

Design a Robot for a Real Job

DESIGN SPRINT

Duration: 45 min • Grades 6–8 • Facilitator-led

Overview

A structured, human-centered design activity. Students pick a job-site scenario, define a user, list constraints, and sketch a robot concept. Ends with a two-minute pitch.

Learning Objectives

- Use empathy to define a real problem
- Apply constraints when designing a solution
- Communicate a technical idea to non-experts

Materials Needed

- Constraint cards (1 per group)
- Blank sketch template
- Markers or colored pencils

Facilitator Flow

- 1 Empathy (5 min): choose a job site and describe the worker.
- 2 Define (5 min): write a one-sentence problem statement.
- 3 Ideate (10 min): sketch three rough ideas.
- 4 Design (15 min): pick one and detail the robot.
- 5 Pitch (10 min): 2-minute presentations with peer feedback.