

# Scientific Procedure Resource

**Project Title** .....

**Name(s)** .....

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**Ask a Question:** (i.e., "Does the number of wire wraps affect the strength of an electromagnet?")

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**Research:** (Is there any additional information you need to find out before designing your experiment? Note any important findings here and be sure to include your sources.)

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**Hypothesis Statement:** (Make it clear and testable.)

Independent variable (what you will change): .....

Dependent variable (what you will measure): .....

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**Design diagram:** Use this space to draw your experimental set-up.

Label as many parts as you can; this will help you with listing materials and tools needed.

## Materials

[illegible]

## Tools

[illegible]

**Risk assessment and safety protocol:** (Describe potential physical hazards, and any environmental or ethical concerns. List necessary safety equipment and steps to take to mitigate risks.)

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**Procedure:** (Write detailed step-by-step instructions so your experiment could be replicated by someone else. If you need more space, continue on another sheet and staple to this page. Create a data table in which to record your test results and attach it to this sheet, making sure you include for each independent variable input value enough space for a minimum of six replications or measurements for your dependent variable).

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**Teacher Check-in:** (Your teacher will note any changes here that you need to make to your materials or procedure before moving forward with your experiment.)

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Teacher initials here when revisions are complete: .....

**Results:** (Note any trends you observe in your data collection, any qualitative observations you have, and attach a labelled graph illustrating the relationship between your variables. Any calculations, including those for central tendency and other statistics, can be shown here.)

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**Conclusion:** (State objectively whether the hypothesis was or was not supported and include a sentence about the relationship you discovered between your independent and dependent variable. Provide possible sources of error and suggestions of how they could be mitigated. List any assumptions you made and how they may have affected your results.)

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**Reflect and Take it Further:** (What parts of your procedure would you change if you were planning to do this experiment again? What question(s) could you pose next to test this subject further?)

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