

J. Simmons Technology Applications Lesson Plan Series

Order of Lessons

1. Behind the Numbers: How Data Shapes AI Decisions
2. Beyond the Numbers: The Ethics of AI Decisions

Instructional Considerations

Differentiation & Accessibility:

- Provide sentence starters or graphic organizers for students who need support in planning or writing essays.
- Offer alternative formats for students with disabilities (e.g., speech-to-text for writing, screen readers, large-print materials).
- Allow students to choose between various dataset options for their data collection activities to increase engagement and ownership.

Technology Access:

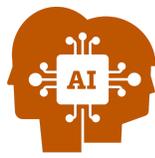
- Google Teachable Machine - <https://teachablemachine.withgoogle.com/>
- Data USA - <https://datausa.io/>
- Gapminder Tools - <https://www.gapminder.org/tools/>

Time Management:

- Keep a timer visible or set reminders (e.g., 5 min warning before wrap-up).
- Have a pre-annotated chart ready in case tech issues slow you down.
- Use a polling tool (Poll Everywhere, Mentimeter, Kahoot, etc.) for quick opinions if the discussion is limited.

Equity & AI Ethics:

- Reinforce these themes clearly:
 - Data bias is often unintentional, caused by incomplete or skewed datasets.



- Even small % differences can lead to big consequences (e.g., misidentification, unfair outcomes).
- Tech decisions reflect human choices—what’s measured, who is represented, and what’s left out.
- Ask: “Whose voices are missing when we design AI?”
 - Encourage empathy-driven reflection: “If this system misunderstood you, how would that affect your life?”

Optional Extension:

1. Students can use Teachable Machine to create their own data set:
<https://teachablemachine.withgoogle.com/>
2. Title: “Design a Fairer AI” Task: Students brainstorm in pairs or write individually:
 - “What would you add to this dataset to make it fairer?”
 - “What would a responsible AI designer do differently?”
 - “Create a 5-point checklist for ethical AI systems.”
 - Students can share their ideas via slides or posters.