



MODULE 5: DETECTING FAKE NEWS & DISINFORMATION

MODULE OVERVIEW

This module is designed to equip teachers with the knowledge and strategies necessary to help students aged 12-17 identify fake news and disinformation.

Key areas of focus in this module include the identification of common traits in misleading information, the development of critical thinking skills, and the application of fact-checking techniques. Through an interactive approach, teachers will learn how to integrate these concepts into their curriculum, enabling students to become more discerning consumers of information.

MODULE OBJECTIVES

Upon completion of this module, students will be able to:

- ◆ Recognize commonly used manipulative techniques used to spread fake news.
- ◆ Develop critical thinking and media literacy skills to evaluate online content effectively.
- ◆ Use online verification tools to fact-check information.
- ◆ Practice responsible online behavior.

STRUCTURE OF THE MODULE

5.1: Critical Thinking & Fake News Identification: Essential Skills

- Understanding the challenge of misinformation
- Common traits of misleading information
- Developing a critical mindset
- Mastering fact-checking techniques

5.2: Fact Checking and Verification: From Theory to Practice

- Utilizing online tools
- Reverse image search and visual analysis techniques
- Fact-checking platforms and their effective use
- Browser extensions and other verification tools

5.1: CRITICAL THINKING & FAKE NEWS IDENTIFICATION: ESSENTIAL SKILLS

Understanding the challenge of misinformation

The proliferation of fake news and disinformation presents a significant challenge to navigating this complex information landscape. This section delves into the core of understanding misinformation, equipping students with the foundational knowledge to recognize and analyze misleading information. By understanding key factors, students will be able to develop the initial skills necessary to firstly identify misleading information, laying the foundation for critical thinking and responsible online behavior.

The digital age presents a constant barrage of information, making it increasingly difficult to discern truth from fiction. Navigating this complex landscape requires more than just passively consuming information; it demands critical thinking skills and a proactive approach to verifying information. Instead of simply accepting information at face value, individuals must develop a critical mindset. This involves questioning the assumptions underlying news stories and online content. By asking "who created this information?", "what is the purpose of this information?", "who is the intended audience?", "what evidence supports the claims?", and "what are the potential biases of the source?", students can begin to critically analyze the information they encounter.

This section will equip students with the essential tools to navigate the complexities of the online information landscape. By developing a critical mindset, mastering fact-checking techniques, and actively seeking out diverse perspectives, students can become more discerning consumers of information and better equipped to identify and resist the influence of misinformation.



Common traits of misleading information

Misleading information often exhibits several identifiable characteristics. Understanding these traits allows students to recognize and question dubious content effectively.

- ◆ **Sensational headlines:**
Misleading articles often use exaggerated, emotionally charged, or clickbait-style headlines to capture attention and encourage sharing. These headlines can be misleading or entirely false.
- ◆ **Emotional manipulation:**
Many misleading articles rely on strong emotional appeals, such as fear, anger, or outrage, to provoke an immediate reaction from readers without encouraging deeper analysis.
- ◆ **Misleading images and videos:**
Out-of-context images, altered visuals, and deepfake videos can distort reality. Recognizing how images and videos are manipulated is key to identifying misinformation.

- ◆ **Lack of credible sources:**
Fake news frequently lacks verifiable sources or relies on anonymous, biased, or unreliable references. Checking for authoritative sources helps determine credibility.
- ◆ **Logical fallacies:**
Fake news often employs faulty reasoning, such as false dilemmas, ad hominem attacks, and appeals to conspiracy theories, to create persuasive but deceptive narratives.
- ◆ **Use of jargon and complex language:**
Some misinformation sources use overly technical or convoluted language to obscure falsehoods, making verification difficult for the average reader.

Developing a critical mindset

A key component of media literacy is fostering a questioning attitude towards online content. Students should adopt a habit of critical inquiry, asking fundamental questions about any piece of information they encounter.

Who created this information?

Investigate the author's credentials, affiliations, and potential biases.

What is the main claim?

Determine whether the claim is supported by credible evidence.

When was this published?

