



AI Design Challenge

DESIGN. BUILD. TEST. IMPROVE.

What Students Do

Students identify a real-world problem and design a concept for an AI-assisted solution. They define the user need, decide what information the system would use, sketch how it should respond, build a low-tech prototype, test it against a scenario, and improve the design while considering accuracy, privacy, fairness, and human oversight.



24

STUDENTS

60-90

MINUTES

3-8

GRADES

NO

DEVICE REQUIRED

KNT Activity Pack Includes

- Teacher Guide with facilitation notes, challenge prompts, and extension ideas
- Student Activity Book and My AI Design Plan
- AI Design Challenge Cards featuring real-world problems and user needs
- Prototype, Test, and Redesign worksheets
- Responsible AI Checklist covering privacy, fairness, accuracy, and human oversight
- Printable materials for up to 24 students; basic classroom craft supplies support prototype building

Students Learn To

- Use an engineering-design process to define a problem and propose a solution
- Explain what information an AI-assisted system would need as input
- Describe the intended output, recommendation, or action
- Create and test a low-tech model or paper prototype
- Identify possible errors, risks, or unintended consequences
- Improve a design using test results, user needs, and responsible-AI considerations

How It Works

- 1 DEFINE**
Choose a challenge, identify the user, and describe the problem the design should solve.
- 2 DESIGN**
Plan the input, output, user experience, and role of AI in the proposed solution.
- 3 TEST**
Use a scenario to test the prototype and look for errors, confusion, or unintended results.
- 4 IMPROVE**
Revise the design using evidence, user feedback, and responsible-AI considerations.

AI Design Starts With a Human Problem.

Students do more than imagine a smart tool. They decide what the system should do, what information it needs, where it could fail, and when a person should remain in control. The goal is thoughtful design, not technology for its own sake.

Designed for flexible afterschool, summer, classroom, and expanded-learning implementation.