



### UNIT 3: MISINFORMATION

#### Lesson 9

## 7. What's AI Got To Do With It?

It is impossible to overlook the increasing role of artificial intelligence (AI) in the spreading of misinformation and disinformation. The rapid advent of AI technologies has news organizations, tech companies, researchers, government officials, and more scrambling to establish safeguards and standards, but already AI is being used in a number of concerning ways. For example, AI-generated “news” websites can be found online, “deepfakes” depict public figures doing or saying things they never did or said can be easily made and spread, and some governments have created AI broadcasters that deliver state-funded news. In this lesson students will learn what AI is, how it is being used to spread misinformation, and most importantly, how to identify it. Please take time with this important lesson.

Key Standards—CCSS.ELA-LITERACY: RI.8.1, RI.8.9, W.8.1, W.8.1.A, W.8.1.B, W.8.1.C, W.8.7, W.8.8, SL.8.1, SL.8.1.A, SL.8.1.B, SL.8.1.C, SL.8.1.D, SL.8.2, L.8.6. ISTE: 2b, 3a, 3b. CASEL: 4a, 4b, 4d, 5d, 5e.

### Learning Objectives

Students will...

- ✓ Understand what artificial intelligence (AI) is and how it works.
- ✓ Understand the role AI is playing in the dissemination of misinformation.
- ✓ Learn techniques to spot AI in use.



### Introducing The Lesson

Review what students have learned thus far: Although the spreading of misinformation is not a new phenomenon, increasingly sophisticated technologies are making it easier than ever to create, share (and, fortunately, even detect!). One of these new technologies is artificial intelligence, or A.I. Find out how much your students know about A.I. Ask: *Can you think of any examples of A.I. in our everyday lives?* (Answers may include: Siri, Alexa, self-driving cars, etc.). Ask: *Have you ever used AI? Can you explain how AI works?*

### The Lesson

1. Screen [Video 1]. It answers the question: *What is AI?*



## The Lesson, continued

2. Review and have students record the definition:

- **ARTIFICIAL INTELLIGENCE (AI):** The ability of a machine or computer program to perform tasks that historically required human intelligence.

3. Review how AI works: Remind students what they've already learned about algorithms (in Level 2). An algorithm is a set of instructions that tell a computer what to do, much like how a recipe tells a baker how to make a cake. AI is **a group of algorithms that can modify themselves or create new algorithms—even problem-solve!—in response to learned inputs and data.**

4. The key thing for students to remember is that AI learns from the data it collects, and it collects this data from us! Every time we fill out an online form, use face filters, complete captcha tests, edit Wikipedia, message our friends, and basically do anything online—we are creating data. The data we freely give away every single day feeds AI systems that are used in many everyday interactions.

5. Explain that collecting data is just the first step. AI models have to *learn*. They learn by observing and memorizing our data, looking for and repeating patterns. That way, when they are fed new information they can compare it to what they've already learned in order to make *predictions*.

6. While many people assume that AI *thinks*, it is important for students to understand that what it is actually doing is making *predictions*.

7. Tell students that, as they learned by watching the video, and from personal experience, AI is already being utilized in a myriad of ways. While they will be exploring these different ways in future lessons, this lesson will focus on how AI might be used to spread misinformation and even disinformation. This is a good time to explain (and have them record) the difference between these terms:

- **MISINFORMATION:** False or inaccurate information.
- **DISINFORMATION:** False information which is intentionally intended to mislead.

8. Next, give students examples of how AI is being used to spread misinformation and disinformation, **and** give them tips for detecting it.





## The Lesson, continued

9. **Example #1:** Tell students that AI tools can be used to write news articles. Some websites even churn out vast amounts of clickbait articles to earn ad revenue (remind students of the example of the Macedonian youth). These websites often do not disclose ownership or authorship. Articles, on a variety of topics, may include misinformation and disinformation.