Assess the relevance and timeliness of the information.

Where did this originate?

Consider whether the source is reputable and has a history of accurate reporting.

Why was this information created?

Identify whether the intent is to inform, persuade, entertain, or manipulate.

Mastering fact-checking techniques

Evaluating the credibility of information sources is paramount in navigating the digital age. Students should learn to critically assess sources by considering several key factors.

First, establishing the authority of the source is crucial. Students should investigate the credentials and expertise of the author or organization behind the information.

- ◆ Are they recognized experts in the field?
- ◆ Do they have relevant qualifications and experience?
- ◆ Is the organization known for its accuracy and reliability?
- ◆ Does the organization have a history of bias or misinformation?

Secondly, **assessing the accuracy of the information** is essential. Students should carefully examine the evidence presented, looking for supporting data, research studies, expert opinions, and credible sources. They should also check for inconsistencies or contradictions within the information itself or with information from other reliable sources.

Thirdly, **objectivity** plays a crucial role. Students should consider the potential motivations of the source and whether they have any vested interests in presenting a particular viewpoint. They should look for signs of bias, such as strong language, emotional appeals, or a lack of balanced perspectives.

Furthermore, **currency** is a significant factor. Students should consider when the information was published and whether it remains relevant in the current context. Rapidly evolving fields require up-to-date information, while historical information may still be relevant in certain contexts.

Finally, **coverage** should be considered. Does the source provide a balanced and comprehensive overview of the topic, or does it present a limited or biased perspective? Students should look for evidence of thorough research, consideration of multiple viewpoints, and a fair representation of different perspectives.



Cross-Referencing and Lateral Reading: Beyond evaluating individual sources, students should learn to cross-reference information from multiple reliable sources to identify inconsistencies or biases. This involves comparing information from different sources to see if they align or contradict each other. By practicing lateral reading, students can develop the critical thinking skills necessary to navigate the complex information landscape and avoid being misled by misinformation.

Furthermore, the technique of "lateral reading" is crucial. Instead of diving deeper into the initial website, students should navigate away from it to investigate the source and its credibility. This involves:

Checking the source:

Researching the website's author or organization. Identify any potential bias or messaging associated with the organization.

Conducting a web search:

Use keywords from the initial source to search for information about the author, the organization, and the claims made in the article.

Looking for corroborating evidence:

Search for information from other reputable sources that supports or contradicts the claims made in the initial article.

Checking for fact-checking websites:

Utilize resources like Snopes, PolitiFact, and FactCheck.org to verify the accuracy of the information.

5.2: FACT CHECKING AND VERIFICATION

Utilizing online tools

In today's digital age, information flows in at an unprecedented pace from a multitude of sources. While this abundance of content can foster learning, creativity, and global awareness, it also presents significant challenges. Students are not only bombarded with meticulously researched news articles and academic studies but also with rapidly shared social media posts, viral images, and videos—many of which lack proper verification or may even be intentionally misleading. This overwhelming influx of information can make it difficult to discern reliable facts from unfounded claims or outright falsehoods.

Given this landscape, it becomes imperative for students to be equipped with a robust set of digital verification tools and critical thinking skills. These tools—ranging from reverse image searches and dedicated fact-checking platforms to browser extensions and social media analysis apps—serve as essential filters that help sift through the noise. By leveraging these resources, students can effectively evaluate the credibility of sources, cross-reference information across multiple platforms, and ultimately make informed decisions about which content to trust. This proactive approach not only enhances their digital literacy but also empowers them to navigate the complexities of online information with confidence and discernment.

Reverse image search and visual analysis techniques

Unveiling the truth behind images

Visuals play a powerful role in shaping our perception of information. However, with advancements in technology, even images can be manipulated to deceive. This subsection empowers students to become discerning viewers by introducing them to techniques for analyzing and verifying the authenticity of images.

Google Reverse Image Search & TinEye

These powerful tools allow students to upload an image or provide a web address and conduct a reverse image search. This search scours the internet for similar images, helping students identify the original source and potential manipulations. For instance, if a student encounters an image shared online with a sensational headline, they can use a reverse image search to see if the image appears elsewhere with a different context or caption.

