

Lesson Plan: Should We Worry about Facial Recognition Technology?

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Featured resources

Above the Noise: [Is Facial Recognition Invading Your Privacy?](#)

The Lowdown: [Profiling, a Brief History of Identification](#)



Opening quick write prompt:

Do you think companies, governments and law enforcement should be able to identify your “face print” using facial recognition technology? Why or why not? How is this technology already being used in our daily lives?

A quick write allows students to write down their thoughts before discussing the opening question in order to increase participation and make the discussion more accessible to English Language Learners.

Objective

- Students will analyze the role of facial recognition technology and similar advances and how they affect the way people are identified and tracked.
- Students will evaluate and reflect on the positive and negative consequences of technologies that allow governments, law enforcement and companies to identify and track their citizens.

Essential Question and Lesson Context

What is facial recognition software and how does it affect my life? How does society balance the need to identify and track people, especially wrong-doers, with the right to privacy?

Facial recognition software is increasingly used for everything from silly Snapchat filters (give yourself cat ears and a rainbow tongue!) to border security. We now have the technology to create individual “face prints” that are so accurate Apple used face-printing software in the latest iPhone. Forget fingerprints. You can now unlock your phone with your face. But how does this technology affect our safety, privacy, ability to peacefully protest— or even go out in public anonymously. This lesson explores how facial recognition and similar technologies are being used, and how public opinion and public policy have changed as identification technology has developed throughout history.

Key vocabulary

Pre-teach key vocabulary before students do the activity, especially if you have English Language Learners. After going over the simple definition, consider providing a visual aid or having students draw one. More ideas for how to pre-teach vocabulary can be found [here](#).

Word	Simple definition
cross-reference (v.)	To direct a reader in one place to information in another place <i>Information from one database was cross-referenced in another, making it possible to track people across state lines.</i>
data mining (v.)	The practice of searching through lots of computerized data to find patterns or trends. <i>Facial recognition technology also includes data mining: companies can see what products you like based on the photos you post online.</i>
futuristic (adj.)	Relating to the future, very modern and cutting edge <i>Facial recognition seems futuristic, but we use it all the time, like whenever we put a filter on a Snapchat photo.</i>
outgrowth (n.)	Something that develops as a result of something else <i>One outgrowth of facial recognition technology is the ability to put together “digital lineups” of suspects in a crime.</i>
surveillance (n.)	The act of carefully watching someone or something <i>Stores set up camera to conduct surveillance on customers to prevent shoplifting and see what products people buy.</i>

Investigate

- Discuss the quick-write prompt to gauge what students already know about this issue.
 - **NOTE:** *Students may think of facial recognition technology as a government or security tool—yet they likely use it daily on apps like Snapchat.*
- Depending on the students’ responses and information in the overview, explain that facial recognition is used in a variety of contexts: social media platforms like Snapchat, public safety, crime prevention and advertising.
- **Ask:** What do you know about how facial recognition technology works? Call on several students to share their ideas.
- Tell students they will learn the basics of facial recognition technology and how it’s used from the [Above the Noise](#) episode:
 - **Stop the video at 1:47 and ask:** How are face prints created?
 - **Stop at 2:27:** Why is there a good chance our faces are recorded every day? What could happen as a result?
 - **Stop at 3:30:** What are the ways law enforcement and airport security are using facial recognition?

- **Stop at 4:19:** How is facial recognition technology being used in China?
- **Stop at 4:57:** How do tech companies like Facebook and Google use facial recognition?
- **At the end of the video, ask students the final questions:** Where would you draw the line when it comes to facial recognition? Private companies (like Snapchat or Walmart)? Everyone? No one? Explain your answer using evidence from the video.
- After discussing the Above the Noise video, ask students: What other technology has law enforcement, the government and companies used to keep track of you? Have students list as many as they can think of. (Ex: fingerprinting, mug shots, public records like taxes and home purchases, DNA testing, voice recognition, etc.)
- **Ask:** What do you think people might have worried about when the “new” technologies of fingerprinting or mug shots were invented?
- **Explain:** We’re more comfortable with a lot of these formerly new technologies now because we’ve learned to live with them. But that hasn’t always been the case.
- Individually or in small groups, students read [The Lowdown](#) post, which gives a historical overview of identification technologies. As students read, they should note how people at the time felt about new identification technologies and what laws or policies occurred as a result.
- **Transition to the Make and Share:** Tell students they will have a chance to share their response to this issue in the comments section of The Lowdown. The first time they comment, students must sign in to [Disqus](#), a free discussion app embedded in The Lowdown.
 - To sign in to [Disqus](#), click the “Comments” button at the bottom of the post.
 - Click the blue “Get Started” button in the gray “Welcome to Disqus” box.
 - Students will need to enter a username. We recommend first name, last initial.
 - After signing in for the first time, students must verify their email address before commenting. A verification email will appear in their inbox once they sign in to Disqus.

Make and Share

- Individually or in small groups, students post in the comments section in response to their
 - Responses should be supported by evidence from the Above the Noise episode, The Lowdown post, or other research on the topic.
 - Encourage students to reply to other comments after posting their response. Remind them to use evidence to support their claims and respectful language when replying.
- Students can create their own response or use the following question as a starting point:
 - **Make your case:** Is facial recognition and other forms of identification technology an invasion of privacy? Why or why not? Who should have access to our face prints and other data? Who shouldn’t?

Assessment/Reflection

- Students reflect on what they have learned either through a class discussion or in writing:
 - What have you learned about facial recognition and other identification technology? Did your opinion change or stay the same as you learned more about the issue?
 - What was it like to post your responses publically and reply to other posts? What did you learn from other students? What do you hope they learned from you? What will you do the next time you post a comment in response to The Lowdown?

[Circle chats](#), small-group discussions and [think-pair-share](#) provide a safer space for students to practice speaking and listening, and also boost participation during whole-class discussions.

Extension/Homework

Write/speak locally: Students turn their response to this issue into a letter, short speech or presentation, then research ways to make their voice heard in their community. (Example: Speaking during the public comment section of a city council meeting, posting in an online forum, etc.) For a list of how to contact local officials in your area, check out [KQED Learning's Local Election Toolkit](#).

Common Core, NGSS and C3 standards

CCSS.ELA-Literacy.CCRA.R.1	Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
CCSS.ELA-Literacy.CCRA.R.7	Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
CCSS.ELA-Literacy.W1	Write arguments to support claims with clear reasons and relevant evidence.
NGSS.SEP.7	Engaging in argument from evidence
NGSS.SEP.8	Obtaining, evaluating and communicating information
D2.Civ.13.6-8	Analyze the purposes, implementation, and consequences of public policies in multiple settings.