

This simulation is found at: <http://phet.colorado.edu/en/simulation/faradays-law>

If the link above is not working, search for PHET simulations, then look under the Physics--> electricity and magnetism page.

1. Open the **Faraday's Law** simulation and discover what you can about what happens when you move the magnet or coil around or click on buttons. Make a list of all the ways to cause the voltmeter to register voltage in the coil.
2. Write a sentence that relates the observations from #1 to the voltage in the coil. (Example: I can cause the coil to have voltage when which is probably due to.....)
3. Using your magnet (hopefully you have one still) and a quarter or penny, try to induce a current in the coin. Balance the coin on its edge, and then bring your magnet (a stack of 2 if you have them) near the coin (maybe 1-3mm). Now rapidly pull the magnet away. Explain what happens, if anything.
- 3a. Explain your results for #3 (there should be some results in order to get points here). Hint: you will not get a plastic, chocolate, or other non-conductive coin to behave as your quarter or penny did, and you know what moving charges generate.
4. Research Michael Faraday and his contributions to science, especially the one you are investigating. Write a summary of your research, in your own words, and at your level of understanding, plus a discussion of what life would be like if electromagnetic induction had not been discovered. $\frac{3}{4}$ page single spaced approximately.
No special citation required, as this is informal, but you must give credit to your sources at the end of the paper.
For a website, just copy the link. For a book, use typical works cited format.
*** summary must be in your own words and not simply paraphrased***
Wikipedia may be used to read initially, but may not be used as a source. I love it too; it's one of the greatest collaborative human accomplishments in the past decades. Due to its nature of being a tertiary source that may be edited, you must use other sources.