Video Analysis Tools and Detecting Deepfakes

The rise of deepfakes, which are manipulated videos that can realistically make someone appear to say or do something they never did, necessitates the use of video analysis tools. While some deepfakes are sophisticated and require advanced detection methods, students can be introduced to resources that analyze subtle inconsistencies in facial features, blinking patterns, and lighting to identify potential manipulation.

Fact-checking platforms and their effective use

Separating Fact from Fiction

Fact-checking websites play a critical role in verifying information and debunking misinformation. This subsection introduces students to reputable fact-checking platforms and equips them with the skills to leverage these resources effectively.

Snopes, PolitiFact, and FactCheck.org

These established fact-checking websites employ journalists and researchers to verify claims made in news articles, social media posts, and other online content. Students will learn how to navigate these platforms to search for claims they encounter online and see if they have been fact-checked. Additionally, they will be guided on how to evaluate the evidence presented by fact-checking websites to understand the reasoning behind their conclusions.

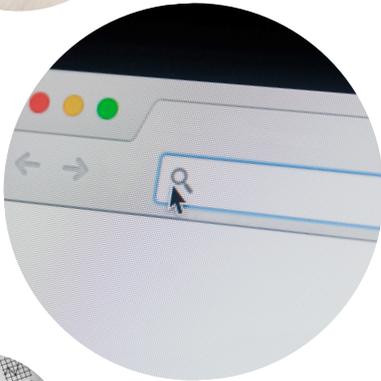
Guiding Effective Use

Simply knowing about fact-checking websites is not enough. This section will delve into effective utilization of these resources. Students will learn how to properly formulate search queries to find relevant fact-checks, how to assess the credibility of the fact-checking website itself, and how to interpret the different ratings used by these platforms (e.g., "True," "Mostly True," "False").

Browser extensions and other verification tools

Building Your Digital Verification Arsenal

Beyond the tools mentioned above, a vast array of resources exists to aid in online verification. This subsection introduces students to a wider range of verification tools that can be incorporated into their digital toolbox.



Browser Extensions for Enhanced Verification

Several browser extensions, like Media Bias/Fact Check Extension or Cheker – the Fact Check Extension can be installed to provide real-time credibility ratings for news websites visited by the user. These extensions often analyze factors such as the website's ownership, transparency, and history of publishing factual content. Students will learn how to install and utilize such extensions to gain immediate insights into the credibility of a news source they encounter online.

Hoaxy & BBC Reality Check

These tools track the spread of information across social media, allowing students to visualize how misinformation circulates. Hoaxy maps out the diffusion of stories across Twitter, highlighting interactions between real users and bots. BBC Reality Check, the BBC's disinformation debunking service.

THE CHINESE WHISPERS GAME

Practical Activity 1

(OFFLINE)

Objective:

This activity allows students to experience firsthand how easily information can be distorted and emphasizes the importance of critical thinking and verification before sharing information online.

Learning objectives:

- Understand how information can be misconstrued or twisted when passed from person to person.
- Recognize the importance of verifying information before sharing it.
- Develop critical thinking skills to evaluate the credibility of news sources.

Activity instructions:

Introduction (5 minutes):

- Briefly introduce the concept of fake news and disinformation, explaining how it can spread misinformation and mislead people.
- Explain the activity as a simulation of how rumors and fake news travel.

Chinese Whispers Game (15 minutes):

- Instruct students to form a line, standing shoulder-to-shoulder.
- Whisper a clear, concise sentence related to current events or a well-known story (e.g., “The principal is giving out free pizza today”) to the first student in the line.
- The first student whispers what they heard to the second student in line, and so on, until the message reaches the last student.
- The last student stands up and announces the sentence they heard out loud to the entire class.

Debrief and Discussion (20 minutes):

- Compare the original sentence to the final version announced by the last student.
- Discuss how the message changed throughout the line.
- Ask students why the message might have been altered (e.g., mishearing, misremembering, adding details).
- Relate this game to how fake news and disinformation spreads online.
- Emphasize how information can be unintentionally or intentionally twisted as it is shared from person to person or on social media.

