Lesson | Using Artificial Intelligence for Good

Help students flex their critical-thinking skills as they explore the basics of AI, then create their own tech solution.

Objective

Students will identify real-life examples of artificial intelligence, then brainstorm and design a tech solution to a community problem.

Standards, Grs. 3–7

NGSS

- ETS1-1 Define a design problem
- ETS1-2 Generate/evaluate solutions

ISTE

- 3d Explore real-world issues and pursue solutions
- 4 Use a design process to solve problems

CCSS

- L.3.4.C & L.4–6.4.B Use a known root word as a clue for an unknown word
- SL.1 Discuss collaboratively
- SL.4 Report on a topic with relevant details

Time

60 minutes

Materials

- Explore Artificial Intelligence activity sheet
- Classroom poster

Remote Ready

1 **Hook** students by asking: Has a friend ever given you a recommendation for a song or video to try? Has a website?

2 **Explain** that websites use artificial intelligence (AI) to make those recommendations. Preview the vocabulary on the Explore Artificial Intelligence activity sheet as needed. Have students find word parts they recognize to help form their understanding of the terms. (For example, in the word "autonomous," the prefix "auto-" means self, like autobiography. Chatbot, like robot. Facial, like face. Recognition, like recognize. Predictive, like predict.)

3 **Distribute** the Explore Artificial Intelligence activity sheet. Divide students into groups, then assign one AI term to each group and instruct them to complete the entire row. Ask: *Do you see this technology in your own life? How could it be used to make the world better?*

Students working remotely can share their ideas in a collaborative document or on a discussion board, or complete the entire chart individually.

4 **Mix up** the groups, then have students share what they've learned and complete the remaining rows of the sheet.

5 As a class, **create** a definition of AI. *Possible response:* AI results when humans create algorithms (steps) that computers can follow to make "choices" in order to complete tasks, using large amounts of data to find patterns and get better at making choices over time. Ask: *How is AI similar to and different from human intelligence?*

6 **Refer** to the classroom poster to discuss examples of how students used data and technology for social good.

Level up: Ask students what "thinking" skills are required for the various examples of AI (e.g., making decisions, translating languages).

7 Have students **complete** the Tech4Innovation contest entry form to create a tech solution to a community problem. Point out that the tech solution doesn't have to include AI, but it can.

Supporting All Learners Allow students to conduct a safe web search to identify examples of their assigned AI term. Provide sentence starters ("One example of _____ is...", "This can help people because...").

Name _____

Explore Artificial Intelligence

AI is all around us! Complete this chart to organize your ideas.

	AI Term	Example	Another Example	Ways It Can Solve Problems and Help People
1	**autonomous:** something built to work on its own (without a human operating it)	robot vacuum		
2	**chatbot:** a program that has been set up with automated responses so it can have a "conversation" with a human	confirming a doctor's appointment through automatic text messages		
3	**facial recognition:** a program that can identify faces	using your face to unlock a smartphone		
4	**machine learning:** a program that processes large amounts of data in order to find patterns and get better (over time) at making choices	over time, a map app gets better at predicting traffic		
5	**predictive algorithm:** the steps a computer follows to make predictions	a search engine predicts what you want to search for before you finish typing		
6	**speech recognition:** computers that match sounds to words	voice typing		