

## Experimental Design Template

### Part A: To be completed and approved before beginning the investigation

What question will you explore? \_\_\_\_\_  
\_\_\_\_\_

On the basis of your previous laboratory exercise, background knowledge, and research, what is the hypothesis that you will test? \_\_\_\_\_  
\_\_\_\_\_

What will be the independent and dependent variables? \_\_\_\_\_  
\_\_\_\_\_

What will be the control group(s)? \_\_\_\_\_  
\_\_\_\_\_

What equipment and materials will you need (list items and quantity)? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What procedure (step-by-step) will you follow? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What safety steps will you follow (equipment and procedures)? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How will you collect data? \_\_\_\_\_  
\_\_\_\_\_

How will you analyze data? \_\_\_\_\_  
\_\_\_\_\_

Teacher approval to begin your investigation: \_\_\_\_\_

**Part B: To be completed during or after your investigation**

What changes or modifications have you made to the investigation? \_\_\_\_\_

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Attach any data collection or analysis as instructed by your teacher.

What results did you see in the experiment? \_\_\_\_\_

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Was the hypothesis accepted or rejected? What conclusions can you draw on the basis of the data and analysis?

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What sources of error may have existed, and how might the experiment have been conducted differently? What additional questions arose from the experiment?

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