

CRISP CLASSROOM KITS & DEMONSTRATIONS STANDARD ALIGNMENT

**KIT TITLE:** DC Circuits

**GRADE LEVEL:** 9-12

**OBJECTIVES:**

- Students will understand the relationship between current, voltage and resistance.
- Understand a simple circuit

**Next Generation Science Standards (NGSS)**

<p>NGSS Performance Task</p>	<p><b>HS – PS3-4.</b></p> <ul style="list-style-type: none"> <li>• Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.</li> </ul>
<p>NGSS DCI Standards</p>	<p><b>PS3.B: Conservation of Energy and Energy Transfer</b></p> <ul style="list-style-type: none"> <li>• Energy can also be transferred from place to place by electric currents, which can then be used locally to produce motion, sound, heat, or light.</li> </ul> <p><b>PS3.A: Definitions of Energy</b></p> <ul style="list-style-type: none"> <li>• “Electrical energy” may mean energy stored in a battery or energy transmitted by electric currents.</li> <li>• Energy can be moved from place to place by moving objects or through sound, light, or electric currents.</li> </ul>
<p>NGSS CCC Standards</p>	<p><b>CCC 3 - Cause and Effect</b></p> <ul style="list-style-type: none"> <li>• Empirical evidence is required to differentiate between cause and correlation and make claims about specific causes and effects.</li> </ul> <p><b>CCC 5 - Energy and Matter</b></p> <ul style="list-style-type: none"> <li>• Energy can be transferred in various ways and between objects.</li> </ul>
<p>NGSS SEP Standards</p>	<p><b>SEP 4 - Planning and Carrying out Investigations</b></p> <ul style="list-style-type: none"> <li>• Plan and conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence, and in the design: decide on types, how much, and accuracy of data needed to produce reliable measurements and consider limitations on the precision of the data (e.g., number of trials, cost, risk, time), and refine the design accordingly.</li> </ul>

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**Common Core Standards (CC)**

<p>CC-ELA Standards</p>	<p><b>WHST.11-12.7</b> Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p> <p><b>WHST.11-12.8</b> Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p><b>WHST.11-12.9</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>
<p>CC-MATH Standards</p>	<p><b>HSN.Q.A.2</b> Define appropriate quantities for the purpose of descriptive modeling.</p> <p><b>HSN.Q.A.3</b> Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p>