



Toolkit
for teachers

How to spot and fight **disinformation**

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1. Introduction

INTRODUCTION

This toolkit aims to give secondary teachers resources in order to start conversations with their students about the important questions raised by the spread of false information, and more specifically disinformation. This has become an increasing problem in recent years. These relate to health, democracy, the environment, and the cultural and legal norms underpinning our societies.

There are no easy answers to many of these questions and the aim of these materials is not simply to teach students what is true and what is false, but to get them thinking about how information is presented and what motivations

those spreading false or misleading information might have. They will learn about the strategies that propagators of disinformation often used to manipulate their audience, about how they as media consumers can avoid being deceived, and about how to talk to people who have fallen for disinformation.

Educators are a key part of the conversation on disinformation. For more resources on how to design lessons on disinformation and digital literacy more generally, have a look at [Guidelines for teachers and educators on tackling disinformation and promoting digital literacy through education and training](#) published by the European Commission.



ACCESS THE TOOLKIT PRESENTATION
BY CLICKING HERE

AVAILABLE TOOLKIT CONTENT

- **Introductory presentation** (in PPT format)
 - The embedded YouTube videos are in English/Russian, but translated transcripts are available
 - Explanations and descriptions are available in the Notes section under each slide
- **4 workgroup case studies** with discussion questions (pages 15-18 of this document).



WHAT IS IT FOR

This toolkit is designed to introduce young people to the phenomenon of disinformation – conveying an understanding of the threats it poses, explaining how students can protect themselves from it, and providing an opportunity to look in more depth at particular examples. The toolkit is open and free to use for any educational establishment. Although it can be adjusted and tailored for other age groups, the main target group is teenagers from 15 to 18 years old.

HOW TO USE IT

The toolkit is designed to cover 1 or 2 lessons for an average secondary school class.

The PowerPoint presentation includes links to several videos. For a single lesson, just 1 or 2 of these should be enough to get the main points across – you can use the others if you have time, or want to spread the material over multiple lessons. We leave it to the teacher's discretion to decide which videos would best fit a particular class and generate the most interesting discussions.

WHAT IS DISINFORMATION?

The [Guidelines for teachers and educators](#) define disinformation as 'verifiably false or misleading information that is created, presented, and disseminated for economic gain or to intentionally deceive the public'. Misinformation is 'verifiably false information that is spread without the intention to mislead'.

This toolkit focuses on helping students to spot manipulative techniques and to develop the skills to assess information themselves. You can find more information on definitions in the Guidelines linked above and on [EUvsDisinfo's Learn section](#).

RECOMMENDED ACTIVITIES INCLUDE THE FOLLOWING:

! ACTIVITY	🕒 MINIMUM TIME	▶ SUGGESTED MATERIAL
Presentation on understanding disinformation (slides 1-21)	35 minutes	PowerPoint presentation, video transcripts, interactive discussion
Group work (groups of 5-6 max) (slide 23)	15-25 minutes	Case studies (and PowerPoint presentation as reference)
Group presentations & discussion	25 minutes for each group	Case studies





2. 'Understanding disinformation' presentation

UNDERSTANDING DISINFORMATION PRESENTATION

If you have more time available, you could extend the section on 'Understanding disinformation' (e.g. by spending more time looking at external sources and discussing the different examples with the students) or devote more time to the group work. You can also use the Commission's [Guidelines for teachers and educators on tackling disinformation and promoting digital literacy through education and training](#) to design more activities.

It is important to emphasise that freedom of expression is a core value in European society. The aim of this lesson is not to teach students what they're 'allowed' to say, but to raise their awareness of how to think critically in general and more specifically how to avoid being manipulated by

people or organisations that spread false information in order to undermine trust in democracy, in science and in the institutions that we all have a stake in. Strong, independent media and a healthy democracy, where many different voices and views are heard, are also key to avoiding disinformation, so the point is not to reduce freedom of speech but to increase it, by teaching students to recognise when they are being manipulated.

We don't recommend using the term 'fake news', because it is sometimes used to criticise independent media.



NB: Disinformation is a sensitive topic and you may prefer to use the alternative examples offered on page 12 below if they suit your students better. Likewise, you may find other case studies more suited to your students or you could ask them to identify other case studies themselves, as a group task.

INTRODUCTION slides 1-2

→ The aim here is just to get students thinking about disinformation.

DISINFORMATION AND ITS THREATS TO SOCIETY slides 3-8

→ **Why might someone spread untrue information?**

This is a good opportunity for active discussion.

False information is not necessarily spread only for the purpose of disinformation.

