://www.washingtonpost.com/technology/2024/misinformation-ai-twitter-facebook-guide/

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Part 2
Action for healthy digital habits

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This section (Slides 18-35) provides key strategies and concepts in order to take action on digital behaviours. This includes how different types of screen time can be conceptualised, encouraging students to think about what healthy digital diets look like for their own health and wellbeing. It may be appropriate to do these exercises in class, or to set at self-guided learning for students to report back on.

Discussion questions during this section could include:

- What activities count as passive screen time? What activities count as active screen time?

- Can you think of a time when your phone provided you with community? Has it ever made you feel isolated or alone?

- When has something on your phone educated you? And when has it distracted you?

- When does your phone keep you safe? When does it put you in unsafe situations?

- Can you think of examples of aspects of the 'dark' side of digital engagement for each category for the digital diet?

- Should governments regulate social media and digital tech companies? Can they?

These questions could also be used with digital leaders to come up with ideas for relevant issues or topics ahead of sessions with a wider group.

Exercise 4:   Keep a "phone fed journal"

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In a shared check in everyone shares the following:

a. What you opened your phone/ tablet to do.

b. Where you eventually ended up.

c. How long the session was.

d. You can also then write down how was your mood a the end of the session? Did you feel bad, did you feel good?

After a couple days, if you look back over your phone fed journal and find that you are uncomfortable with the amount of time spent (the quantity) or the overall content and the way it made you feel (the quality) of your consumption, let's think about changing that.

To help with your journal: both Android and Apple devices also have settings where you can see how much time you spend on your device and on individual apps. You can find instructions about how to change these settings by searching for Screen Time in the Google Help Centre for Android devices and at Apple Support for Apple devices.

Look over your "phone fed journal" and ask yourself: What categories does your consumption fall into? If your consumption time is high and most of that consumption is sitting at the top of the pyramid, try to move your screen consumption lower down into a more active category. Are you happy with your current pyramid? Is there anything you'd like to change? What changes can you make? How can we become more active in our choices?

Exercise 5:   Understanding your addictions

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• **Turning your phone to Grayscale:** This is one of the quickest and easiest ways of understanding the impact of colour and images on our user experience. This will give you a sense of how colour and image quality plays into the addictive nature of these devices.

• **Decide your max:** Set a daily time limit for your most frequently used apps and stick to it. You can use your device's limits (see below) to put these limits in place.

• **Stop pushing me:** Turn off push notifications which draw your attention to a certain apps. At the same time, think about who you do want to hear from and adjust your settings so that you always get notifications from the people you want to hear from but not those you don't. You can even assign different alert sounds to different people to aid with this.

• **Clean up your home screen:** Move social media apps off your main home screen. Or alternatively you can delete apps off your phone altogether and only access your social media channels by signing in via a web browser. Both of these techniques will dissuade you from sliding from a necessary task into doomscrolling.

Exercise 6: The digital diet

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PASSIVE

PARTICIPATION

COMMUNICATION

CREATIVITY

EDUCATION & LEARNING

Using the digital diet guide, students can start to think more critically about what to prioritize with your screen consumption. Create a pyramid that shows how much time you are spending on each of these categories. (There is a printable blank version of this pyramid at the end of these resources.)

Once you have filled it out, ask yourself:

• Are you happy with your current pyramid?

• Is there anything you'd like to change?

• What changes can you make?

• How can you become more active in your choices?

Exercise 7: Thinking critically about healthy and unhealthy digital usage

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As a group write a list of the platforms and apps that you use and the types of digital activities that you do regularly. Use the large print out of the cone diagram (page 13 below) and decide together where the platforms and activities on your list fit into the categories on the cone. Write them onto the categories on the cone.

- Which digital platforms do you use most in each category? You can put them into more than one category. For example, an app you use might be for communication but it might also fall into passive.

- Which activities or platforms do you use for healthy usage? Which activities could slide into unhealthy behaviours? Or Toxic? There are some suggestions in the descriptions in the categories that might help you to think of examples. Represent these on the diagram by drawing emojis or exclamation marks.

- Finally, share what your group has done with the other groups.

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Extension:
Ethical approaches to technology

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For older students, it may be appropriate to engage them with the wider ethical issues of social media, advertising and regulation (Slides 36-39). This could include the following discussion points:

- The model of social media advertising has described as process by which "human beings and their attention are treated as a commodity that can be harvested and sold" – do you think this is an ethical business model? What might a more ethical model of social media look like?

- To what extent do you think that advertisers have some responsibility to hold social media companies accountable for the harm on their platforms?

- Should governments regulate social media and digital technology companies? Can they?