Critical Thinking Strategies (10 minutes):
Brainstorm as a class different strategies students can use to evaluate the credibility of information they encounter online.

Assessment:

- Observe student participation in the discussion and role-playing activity.
- Engage in informal discussions to assess students' understanding of the concepts of fake news and disinformation.

- Examples:
 - Check the source of the information. Is it a reputable news organization or a personal blog?
 - Look for evidence to support the claims being made.
 - Be wary of sensational headlines or emotionally charged language.
 - Consider if the information aligns with what you already know about the topic.

- ◆◆ **Wrap-Up (5 minutes):**
Summarize the key takeaways from the activity.
- ◆◆ Remind students to be critical consumers of information and to verify information before sharing it online.

Differentiation:

- For younger students, you can use simpler sentences or phrases for the telephone game.
- For older students, you can provide them with a more complex news story or event to whisper in the telephone game.
- You can also encourage them to research different fact-checking websites and tools.

"Fact or Fiction: News Headline Challenge" (H5P Game - Quiz Set)

Practical Activity 5 (ONLINE)

REFERENCES

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- **Lazer, D. M. J., Baum, M. A., Benkler, Y., Berinsky, A. J., Greenhill, K. M., Menczer, F., ... & Zittrain, J. L. (2018).** The science of fake news. *Science*, 359(6380), 1094–1096. <https://doi.org/10.1126/science.aao2998>
- **Vosoughi, S., Roy, D., & Aral, S. (2018).** The spread of true and false news online. *Science*, 359(6380), 1146–1151. <https://doi.org/10.1126/science.aap9559>
- **Pennycook, G., & Rand, D. G. (2019).** The Implied Truth Effect: Attaching Warnings to a Subset of Fake News Stories Increases Perceived Accuracy of Stories Without Warnings. *Management Science*, 66(11), 4944–4057. <https://doi.org/10.1287/mnsc.2019.3478>
- **Allcott, H., & Gentzkow, M. (2017).** Social Media and Fake News in the 2016 Election. *Journal of Economic Perspectives*, 31(2), 211–236. <https://doi.org/10.1257/jep.31.2.211>
- **Wineburg, S., McGrew, S., Breakstone, J., & Ortega, T. (2018).** Evaluating Information: The Cornerstone of Civic Online Reasoning. Stanford History Education Group. <https://purl.stanford.edu/fv751yt5934>
- **UNESCO (2018).** Global Media and Information Literacy Assessment Framework: Country Readiness and Competencies. <https://unesdoc.unesco.org/ark:/48223/pf0000224655>
- **International Federation of Library Associations and Institutions (IFLA).** <https://www.ifla.org/>
- **Links of interests**
- **Snopes:** <https://www.snopes.com>
- **A well-established fact-checking website that investigates and debunks urban legends, rumors, and misinformation.**
- **PolitiFact:** <https://www.politifact.com>
- **A fact-checking platform focused on political claims, offering detailed explanations and evidence-based verdicts on current issues.**
- **FactCheck.org:** <https://www.factcheck.org>
- **A non-partisan website dedicated to checking the factual accuracy of political news and statements.**
- **Google Reverse Image Search:** <https://images.google.com/>
- **A tool that allows users to search by image, helping verify the origins and authenticity of visual content.**
- **TinEye:** <https://tineye.com>
- **Another reverse image search tool that assists in identifying image sources and detecting alterations or misappropriations.**
- **NewsGuard:** <https://www.newsguardtech.com>
- **A browser extension that provides credibility ratings for news websites based on journalistic standards and transparency.**
- **Hoaxy:** <http://hoaxy.iuni.iu.edu/>
- **A tool that visually maps the spread of information (and misinformation) on Twitter, highlighting interactions between users and bots.**
- **CrowdTangle:** <https://www.crowdtangle.com>
- **A platform used to track and analyze the spread of content on social media platforms like Facebook, Instagram, and Reddit.**

