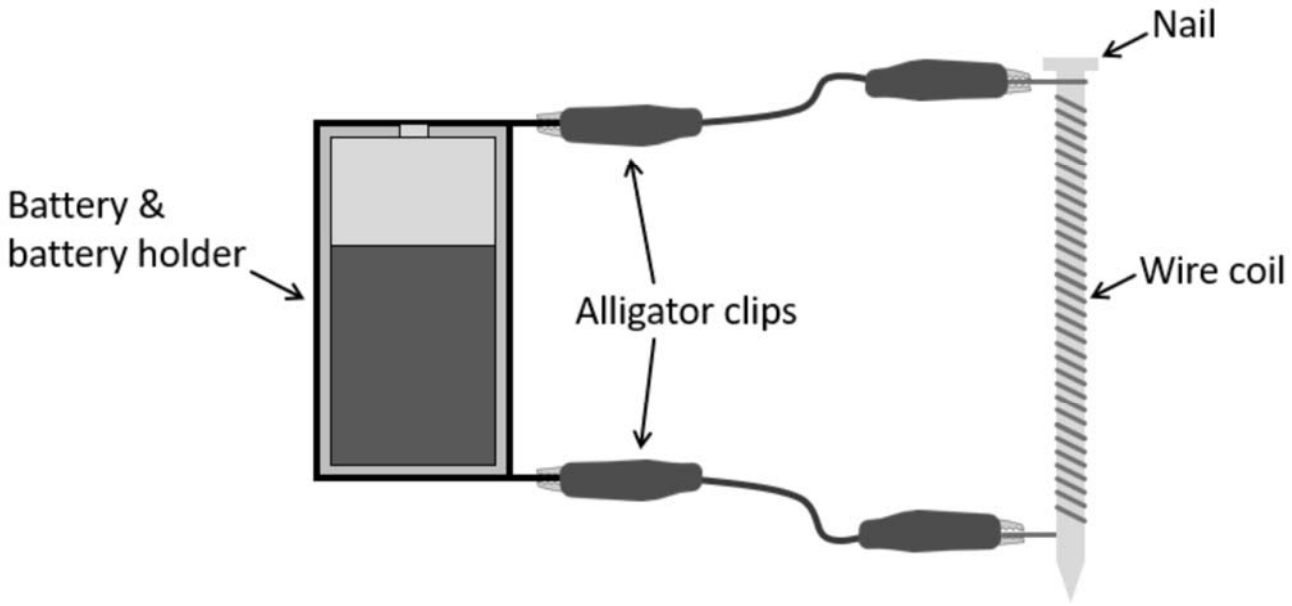
What Factors Affect the Strength of an Electromagnet?

Name: _____

Date: _____

Student worksheet

Directions: Fill out the questions below as you complete the lesson.



1. Make a list of all the variables you think might affect the strength of an electromagnet.

2. Circle the variables in your list that you can test in class, given the materials you have available.

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3. What variable will your group investigate? _____

4. Write down the variables for your experiment:

    a. Independent variable (what you will change):

    b. Dependent variable (what you will measure):

    c. Control variables (what you will keep the same):

5. What values of the independent variable will you test?

6. How many trials will you do for each value of the independent variable?

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7. Based on what you wrote for questions 4-6, use this space to make a data table for your experiment.

	Checklist
	☐ Title ☐ Labeled columns and rows ☐ All values for independent variable listed ☐ Space to add measurement for each trial ☐ Space to calculate an average across all trials

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Name: _____

8. Use this space to make a graph of your data.

	Checklist ☐ Graph has a title ☐ Independent variable is on the horizontal axis ☐ Dependent variable is on the vertical axis ☐ Axes are labeled and include units ☐ For each value of the independent variable, plot a point for the average value of the dependent variable across all trials

9. What, if any, is the relationship between your dependent and independent variables?

Name: _____

10. Why (or why not) do you think your independent variable affects the strength of an electromagnet?

11. If you cannot tell from your data whether or not there is a relationship between the dependent and independent variables, what else could you do to find out? How could you change your experiment?