

Inventor's Pitch: Solve a Problem

SCIENCE



Overview

Students identify a real-world problem and design an invention to solve it, then create a 'pitch' video explaining how their invention works using scientific principles.

Steps for Teachers

1. Discuss the engineering design process: identify problem, brainstorm, design, test, improve
2. Students identify a problem they've personally experienced or observed
3. Students brainstorm multiple solutions and select the most promising one
4. Students design their invention, labeling parts and explaining how each works
5. Students identify the scientific principles that make their invention work
6. Students create a pitch video in Puppet Pals showcasing their invention
7. Hold an 'Invention Convention' where students present and answer questions

Example

A student invents 'The Homework Helper Hat' to solve the problem of forgetting assignments. The character wears a hat with a small screen: 'My invention uses a small camera that scans the whiteboard and saves the homework. It connects to your phone through Bluetooth—that's a type of radio wave! When you get home, it sends a reminder. The battery is solar-powered so you charge it just by going outside for recess!'

Grading Rubric

Criteria	Excellent	Proficient	Developing
Problem Identification	Clear, relatable problem that the invention genuinely addresses	Problem is identified and addressed by invention	Problem is vague or invention doesn't solve it
Scientific Reasoning	Accurately explains scientific principles behind the invention	Some scientific concepts correctly applied	Missing or incorrect scientific explanations
Creativity & Innovation	Original, imaginative solution that shows creative thinking	Shows some creative elements in design	Invention is derivative or lacks originality
Presentation Skills	Persuasive, clear pitch that would convince viewers	Adequate explanation of the invention	Unclear or unconvincing presentation