

Name \_\_\_\_\_

Date \_\_\_\_\_

When Charles Faraday connected a coil of wire to a battery and put a magnet in the middle, he didn't find what he thought he would find, but his discoveries helped us learn about the connection between electricity and magnetism and led to inventions like the motor and the telegraph.

What does your electromagnet make you curious about? How can you make it behave differently? What can you get it to do?

**Investigation 1:**

**What makes the magnet hanging from the pole move? Is it the magnet inside the coil of wire, the current in the wire, or both?**

**What I did:** (Diagrams)

Explanation

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**My conclusion:** (What is the answer to the question?)

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**Investigation 2:**

**Some of the first telegraphs worked by completing a circuit to move a magnet – at a distance of many miles. Can you make someone else’s magnets move by completing your circuit and ‘sending a message?’**

Work with two or three other students. Can you put your electromagnets together so that completing one circuit makes everyone’s magnets move? Can you move the magnet of someone that is two feet away from you? Three feet? Farther?

**What we did:** (Diagrams)

Explanation

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**My conclusion:** (What is the answer to the question?)

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**My Investigation:** (something you are curious about or want to try to do)

**My Question:** \_\_\_\_\_  
\_\_\_\_\_

**What I did:** (Diagrams)

Explanation

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**My conclusion:** (what is the answer to the question?)

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