

Lesson: Cube-lets, Introduction to the Engineering Design Process Worksheet

Engineers start by asking:

1. What is the problem? Does something need to be changed?
2. Can I solve the problem? What would make this better? What needs to be changed?
3. How well does our new solution work? How do we know that we succeeded?

<p><u>Challenge #1</u> Someone keeps stealing your toys! How can you make a motion activated light that will alert you when someone gets close to your toys?</p>	<p><u>Challenge #2</u> Your power has gone out and your freezer won't stay cold forever. Can you make an alarm that will let you know when things are warming up so your ice cream won't melt?</p>
<p><u>Challenge #3</u> You're having a party with 4 different kinds of cupcakes! How can you make a robot that will turn without stopping, while holding a plate on it? Use your box as a pretend plate for this.</p>	<p><u>Challenge #4</u> You are in a dark basement and don't know where the lights are. You don't have a flashlight or candle, but you do have Cube-lets! How can you make a robot flashlight that will stay lit while it's dark but go out and conserve power when you get into the light?</p>

There could be more than one solution for each challenge. Be prepared to share your invention at the end of class, as well as your answers to the questions above.