SPH3U – Electricity & Magnetism Assignment

Due: Monday Jan 25 via Google Classroom

Your job is to write a multiple choice quiz, similar to the Kahoot quizzes that Mr John made earlier.

- Aim for between 10-20 questions
- Include a variety of topics related to electricity and magnetism
- Include a variety of levels of difficulty (easy, medium, harder)
- Put thought into your possible answers – try to think of wrong answers that people might reasonably give
- Include both "concept" type questions, as well as "calculation" type questions. Large, complicated circuit analysis questions probably aren't suitable for a kahoot, but smaller ones would work.
- Here are links to the Kahoots Mr John made if you would like to see some example questions (Kahoot1, Kahoot2)
- Include some pictures in your questions if they can help. You can draw by hand or take from the internet. Consider using a picture for multiple questions. Instructions above.

How to take partial screenshots on Chromebooks

1. Press **Ctrl Shift** ☐II
2. Draw a box around the area to copy
3. Press Copy to Clipboard
4. Paste into Google Doc or slides (Ctrl v)

Here are some possible topics to get you started:

Drawing circuits (symbols, etc.)	Ohm's Law (V = IR)	Static vs. current electricity
Current, Voltage, Resistance – what are they?	Series circuits – equivalent resistances	Parallel circuits – equivalent resistances
Parallel circuit concepts (ex. what are they? unscrewing one bulb, voltage drop across, how current works	Series circuits concepts (ex what are they? why lightbulbs aren't bright, current and voltage concepts)	Analogies: Circuit – Water Circuit – Jujubes Circuit – Trucks/Roads/etc
Kirchoff's voltage law around a loop	Kirchoff's current law at a node	What are magnets?
Magnetic attraction and repulsion between magnets	Magnetic attraction and repulsion between magnet and non-magnet	Magnetic field lines
The earth's magnetic field	Oersted's principle	Faraday's Law
Left-hand rule (straight conductors)	Left-hand rule (coiled conductors	Motor principle (concepts, directions)

Here's what I'll be looking for when marking:

	R	1	2	3	4
Variety of questions (topics, difficulties)					
Clarity/accuracy of questions (correct vocabulary, wording, understanding)					
Overall impression (pictures, # of questions, general quality, etc.					