Unit 2: Electricity & Magnetism

Name: _____

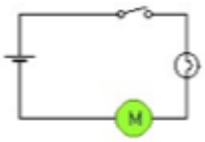
Date: _____

Assessment 2-5 Choice Board

Using Electricity and Magnetism

Instructions

1. Your task is to complete the choice board below. Choose and complete three items in one row. For example, Row 1, Row 2, or Row 3.

Using Electricity and Magnetism Choice Board			
Row 1	**Remember and Explain** I'm not sure I understand the difference between voltage and current. Can you explain what they are and how they are different?	**Remember and Apply** I am trying to make an electromagnet to pick up pieces of iron from my shop floor, but it is not strong enough. What can I do to make my electromagnet stronger? Explain.	**Design and Explain** I need help with a circuit I am designing. It is for a drill I need to use both during the day and at night. Along with a motor for the drill, the circuit needs a lamp for light. Here is what I have so far:  The problem is that I need to turn off the light during the day without affecting the drill motor. How can I change the circuit to make the drill work the

			way I want? Can you explain what these symbols mean?
Row 2	**Remember and Explain** Sometimes, when I take clothes out of the dryer, some of my clothes stick together. My friend says that it is because of electricity. Can you identify if he is right or wrong and explain why?	**Remember and Apply** I need to buy a new dishwasher, and the two models I like have EnerGuide labels that read "200 kWh" and "300 kWh". What do the numbers and "kWh" mean, and which of the two dishwashers will make my electric bill smaller?	**Design and Explain** I want to build a lamp that I can make dimmer or brighter. A friend says I need to add resistance to the circuit, but I am not sure what that means. Can you explain what resistance is and show me a circuit design I could use?
Row 3	**Remember and Explain** I just started building circuits in an electronics shop, and my boss says I need to use a push-button switch in my circuit design for safety reasons. What is a push-button switch, and why is it safer?	**Remember and Apply** How can I tell the difference between an insulator and conductor? How are conductors and insulators used in my home to keep me safe from injury caused by electric shock?	**Design and Explain** I am doing a school project on electric motors and I am stuck. Please provide a circuit diagram on how to use a switch to turn on a motor. Please explain to me how electric motors use electric energy, and give me two examples of how they can be used in devices.

Choice Board Rubric

Criteria	Excellent 5	Proficient 4	Satisfactory 3	Limited 2
Content /5	• I developed *insightful* and *detailed* understanding and explanations of the Unit's concepts and facts.	• I developed *logical* and *thoughtful* understanding and explanations of the Unit's concepts and facts. o static and current electricity	• I developed *appropriate* and *basic* understanding and explanations of the Unit's concepts and facts. o static and current electricity	• I developed *underdeveloped* and *vague* understanding and explanations of the Unit's concepts and facts. o static and current electricity

	o static and current electricity o magnets and magnetic fields o electrical safety o measuring electricity o conductors, insulators, resistors o circuits o mechanisms using electricity • I used *precise* details.	o magnets and magnetic fields o electrical safety o measuring electricity o conductors, insulators, resistors o circuits o mechanisms using electricity • I used *logical* details.	o magnets and magnetic fields o electrical safety o measuring electricity o conductors, insulators, resistors o circuits o mechanisms using electricity • I used *general* details.	o magnets and magnetic fields o electrical safety o measuring electricity o conductors, insulators, resistors o circuits o mechanisms using electricity • I used *vague* details.
Presentation /5	• I communicated *effectively* and *accurately*.	• I communicated *thoughtfully* with *few* errors.	• I communicated *clearly* with *some* errors.	• I communicated *ineffectively* with *many* errors.
Insufficient	Your attempt to respond is *insufficient*. **Contact your teacher** to discuss suggestions for improvement.			
Total: /10				
Assessment	**Areas of Strength:**			
	Target for Improvement:			

Total: /10 marks

KWHL Chart

Complete the KWHL Chart below.

What Do I **Know** about Electricity and Magnetism	What I **Want** to Know about Electricity and Magnetism	**How** Can I Learn about Electricity and Magnetism?	What Did I Learn about Electricity and Magnetism

Total: /5 marks

Overall Total: /15 marks

Save Your File

Name your file in this format: 2-5_(jsmith)sc5-choiceboard and save your file to your Chemistry Notebook folder. Submit to the appropriate Submission folder when completed.