Printable resources: Digital diet pyramid
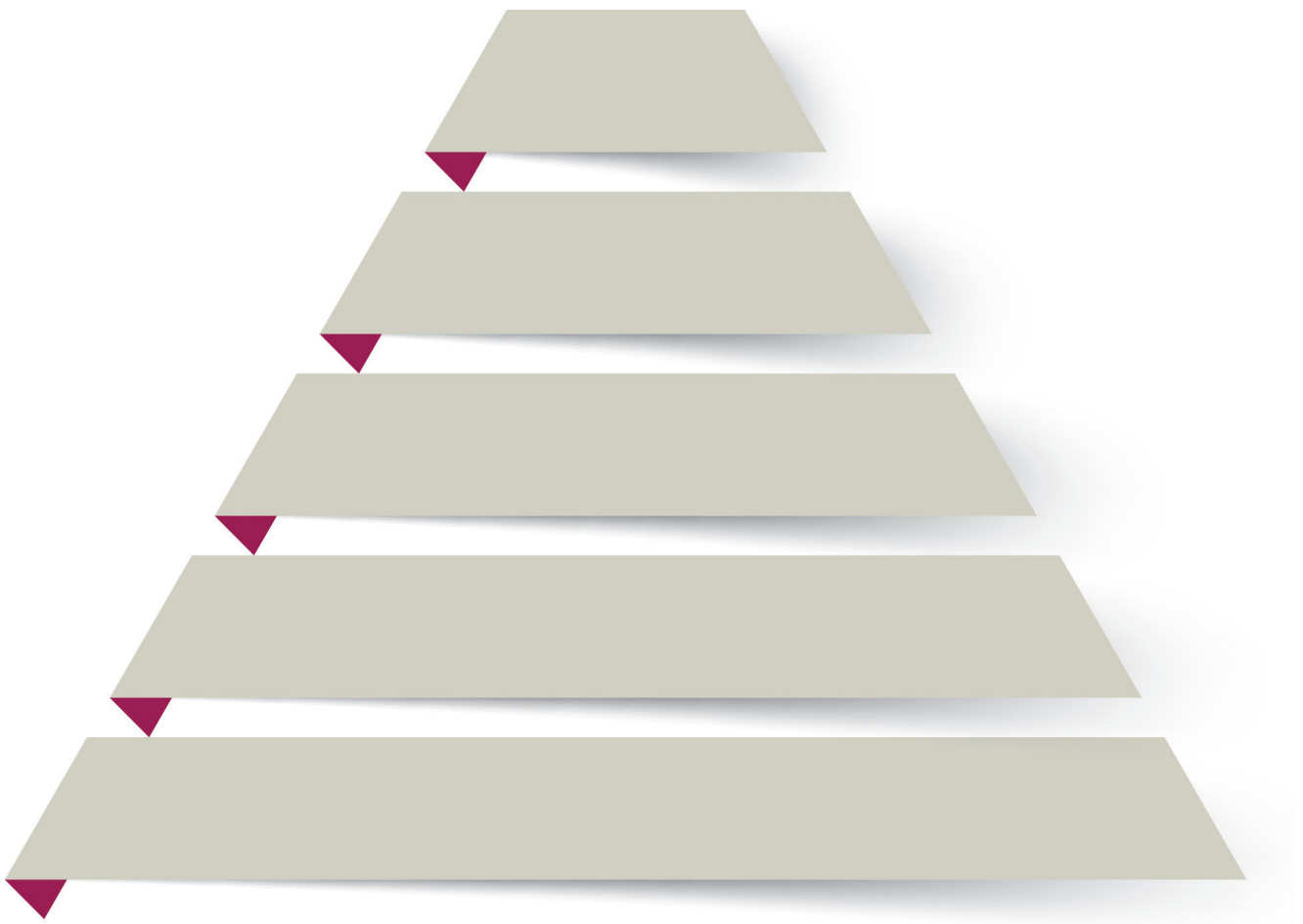
PASSIVE

Non-interactive viewing with low level of Intellectual and social engagement are often used as a way to switch off. Such forms of relaxation are reasonable in moderation but the type of content being consumed should be considered and monitored.

(!) Avoid long sessions of consuming content with low levels of positive stimulation.

PARTICIPATION

Participation activities such as gaming can be a good way to have fun with friends, home problem solving skills and as a way to relax.

(!) Be mindful of addictive qualities of some games and online gaming crossing into unsafe spaces.

COMMUNICATION

Healthy communities can support wellbeing, such as chatting with friends and family on invite only networks.

(!) Trolling, large unregulated group chats featuring bullying, sharing toxic content.

CREATIVITY

Art and music making practices and creativity can be supported by digital tools, such as graphics pads for drawing and music or film-making software.

(!) Fillering photos into unrealistic body ideals or creating disinformation.

EDUCATION & LEARNING

Digital tools are now crucial to education. Encourage use for research and homework and by using trusted news organisatios.

(!) Misinformation or seeking out information about damaging practices.

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