

Instructional Scenario

AI Innovators: Community Solutions Lab



Course/Duty Area: Artificial Intelligence Fundamentals/Solving Problems with AI

Scenario:

In the Community Solutions Lab, you and your team ignite your potential as AI entrepreneurs to solve local problems. Your community faces real challenges—maybe the local food bank struggles to predict demand, your school's parking lot turns into chaos at dismissal, the town's recycling program can't keep up with sorting, or rising energy costs strain school budgets. While everyone buzzes about "AI fixing everything," few truly get how it works or when it's the right tool. Your team's mission is to identify a genuine community problem AI can tackle, design an ethical and practical solution, and pitch it to community leaders.

Big Question:

How can we use AI to solve problems we genuinely care about in our community while understanding the real capabilities and limitations of these technologies?

Focused Questions:

- What specific problem in our community could benefit from AI, and why is it well-suited for AI solutions (large datasets, repetitive tasks, classification, prediction)?
- How is AI different from traditional tech, and why is AI the best approach for our problem?
- What happens when our AI solution fails, and how do we learn from those mistakes?
- What ethical concerns (bias, privacy, accessibility) might pop up?
- Who in our community might be helped or harmed by our AI solution?
- How can we ensure our solution respects legal guidelines like data privacy while staying effective?

Student Project or Outcome:

Students will create an **AI Impact Portfolio** including:

- **Problem Pitch:** Define a local issue (e.g., food bank demand, predicting school energy usage) and a "Why AI?" justification tying it to specific AI traits (e.g., prediction, classification). Optional for beginners: Compare an AI approach to a non-AI solution (e.g., "A spreadsheet tracks energy, but AI predicts spikes better because...").
- **Prototype:** A working AI solution using tools like **Teachable Machine** or **Scratch AI**, showing basic functionality. Optional for beginners: Demo a pre-built AI tool (e.g., Google's Quick, Draw!) explaining how it adapts to their problem.
- **Failure Log:** Document three iterations, noting mistakes (e.g., "Data too messy"), fixes, and one lesson about AI's limits per failure.
- **Impact Analysis:** Examine consequences, trade-offs, and stakeholder effects (optional: include "Stakeholder Voices" quotes, like "The food bank says, 'This AI saves time, but misses seasonal trends!'").

Project-Based Assessment:

Shark Tank Presentation: Pitch their solution to judges with flair—bonus points for creativity (e.g., team name: "The SPARK Igniters")!

Students will present their **AI Impact Portfolio** in a **Shark Tank-style** event to "investors" (teachers, peers, community partners), classmates, etc). The presentation must demonstrate their understanding of AI capabilities, showcase their prototype (or explanation of a pre-built tool for beginners), explain their development process, and address ethical and practical considerations. Judges will evaluate teams on their **problem selection, technical execution, development process, and consideration of ethical and stakeholder impacts**. Teams can earn extra flair points for creative presentation styles (e.g., best tagline or prop)

Note: This instructional scenario was created with the help of AI.