



## CLASSROOM ACTIVITY

# (Artificial) Intelligence

## OBJECTIVES

Students will be able to:

- **Research** and **describe** characteristics and effects of artificial intelligence
- **Debate** artificial intelligence's benefits and risks
- **Develop** their own stance on the role artificial intelligence plays in society

## OVERARCHING QUESTION

Is artificial intelligence beneficial to society?

## ACTIVITY SUMMARY

Students will explore the concept of artificial intelligence (AI) and the way in which it affects their daily lives. After researching the impact of AI in one career area, they will debate its benefits and risks. They will ultimately apply what they have learned to craft their own opinion on the role of AI in today's society.

## MATERIALS

- White board or chart paper
- Markers, for students to share
- Devices with internet access, at least enough for half the class
- [How Artificial Intelligence is Powering Everyday Tasks](#) article, one per student
- Analyzing Conclusions Handout, one per student

## CHALLENGE

1. Before students enter the classroom, prepare for a class graffiti wall by writing “*Intelligence*” on the board in large letters. As students arrive, invite them to contribute to the graffiti wall by adding a word, phrase, or picture that they associate with this word.
2. Once all students have added a thought to the graffiti board, challenge student pairs to use the ideas on the board to form their own definition of “*intelligence*”.
3. Invite a few pairs to share what they have developed and then write the following dictionary definition on the board:

Intelligence: the ability to learn or understand or to deal with new or trying situations

4. Underline the words “learn” and “understand” and explain that students continually apply and strengthen their intelligence because they are always learning new things. Then, modify the intelligence definition by adding the following two italicized parts below and read the new definition aloud:

*Artificial Intelligence: the ability of computer systems to learn or understand or to deal with new or trying situations*

Explain that the field of artificial intelligence, as students are likely aware, focuses on creating machines that can process information and produce results similar to those of which humans are capable.

5. Tell students that today they will be challenged to investigate and debate the pros and cons of artificial intelligence in order to ultimately answer: is artificial intelligence beneficial to society?
6. Distribute one Analyzing Conclusions Handout to each student and then elaborate on the challenge by reading aloud the bullets listed under *Step 1: Define the Challenge*. Explain that before students are assigned a career and a specific side, they will research AI from a neutral perspective. Tell students that they will complete this research and the duration of the challenge with a partner and assign a partner now.
7. After answering questions, prepare student pairs to perform research to better understand the challenge:
  - Pass out copies of the “How Artificial Intelligence is Powering Everyday Tasks” article to each student
  - Explain that students will have about 10 minutes to read this article aloud with their partner and take notes that will help them better understand the concept of AI and how it can influence their daily lives

## ARGUE

1. Bring the class back together and explain that it’s now time to develop an argument. Call on a student to read the handout’s *Step 2: Create an Argument* section aloud.
2. Explain that as pairs complete further research on AI, they will investigate it through the lens of a specific career area and a specific point of view. Assign\* the following careers and point of view to each pair.
  - Education Careers: For AI and Against AI
  - Healthcare Careers: For AI and Against AI
  - Transportation Careers: For AI and Against AI
  - Manufacturing Careers: For AI and Against AI
  - Customer Service Careers: For AI and Against AI
  - Agriculture Careers: For AI and Against AI
  - Business Careers: For AI and Against AI

\*Notes:

- One pair, for instance, should be assigned “For Artificial Intelligence in Education” and another pair should be assigned “Against Artificial Intelligence in Education”
- Ensure that a separate pair is researching each side of each assigned area. If your class is not divisible by four, you may have two students work independently or have a couple groups of three
- Pick and choose the career areas that are most relevant to your class

3. Tell students that they will have about 15–20 minutes to perform internet research on their assigned topic and write their statement. Quickly recap and encourage students to:
  - Perform research on their topic through a simple web search. Typing “their topic area” + “Artificial Intelligence” + “pro or con” into a search engine will yield many results
  - Use their research to inform their argument and create a 30-second statement explaining their side as well as one question for the opposing side

## CONCLUDE

1. When there are about 10–15 minutes left in the class period, randomly pair each career group with another career group. For instance, the four education students may be paired with the four students who focused on transportation.
2. Explain that as one career group debates, the other career group should watch and take notes on important points.

Then lead the small groups in debating their topic area by:

- Tell groups to decide which career area will debate first
- Instruct the pro side to state their argument first
- Instruct the con side to state their argument
- Allow one minute for each side to ask their question and respond
- Repeat with the second career group

Note: If there are an odd number of groups, one group may debate independently and then join another group to observe their debate.

3. Once students have participated in one debate and observed the debate of one other career area, students should independently complete the *Step 3: Analyze Conclusions* portion of the handout. This section will probe them to reflect on the conclusions that each side made and consider their own answer to the question: Do you believe artificial intelligence is beneficial to society?

## STANDARDS

### Next Generation Science Standards

- Engineering Design—Cross-Cutting Concept: The uses of technologies and limitations on their use are driven by individual or societal needs, desires, and values; by the findings of scientific research; and by differences in such factors as climate, natural resources, and economic conditions. (MS-ETS1-1)

### ITEEA Technological Literacy Standards

- Standard 3. Students will develop an understanding of the relationships among technologies and the connections between technology and other fields of study. In order to appreciate the relationships among technologies, as well as with other fields of study, students should learn that:
  - E. A product, system, or environment developed for one setting may be applied to another setting.
- Standard 4. Students will develop an understanding of the cultural, social, economic, and political effects of technology. In order to recognize the changes in society caused by the use of technology, students should learn that:

- D. The use of technology affects humans in various ways, including their safety, comfort, choices, and attitudes about technology's development and use.
- E. Technology, by itself, is neither good nor bad, but decisions about the use of products and systems can result in desirable or undesirable consequences.

### **Common Core English Language Arts**

- Science and Technical Subjects
- CCSS.ELA-LITERACY.WHST.6-8.1: Write arguments focused on discipline-specific content.

### STEP 1: DEFINE THE CHALLENGE

Your challenge is to:

1. Develop a basic understanding of artificial intelligence (AI), including how it affects our daily lives.
2. Research AI from the perspective of an assigned career and specific point of view. Remember: It is okay to *not* agree with your assigned point of view. The goal is to understand both sides of the argument!
3. Prepare and share an argument that explains your assigned position on AI, based on your research.

List research notes below that could help you tackle #1:

### STEP 2: CREATE A DESIGN

You will now explore AI from an assigned career area and point of view. Once you have performed additional research, you will work with your partner to craft:

1. A 30-second statement explaining why you are for AI or against AI, from the perspective of your career area.
2. One thoughtful question to pose to the opposing side.

Use the space below to brainstorm ideas for your statement and question. Then write a draft of each on a separate piece of paper.

### STEP 3: ANALYZE SOLUTIONS

Reflect on the debates that you just participated in and observed, and now consider your own personal opinion. Do you believe artificial intelligence is beneficial to society? Why or why not? Include at least three details to support your opinion. You may begin your response below and then continue on the back of this handout.