→ **Humour** can easily be mistaken for real news, especially if it comes from a platform or a culture you're not familiar with.

→ Similarly, it is easy to fall for **misinformation** when one feels uncertainty or fear when facing new technology (e.g. 5G/6G technology) or a possible threat to one's life or health (e.g. COVID-19). This is why various impact

assessment studies are carried out, for example, before new technologies or medicines are placed on the market. However, such studies take time and in the meantime stories may spread, because people believe they are true and do not realise they are unintentionally deceiving and possibly even harming others (see slide 7).

→ In some cases, false stories may also be spread intentionally to deceive people, in which case we speak of **disinformation**. The perpetrators may use many different techniques, such as emotional manipulation, to elicit strong emotions and distract from the truth for example, by engaging an actor to pose as a victim of a situation (see slide 8).

The objective here is to make students understand how easily one can be mistaken - **no one is invincible and thinking that you're 'too smart to be fooled' will actually make you more vulnerable.**



HOW DISINFORMATION WORKS slides 9-14

- An open, tolerant society is much more resistant to disinformation and other forms of manipulation; disinformation is used to divide people and exaggerate internal differences and existing conflicts or controversies.
- Disinformation-spreaders aim to flood the information space, so that we become so confused or overwhelmed that we no longer know who to trust, and they use several techniques.
- Disinformation can spread very easily on social media - clickbait, bots, fake stories and more.
- Deepfakes – AI can be used to create convincing fake footage or imagery. (video) [More information on deepfakes here.](#)
- Traditional media are also being used for disinformation, as illustrated by the example of Russia Today, a Russian state media platform that has been suspended from broadcasting in the EU.
- A short video shows how imagery can be used out of context to create a false narrative. (video)



HOW TO RESPOND TO DISINFORMATION slides 15-21

- **Take your time** when responding to disinformation – don't give in to the urge to respond immediately, but take time to fact-check and consider possible explanations.
- **How to fact-check** – some questions to ask yourself when you come across something that looks like disinformation and some resources that can help you check if a story has already been shown to be false by professional fact-checkers.
- **How to talk to people you know** about disinformation.

WHAT IS THE EU DOING? slide 21

- Find out [more about EU action against online disinformation here.](#)
- You can find the European Commission on [Instagram](#), [Facebook](#) and [X \(Twitter\)](#).
- The European Parliament is on [Instagram](#), [Facebook](#) and [X \(Twitter\)](#).
- Find out about the latest disinformation and the real story on [EUvsDisinfo.eu](#) (or on [YouTube](#), [Facebook](#) or [X \(Twitter\)](#)).

WORK IN GROUPS, DISCUSSING SOME TYPICAL EXAMPLES OF FALSE INFORMATION slide 23

Split the class into groups of maximum 5-6 students. Assign a case study to each group. Allow around 15 minutes for students to read the case study and go through the questions, then another 20-25 minutes for presentations by each group and discussion among the class.

- A dangerous new conspiracy theory that has given rise to a cult-like movement now rapidly spreading in Europe
- Unethical and misleading advertising about 'incredibly effective' medicine X
- Are birds real? A parody conspiracy theory
- Social media posts about elections

Note that not all case studies are examples of disinformation, but all are relevant to developing students' skills in navigating unreliable information.

NB: These examples are presented as ready-to-use materials, but you may find other case studies more suited to your students, or you can ask them to identify case studies themselves, as a group task. Things like conspiracy theories (e.g. governments spread COVID-19, aliens in Area 51, etc.), false health information, fake facts about minority groups... It may also be useful to allow students to do some quick online research on the case studies provided, so that they can see for themselves what information is out there. For inspiration, have a look at the sources listed on slide 24.



ALTERNATIVE EXAMPLES

- [Deepfake appears to show Ukrainian President Volodymyr Zelenskyy surrendering to Russia](#)
- [Satirical article about Vatican saying Jesus will not return reported as fact on US website](#)
- [German police accused of staging fake arrest of Greta Thunberg - Link 1](#)
- [German police accused of staging fake arrest of Greta Thunberg - Link 2](#)
- [Fake screenshot of Irish newspaper report on 'asymptomatic global warming'](#)
- [Claims that images of lights in the sky over Hawaii prove wildfires were started by lasers](#)

CONSPIRACY THEORIES

- [The Earth is flat](#)
- [Conspiracy theories about the death of Princess Diana](#)
- [Elvis is still alive](#)





3. Case studies

CASE STUDY #1

THE GROWING INFLUENCE OF 'Q'

