Teaching Channel
With Learners Edge

Activity 1: Fact Check the Bot

Goal

Students practice evaluating the accuracy of AI-generated information.

Materials

Any AI tool that generates text (e.g., ChatGPT, Gemini, Perplexity, search engine results).

Steps

1. **Introduce "Hallucinations:"** Explain to students that AI systems can get things wrong. These inaccuracies are called **hallucinations**, which AI will report with confidence! It's essential that students learn to fact-check AI output. Watch the video About AI Mini-Series: Part 3, AI Hallucinates to build your background knowledge about hallucinations, or watch with students as an introduction to the activity below.
2. **Prompt the AI:** Have students or the teacher input a question or prompt into the AI tool. Try a prompt that aligns with your grade level and content area, such as the examples below.
    - "Tell me some facts about the solar system."
    - "Summarize the key events of the American Revolution."
    - "Tell me about the most recent developments in the conflict between Israel and Hamas." (or any other current event of significance)
    - "Provide a brief synopsis of Shakespeare's 'Hamlet'."
3. **Analyze the Output:** Students critically examine the AI's response. Do they notice any inconsistencies, exaggerations, or unsupported claims?
4. **Fact-Checking Mission:** Students verify the information using reputable sources (e.g., books, academic articles, trusted websites).
5. **Compare & Contrast**: Students complete a graphic organizer to compare the AI's information with their research findings. They highlight discrepancies, noting what the AI got right, wrong, or missed entirely.
6. **Reflection:** Discuss the discrepancies found.
    - What were the strengths and weaknesses of the AI's response?
    - Why might the AI have made errors? (Outdated data, limited training, etc.)
    - How can we verify information from AI sources?
    - How does this impact our trust in AI-generated content?

Supporting Resources

- "How to Use AI Responsibly EVERY Time," infographic from AI for Education provides an acrostic to guide students in evaluating AI output.
- "Checking for Bias in AI Outputs," by Michael McDowell, offers strategies to help students critically evaluate the content of AI responses.
- "Student Use Cases for AI: Start by Sharing These Guidelines with Your Class," by Ethan Mollick and Lilach Mollick.

Activity 2: AI Bias Detectives

Goal

Students identify and analyze biases in AI outputs.

Materials

- Bias Buster Worksheets: (one for each student or group)
- **AI Examples:**
  - Pre-selected AI-generated images depicting various professions or scenarios (for visual analysis)
  - Pre-written AI-generated text excerpts (for text analysis)
  - Optional: Access to a voice assistant or chatbot for live interaction

Steps

1. **Warm-up:** Briefly explain what bias is and how it can manifest in different forms (stereotypes, unfair treatment, etc.). Discuss how AI systems can learn and perpetuate biases. Watch About AI Mini Series: Teaching About Bias on your own for talking points, or watch with students to build background knowledge before beginning the activity below.
2. **Bias Buster Mission:**
   - Distribute Bias Buster worksheets.
   - Present AI examples (images, text, or voice assistant interaction). Source your own, or use those provided in the supporting resources, below.
   - Students use the worksheet to analyze the AI output, noting any potential biases they observe.
3. **Share and Discuss:**
   - Have students share their findings with a partner or in small groups.
   - Facilitate a class discussion about the identified biases and their potential impact on individuals and society.
4. **Reflect and Challenge:**
   - Ask students: How can we challenge and address biases in AI? What role do we play as users and creators of AI?
   - *Optional:* Brainstorm ways to improve AI algorithms to be more fair and unbiased.

Supporting Resources

- "Understanding AI Bias," and "How AI Bias Impacts our Lives," lessons from Common Sense Education
- Bias in AI: Origins and Solutions with Dr. Joy Buolamwini provides background on the causes and real-life impacts of bias in AI
- Gender Shades explains algorithmic bias
- "Shedding Light on AI Bias with Real-World Examples," from IBM

Activity 3: The AI Ethics Dilemma

Goal

Students explore and analyze ethical considerations related to AI use.

Materials

- One or more AI ethical dilemmas, geared towards the age group of your students. We've included a few examples below. Moral Machine Critical Thinking Card Game from aiEDU and AI Snapshots, from the AI Education Project provide many ethical AI questions you may use.
- AI Ethics Checklist–provide one for each student or group

Steps

1. **Warm-up:** Briefly discuss what AI is and how it's used in everyday life. Ask students if they've encountered AI and what they think about it.
2. **Flashpoint**: Present a brief AI scenario from the examples below, or another you've selected. Give students a few minutes to individually consider the ethical implications.

    Examples:

    - **Elementary:**
        - Should a robot that looks and acts like a pet be used to comfort children who are hospitalized? What are the potential benefits and drawbacks?
        - A toy company creates a doll that can talk and learn about the child who owns it. Is this a good idea? What could go wrong?
    - **Middle:**
        - A school uses AI to monitor students' social media for signs of cyberbullying. Is this invasion of privacy justified? What are the potential consequences?
        - You discover a website that uses AI to generate realistic fake news articles. Should you tell someone about it? What are the potential consequences of this technology?

- **High School:**
    - An AI system is used to predict which students are most likely to drop out of school. Should this information be used to allocate resources, or does it unfairly label students?
    - A self-driving car is programmed to prioritize the safety of its passengers. In an unavoidable accident, should the car sacrifice its passengers to save more pedestrians?

3. **Ethics Check:** Introduce the Ethics Checklist (see below) and have students use it to evaluate the scenario. They can do this individually or in small groups. Note: We've created this simplified checklist based on the supporting resources below. If you have more time or are working with older students, consider asking them to evaluate the example scenarios using the AI Bill of Rights or even having students develop their own ethics checklist.
    - Fairness: Is the AI system fair and unbiased in its decision-making?
    - Transparency: Can we understand how the AI system works and why it makes the decisions it does?
    - Accountability: Who is responsible if the AI system makes a mistake or causes harm?
    - Safety: Does the AI system prioritize the safety and well-being of users and those affected by its decisions?
    - Privacy: Does the AI system respect user privacy and protect sensitive data?
    - Human Control: Can humans intervene or override the AI system if necessary?
4. **Share and Debate:** Have students share their findings. Encourage discussion and debate about the ethical implications of the scenario.
5. **Reflect:** Wrap up by asking students how they might approach ethical dilemmas related to AI in the future.

Supporting Resources

- "Blueprint for an AI Bill of Rights," from the White House, identifies five principles to guide AI use and protect the American public in the age of AI
- Algorithmic Justice League's 101 Overview, includes recommendations for equitable and accountable AI
- The EU AI Act Explained describes one of the most comprehensive regulations of AI in the world, still under development