**Give students these tips to detect AI-generated content:** It is often possible to detect AI-generated content by looking for repetitive word or phrases, bland language, sentences that sound odd, and articles that end with, "In Conclusion." Students should use the 3 questions they learned in an earlier lesson to evaluate articles they find questionable.

10. **Example #2:** AI tools are being used to produce or alter video content to make it look like someone is saying or doing something that they did not say or do. This is called a "deepfake." Have students record this definition:

- **DEEPPFAKE:** AI-generated video of a person in which their face or body has been digitally altered so that they appear to be someone else or are saying something they did not say.

Deepfake videos can be very convincing. Screen [Video 2], it is a deepfake of President Barack Obama. Discuss how "deepfakes" of political figures, like this one, can have dire consequences for democracy and even national security. Next, screen [Video 3]. Discuss how some deepfakes, like this one, might be entertaining, for some people they might cause embarrassment or damage their reputation.

11. **Example #3.** AI is also being used to create completely fake people and voices. Ask students if they can detect which of the following is a real person and which one is AI-generated (also in Slides).



From: <https://www.nytimes.com/2023/04/08/business/media/ai-generated-images.html>



## The Lesson, continued

**Answer:** The image on the left is a real person, photograph taken by Tara Moore for Getty Images. The image on the right was created by Julie Wieland using Midjourney, a popular A.I. tool that creates images from text commands. She generated it with the following prompt:

*A young man is sitting on a couch with headphones on, in the style of iconic pop culture references, prairiecore, avocadopunk, photo taken w/kodak portra, garden state, intense gaze, modular, movie still.*

**Give your students these tips to detect a deepfake or an AI image:**

- **Facial Inconsistencies:** Look for unnatural blinking, mismatched eye movements, distorted facial expressions, or unusual head movements.
- **Unnatural Artifacts:** Pay attention to any strange or unnatural artifacts around the face or other parts of the video or image. These may include blurriness, pixelation, or unusual edges.
- **Lip-Syncing Errors:** Deepfakes may have lip movements that do not match the audio properly.
- **Quality Discrepancies:** Look for variations in the overall video or image quality or sharpness compared to the background or other elements in the scene.
- **Background Anomalies:** Keep an eye out for unusual or distorted elements in the background, such as strange shadows or objects.

(Surprise students by telling them the tips above were generated by ChatGPT, a natural language processing tool driven by AI technology that can answer questions, write essays, and more.)

## Activity or Homework

Have students to try an AI tool! Select a topic your class is studying or may be interested in (science, history, current events, sports, etc.) and ask them to develop a question about the topic. If they have access to devices, have them try an AI chatbot like [Bard](#) or [ChatGPT](#) and ask this question (or you can do this step for them). When they (or you) get the answer, have students use the “3 Essential Questions” they learned in an earlier lesson to evaluate the response. Have them report their findings.

## Goal

Students understand what AI is, how it works, and how it might be used to spread misinformation.





## TERMS TO KNOW

### **ARTIFICIAL INTELLIGENCE (AI)**

The ability of a machine or computer program to perform tasks that historically required human intelligence.

### **MISINFORMATION**

False or inaccurate information.

### **DISINFORMATION**

False information which is intentionally intended to mislead.

### **DEEPFAKE**

AI-generated video of a person in which their face or body has been digitally altered so that they appear to be someone else or are saying something they did not say.



Your Name(s) \_\_\_\_\_

## YOU TRY IT!

Your Topic: \_\_\_\_\_

Think of a question about this topic (what would you like to know about it?): \_\_\_\_\_

Ask [Bard](#) or [ChatGPT](#) (two AI tools) this question. Read the response carefully, and check its accuracy by using the "3 Essential Questions":

1. **Who is behind this information?** (check to see what sources of information are credited or cited).

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2. **What is the evidence for their claims?** (check to see if any claims made are backed up by credible evidence).

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3. **What do other sources say about the author/organization and the claims?** (search the topic elsewhere to see what others have published about it).

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Did you find the response you got to be credible? \_\_\_\_\_