Physical Science Team Remote Lesson Plan

<table>
<tr><td>Teacher/Subject:Brock, Godfrey HS Science</td><td>Date: Thursday, April 30, 2020</td></tr>
<tr><td>Standards:</td><td>S8P5a. Construct an argument using evidence to support the claim that fields (i.e., magnetic fields and electric fields) exist between objects exerting forces on each other even when the objects are not in contact.
S8P5b. Plan and carry out investigations to demonstrate the distribution of charge in conductors and insulators.
S8P5c. Plan and carry out investigations to identify the factors (e.g., distance between objects, magnetic force produced by an electromagnet with varying number of wire turns, varying number or size of dry cells, and varying size of iron core) that affect the strength of electric and magnetic forces.</td></tr>
<tr><td>Objective:</td><td>To learn about and gather evidence that magnetic and electric fields exist between objects not in contact.
To carry out investigations through simulations to identify factors that impact the strength of magnetic and electric forces.</td></tr>
<tr><td>Student Activities:</td><td>It's Not Magic, It's Magnetism (120 minutes)
a. You will submit one product document to Google Classroom for this activity.
b. Choose one option from each of the following sections: SEE, READ, and DO. Make sure you do these activities this is where you will learn the information that you use in your final product.
c. Create a product to share about the topic of magnetism. Product ideas and information are located in the SHOW section below. You will upload and submit this product to Google Classroom. No Power Points may be submitted for your product. Be creative!

SEE
• Unit Overview w/ Mr. Brock's Nearpod - Copy and paste the link into your browser https://share.nearpod.com/e/RXQgCLHgS5U Students use code: WNAFJ
• Bill Nye Magnetism video
○ Try Safari Montage first – Go to ClassLink, select the Safari Montage app and search for "Bill Nye Magnetism video" or try this link: https://safari.fultonschools.org/SAFARI/montage/search.php?SearchValue=bill%20nye%20magnetism&xc=1
○ If Safari Montage does not work for you try this link: https://safeYouTube.net/w/szP9
• GPB Physics in Motion – Magnetism https://www.gpb.org/physics-in-motion/unit-5/magnetism

READ
• Science Online Textbook
○ HS Ch 7 Magnetism pg 201-227 (Go to ClassLink, select the McGraw Hill Education app)
○ 8th Grade Ch 7 Electricity & Magnetism pg 470-499 (go to ClassLink, select the HMH Ed app)</td></tr>
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		• **National Geographic**
		  ○ Magnetism - https://www.nationalgeographic.org/encyclopedia/magnetism/
		• **Explain that Stuff!**
		  ○ Magnetism - https://www.explainthatstuff.com/magnetism.html
		• **Physics4Kids**
		  ○ Magnetism - http://physics4kids.com/files/elec_magneticfield.html
		  ○ Magnets - http://physics4kids.com/files/elec_magnets.html
		  ○ Faraday's Law - http://physics4kids.com/files/elec_faraday.html

	DO	**You can choose to simply play with the PhET OR you may download the PhET Word document to your device so you will have a little guidance with the simulation. You will be able to write directly on this document using your device. This activity is to practice/investigate concepts.** • Watch the first 4:00 minutes of this video: https://safeYouTube.net/w/k2E9 • Charges and Fields PhET file:///C:/Users/godfreyj/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempState/Downloads/charges-and-fields_en.html • Faraday's Law PhET -https://phet.colorado.edu/sims/html/faradays-law/latest/faradays-law_en.html file:///C:/Users/godfreyj/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempState/Downloads/faradays-law_en.html
	SHOW	To show what you have learned about magnetism you will be developing a product to teach others about it. Products must be visually appealing, have a title, accurate details, and pictures (hand/computer drawn or from internet). Please remember to provide citations for pictures, apps used, and research if not from your textbook. **Product ideas include, but are not limited to:** Digital Products: PowToon, Piktochart/digital poster Written Products: Pamphlet, brochure, fable/myth with truths explained Video Products: Puppet show, panel discussion of "experts," short documentary film **The following list of terms/concepts MUST be included in your product and will help to guide your research:** Magnetic poles, Law of Attraction, magnetic domain, magnetic field, Earth as a magnet, examples of magnetic materials, ferromagnetic, permanent magnet, temporary magnet, solenoid, electromagnet, induction, how do magnets lose strength, how can a weak magnet become stronger (give multiple examples), OPTIONAL: James Clerk Maxwell, Charles Augustin de Coulomb, Michael Faraday, Hans Christian Oersted
Resources:	**Ms. Godfrey's Website:** atomsandapples.weebly.com/ **Online Text:** • 8th Grade: To access go to ClassLink, HMH Ed and look for the tab at the top labeled "Assignments."	

	• HS: To access go to ClassLink, McGraw Hill Education **Google Classroom:** Login and open GC for science class **Gizmo:** To access go to explorelearning.com, login with username - your lunch # and password – your birthday
Help Session Hours:	**Thursday, April 30 10am-12pm**