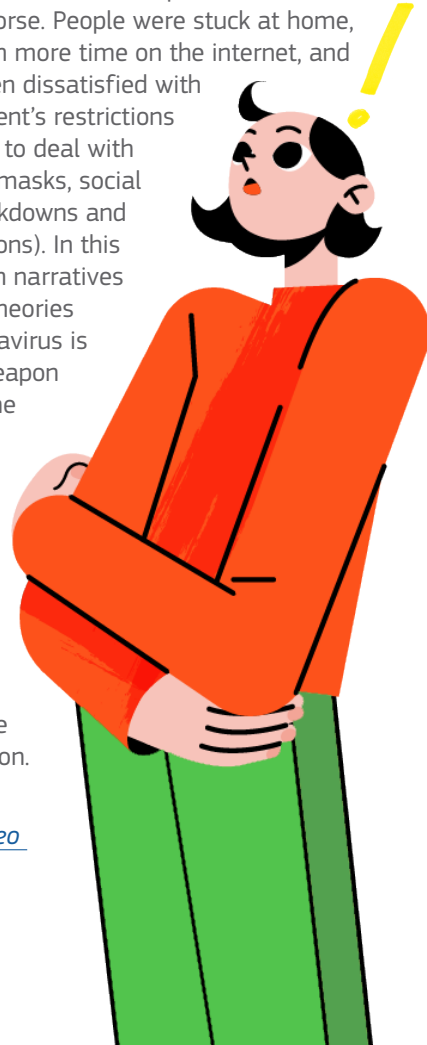
What do former U.S. President Barack Obama, former U.S. Secretary of State and presidential candidate Hillary Clinton, French President Emmanuel Macron, singer Lady Gaga, the pizza restaurant Comet Ping Pong in Washington D.C., Microsoft founder Bill Gates and actor Tom Hanks all have in common? According to the adherents of the QAnon conspiracy theory, they are all part of a Satan-worshipping, child trafficking ring involving celebrities, political and business elites; U.S. President Donald Trump was allegedly recruited by military generals to expose this network and end their control over the government and the media, also referred to as 'the deep state'. The theory is spread by an anonymous online figure using the codename 'Q', who claims to be a high-ranking official in the U.S. government with top security clearance giving them access to classified information.

QAnon emerged in fringe online message boards like 4chan and 8chan in 2017, and it has gained prominence since then on various social media platforms. A key characteristic of QAnon that has enabled its rapid spread is its participatory character: 'Q' regularly posts clues on message boards (also known as 'Q Drops'), inviting followers to conduct their own research to solve the mystery and get to the truth behind the different theories. Since late 2019, QAnon has made its way into European websites and social media pages and has morphed into local movements adapting to local narratives and contexts, primarily in Germany, France, Italy and the UK. Existing groups too, like far-right movements in Germany, have adopted QAnon narratives [in some cases](#). The powerful 'deep state'

that lies at the heart of Q's narratives supposedly knows no borders: European politicians and elites like Emmanuel Macron have also been described as 'pawns of the deep state' by local QAnon followers, and there have been accusations that the German government is running a secret paedophilia network.

Unsurprisingly, the COVID-19 pandemic made things even worse. People were stuck at home, spending much more time on the internet, and they were often dissatisfied with their government's restrictions and measures to deal with the outbreak (masks, social distancing, lockdowns and travel restrictions). In this context, QAnon narratives ranged from theories that the coronavirus is a biological weapon released by 'the deep state', to Bill Gates allegedly having planned the pandemic in order to impose mass vaccinations and control the world population.

You can also [watch this video about QAnon](#).



?! DISCUSSION QUESTIONS

1. Can you identify a common theme behind the QAnon narratives spreading in the US and Europe?
2. What makes the QAnon movement 'appealing' to followers? What makes it different from other conspiracy theories?
3. Can you identify other moments in history, critical events that have triggered similar waves of conspiracy theories and disinformation across continents? What do they all have in common?
4. From our previous discussion about the objectives of disinformation actors, how do you think QAnon narratives can be used by foreign powers to target Europe and make it look weaker?

CASE STUDY #2

CAREFUL! HEALTH NEWS HEADLINES CAN BE DECEIVING

By Robert H. Shmerling, MD, Senior Faculty Editor, Harvard Health Publishing; Editorial Advisory Board Member, Harvard Health Publishing. November 2021.

Ever read a headline that catches your eye but then found the story itself disappointing? Or worse, did you feel that the dramatic headline was utterly misleading? Yeah, me too.

The impact of a well-crafted headline can be big. We often skim the headlines, then decide whether or not to read on.

