

## Experimental Design Graphic Organizer

Question:	Is this a comparison or the relationship between two things?
What is this about?	What is the Dependent Variable (DV)?
What affects the DV? _____ → _____ → _____ → _____ → _____ → _____ → _____ → _____ → _____ → _____ →	How will I manage the effect of these? (Look to right) _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
<b>Options:</b> <ul style="list-style-type: none"> <li>• Set levels at _____</li> <li>• Hold IV constant at _____</li> <li>• Equal numbers of ___&amp;___</li> <li>• Use same subject at different times: _____</li> <li>• Divide equally between control and experimental groups</li> <li>• Observe and measure</li> <li>• Ignore</li> </ul>	
<b>***From the list above, circle or highlight the Independent Variable (IV).</b>	
Comparison:            Is this control VS experimental? ____    OR    Is this group VS group? ____	
What is the first group or control?	What is the second group or experimental?
What am I measuring or observing?	Units?            When will I measure?            What formula will I use?
DV: _____ IV: _____	
<b>Hypothesis:</b> If [I.V.] _____, Then [D.V.] _____.	
How will data look if I am correct? _____ How will data look if I am wrong? _____	
<b>Independent Variable</b> Part of the experiment changed by the experimenter	<b>Dependent Variable</b> Part of the experiment that changes because of the IV- is measured or observed to get data
<b>Constant</b> Parts of the experiment that remain the same to prevent affecting the experiment's outcomes	<b>Control</b> Level of the IV that you compare back to- unchanged or in the natural state

## Experimental Checklist

Complete the checklist below and check each step as it is completed.

What could go wrong in this experiment? _____ _____ _____	How can I prevent or deal with these problems? _____ _____ _____
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- Make a timeline showing the events in your experiment and the times you will measure or observe.
- Write a clear procedure that other people can follow step by step.
- Create an organized data table.
- Complete the experiment.
- Make adjustments to the written procedure if necessary and explain changes.
- Display the data in an organized chart or graph (if possible).
- Complete required follow up for the experiment (questions, lab report, evaluation, etc.).
- Complete the sections below on results and the next step.
- Sign and date this form.

<b>Results:</b> When (I.V.) _____, Then (D.V.) _____.	
<b>SCIENCE DOES NOT STOP:</b> What is my next step? _____	What NEW questions need to be answered? _____

Name \_\_\_\_\_

Date \_\_\_\_\_