

Name: _____ Date: _____

The Good, the Bad and the Electromagnet Worksheet

Procedure

- 1. Leaving 3 to 4 inches at either end of the wire, wrap the wire around the straw. Attempt to keep the wire all together in a small area.**
- 2. Using the scissors, cut off the straw before and after the wire coil.**
- 3. Using the blade of the wire strippers, strip the coating off the wire ends.**
- 4. Spread loose staples out on a table.**
- 5. Using alligator clips, connect the wire to the terminals of a battery.**
- 6. Try using the coil, which is now an electromagnet, to pick up the staples. Record how many staples you were able to lift at once: _____**
- 7. Disconnect the battery.**
- 8. Now, slip the nail into the straw sleeve so that the wire coil is now positioned around the nail.**
- 9. Reconnect the battery.**
- 10. Attempt to pick up the staples again. Record how many staples were picked up this time: _____**
- 11. Which set-up enabled you to pick up more staples? Why?**

- 12. List three things you could do to increase the intensity of your electromagnet (use the number of staples picked up as the dependent variable):**