

## Atomic Theory Skills

- Goals:** Use atomic structure to explain the relationships between resistance, current, and voltage  
Use a multimeter to measure resistance, current, and voltage



<b>3/5</b>	Demonstrate <b>required concepts</b>
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<b>+1</b>	In addition to #3, combine key concepts in <b>circuit applications</b>
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<b>+1</b>	In addition to #3, combine skills to learn something new. Requirements: <ul style="list-style-type: none"><li>- Use at least one skill from this sheet</li><li>- Use at least one other skill (from this sheet, other sheets, other courses, previous experience, etc.)</li><li>- Learn something new and explain how it works</li><li>- Document it (written description, photos, video, screencast, or any other way)</li></ul>
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**Theory: Ch 1, 2, 3**

**Shop**

**3/5: Required Skills**

		Due	Complete
2-1, 2-2	<b>Describe atomic structure, including</b> <input type="checkbox"/> Function of protons, neutrons, and electrons <input type="checkbox"/> Charge <input type="checkbox"/> Relative position		
	<b>Contribute to the class model</b> <input type="checkbox"/> Use the Assessing Evidence rubric		
2-3, 2-4, 2-5, 2-6, 3-1	<b>Describe relationships between voltage, current, and resistance</b> <input type="checkbox"/> Causes and effects <input type="checkbox"/> Units		

		Due	Complete
	<b>Test resistors for damage</b> <input type="checkbox"/> Use the circuit rubric		
	<b>Give feedback on model presentations</b> <input type="checkbox"/> Use the Assessing Evidence rubric		
	<b>Test questions determined by class</b> <input type="checkbox"/> Use the circuit rubric		

**+1: Application**

2-7	<b>Identify incorrect meter use</b> <input type="checkbox"/> For any given multimeter setup, <input type="checkbox"/> Explain whether it will measure what you want to measure <input type="checkbox"/> Relate to your knowledge of the relationship between V, I, R and what's inside a multimeter		
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	<b>Test a fuse</b> <input type="checkbox"/> Use the circuit rubric		
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**+1: Investigation**

- Build a lightbulb dimmer (Ch 2, application Activity)
- Build a motor speed controller (Ch 3, Application Activity)
- Find an interesting project and find prices for all the parts on Newark.ca (Instructables.com, Make magazine)
- Find an interesting project, build it, and explain how it works (Instructables.com, Make magazine)
- Find an interesting project and determine whether it would be suitable for elementary school students to do in an afternoon (Instructables.com, Make magazine)
- Your idea here...