



MAKER CLASS



<u>Topic</u>		<u>Objective(SWBAT)</u>
Build a battery (Electronics)		Students will construct a wet cell battery to power a small light. Students will compare batteries that use different electrolytes.
Instructors:	Gregory Conrad, Lin Mingjie	
Materials:	containers, vinegar, salt, Pocari Sweat, zinc, copper, wire, alligator clips, voltmeter, insulated wires, LED, chopsticks, rubber bands	
Key Terms:	anode, cathode, electrolyte, electron	
Drama:	Chicky takes another spy mission. He must sabotage a Grimbler power plant. The Grimblers panic, and try to contain the Xerxi monster.	
Build:	Students construct a battery from copper, zinc, and vinegar. If an LED cannot be powered by the battery, students will check the voltage of their battery with a voltmeter to see how much electricity is being produced.	
Theory:	Explain how the electrolyte solution breaks down the metals, causing electrons to move from anode to cathode. (Electrons flow from anode to cathode, BUT standard current flows from cathode to anode.)	
Worksheet:	Drama comprehension, label the chicky/grimbler hot tub analogy diagram. Record volt meter readings.	
Order:	Drama, Maker Diary, Battery PPT, Side 1 of Worksheet, Build Instructions, Build, Side 2 of Worksheet	
Notes:	Prepare tap water in a can for students to compare voltage. Prepare demo wet cell battery in case students' build doesn't work properly. Have rags on hand for spills.	