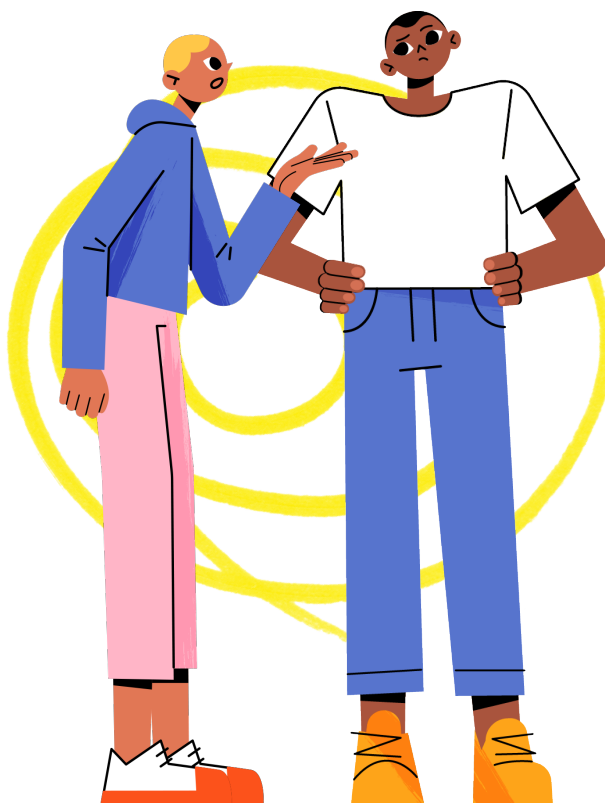
In the same way as [media coverage of drug research](#) can be misleading or confusing, health headlines can be equally deceptive. Watch for these pitfalls.

Overstated study findings

- **Were humans studied?** If a study finds that a drug is safe and effective for an important disease, that's big news. But what if all of the study subjects were mice? Leaving out this important detail from the headline exaggerates the study's importance.
- **Too much drama.** Dramatic terms such as 'breakthrough' or 'groundbreaking' are common in headlines about medical research. Yet true breakthroughs are quite rare. That's the nature of science: knowledge tends to accumulate slowly, with each finding building a bit on what came before.
- **Going too far.** Headlines often make a leap of faith when summarising a study's findings. For example, if researchers identify a new type of cell in the blood that increases when a disease is worsening, they may speculate that treatments to reduce those cells might control the disease. 'Researchers discover new approach to

treatment!' blares the headline. Sure, that could happen someday, but it's an overstatement when the study wasn't even assessing treatment.

- **Overlooking the most important outcome.** Rather than examining how a treatment affects heart disease, let's say, studies may assess how it affects a risk factor for it. A good example is cholesterol. It's great if a drug lowers cholesterol, but much better if it lowers the rate of cardiovascular disease and deaths. Headlines rarely capture the important difference between a 'proxy measure' (such as a risk factor) and the most important outcome (such as rates of death).



Source: Harvard Health Publishing Blog, 21 November 2021.
Edited for length.

?! DISCUSSION QUESTIONS

1. What are the possible negative effects of exaggerated or inaccurate headlines about scientific research (especially medical research)?
2. Can you think of (or find) any examples of articles that exaggerate scientific research findings?
3. Do you think people would still read or watch news about medical research if it was presented accurately?
4. How can people make sure they aren't deceived by over-dramatic reporting of research?

CASE STUDY #3 ARE BIRDS REAL?

Have you seen a bird recently? Did you notice anything strange about it? In 2017, 'Birds Aren't Real' signs started appearing at protests and the theory that what appear to be birds were actually drones began to spread on social media. Proponents of the theory claim that all birds in the United States were exterminated by the federal government between 1959 and 1971 and replaced by lookalike drones used by the government to spy on citizens. They also claim that this has happened in other countries, though they do not specify any EU countries.

As with other conspiracy theories, there are some inconsistencies in the claims its believers make, but here are some:

→ Bird poo falls on cars too often to be a coincidence: in fact, it is a form of liquid tracking device.

- The eggs and meat people eat are in fact '100% synthetic' and have been manufactured by the US government to stop people getting suspicious.
- President John F. Kennedy was assassinated by the US government because he was reluctant to allow birds to be exterminated.

Although the originator of the movement, Peter McIndoe, claimed for several years that he truly believed what he was saying, in recent years he has admitted it is a satirical conspiracy theory, born of frustration with the proliferation of conspiracy theories during the Trump presidency.

