

# Wizards of Wright

## Lesson: Cube-lets 2

Use WOW! Lesson Intro to begin.

<p><b>Background Info for Wizards:</b></p>	<p>The classroom teacher has chosen this lesson because the students either already had the Cube-lets 1 Lesson (a review of electricity, currents, circuits and energy; as well as an intro to Cube-lets with some brief challenges); or because they didn't need the Cube-lets 1 Lesson and already know enough about Cube-lets to jump in and do these Challenges.</p>
<p><b>Materials:</b></p>	<p>Student Boxes of Cube-lets (cubes should match the picture)  <del>Box of extra Cube-lets (cubes should match the picture)</del>          Battery Cube-lets</p> <p>Cube-lets 2 Challenge Sheets</p> <p>charger (if sent)</p>
<p><b>Lesson Time:</b> <i>45-60 minutes</i></p>	<p>Introduction: 5 minutes          Guided Lesson: 5 minutes          Student Activity: 30-45 minutes          Conclusion: 5 minutes</p>
<p><b>Learning Targets:</b></p>	<p>Students will briefly review electricity, currents, circuits and energy.</p> <p>Students will use Cube-lets to solve advanced Challenges.</p>
<p><b>Introduction for Students:</b> 5 minutes</p>	<p>Briefly, have the students explain what they already know about electricity, currents, circuits and energy. Have them also explain experiences they have had with Cube-lets.</p>
<p><b>Guided Lesson:</b> 5 minutes</p>	<p>Review with students what Cube-lets do, and how they work. Depending on how long it's been since they used Cube-lets, you might need to review the following...Explain the different Cube-lets to the students.</p> <p><u>Clear</u> – Action. Outputs. (The signal or info sent by the system. They create a motion or action.) <i>There are Cube-lets that rotate, drive, emit, noise or light, and one with a bar graph.</i></p> <p><u>Black</u> – Sensors. Inputs. (The signal or info received by the system – they are</p>

	<p>like our eyes and ears.) <i>There are Cube-lets that sense distance and brightness, and one with a knob for adjustments.</i></p> <p><u>Colored</u> – Logic. The Thinkers. (Help solve the problem and think critically.)</p> <p>Pass out the boxes of Cube-lets – <b>one box to be shared by 3 or 4 students.</b> Pass out a Battery Cube to each pair of students.</p>
<p><b>Student Activity:</b> 30-45 minutes</p>	<p>Introduce Challenges to the students.</p> <p>The Challenges are divided by difficulty, so students should feel free to decide what to work on, and how to proceed through them. They will not have time for all of the Challenges, they can work on as many as will fit into the time period.</p>
<p><b>Conclusion:</b> 5 minutes</p>	<p>Review what students have learned, what they have created, and how they can use this knowledge.</p>

Students should be asked to...

1. Turn the batteries are off.
2. Return the batteries to the Wizard.
3. Match the Cube-lets in the picture to the layout in the box they've used.