

Sense, Think, Act

SIMULATION

Duration: 20 min • Grades 6–8 • Facilitator-led

Overview

A sandbox where students adjust sliders for a color and weight sensor, then run the arm and see how many objects it sorts correctly. Data updates in real time.

Learning Objectives

- Define sense-think-act as the core robotics loop
- Interpret sensor data to improve accuracy
- Iterate on a design based on results

Materials Needed

- Browser device
- Data recording sheet

Facilitator Flow

- 1 Frame (2 min): introduce sense → think → act.
- 2 Baseline run (3 min): run the sim with default settings and record accuracy.
- 3 Tune (10 min): adjust thresholds and log three trials.
- 4 Share (3 min): who got closest to 100% and why?
- 5 Debrief (2 min): where else do machines 'sense'?