You can [read more about Birds Aren't Real here](#). This isn't the only 'fake' conspiracy theory out there – you can also [research the Bielefeld conspiracy](#).

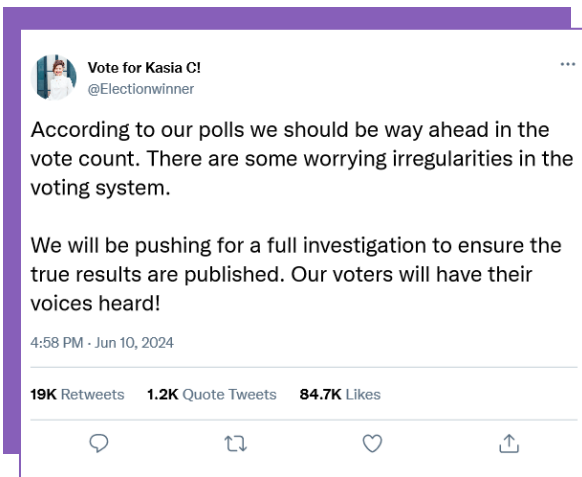
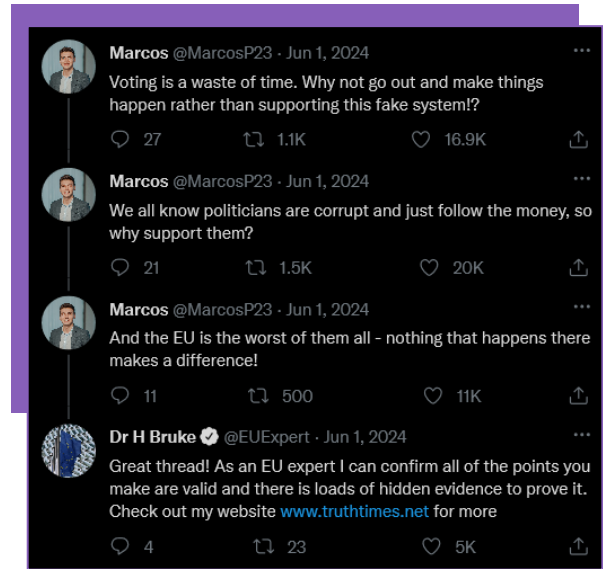
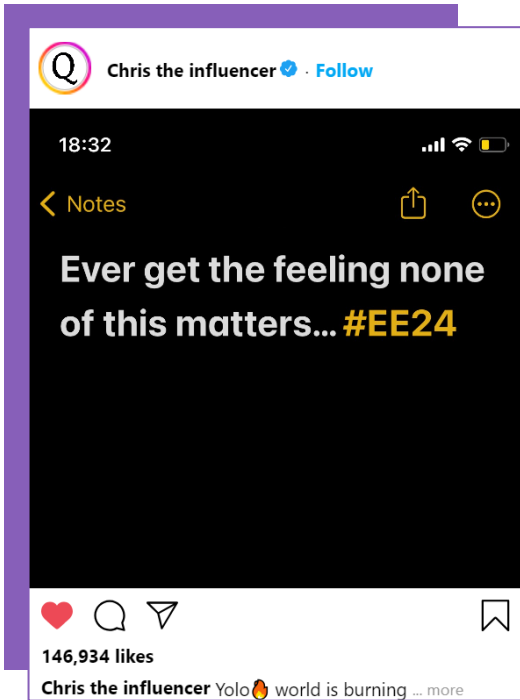


?! DISCUSSION QUESTIONS

1. Do you think anyone believes this theory?
2. What does this theory have in common with 'real' conspiracy theories you have heard about?
3. Why do you think people start believing in conspiracy theories?
4. Are satirical conspiracy theories a good way to combat 'real' ones?

CASE STUDY #4 SOCIAL MEDIA DISCUSSION OF ELECTIONS

Have a look at the social media posts below. They are not real, but they are inspired by the sorts of posts that tend to appear on social media in the lead-up to elections. It is important to keep in mind that small irregularities and human errors may occur in every election and that there are established routines in place for checking such things in all EU countries. However, elections are often the target of more coordinated disinformation, which claims election fraud, election irregularities etc.



Images generated with [Tweetgen.com](\"http://Tweetgen.com\") and [Zeob.com](\"http://Zeob.com\")

?! DISCUSSION QUESTIONS

1. Do you agree with any of the arguments made in these posts? Why (not)?
2. What motivation do you think people might have for posting things like this on social media?
3. What impact do you think posts like this could have on an election?
4. If your friend posted something like this on social media, how would you respond?

