

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)?		
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>What affects the DV?</p> <p>_____ →</p> <p>_____ →</p> <p>_____ →</p> <p>_____ →</p> <p>_____ →</p> <p>_____ →</p> <p>_____ →</p> <p>_____ →</p> <p>_____ →</p> <p>_____ →</p> </div> <div style="width: 65%;"> <p>How will I manage the effect of these? (Look to right)</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> </div> </div>			
<div style="display: flex; justify-content: space-between;"> <div style="width: 70%;"> <p>***From the list above, circle or highlight the Independent Variable (IV).</p> </div> <div style="width: 28%; border: 1px solid black; padding: 5px;"> <p>Options:</p> <ul style="list-style-type: none"> Set levels at _____ Hold IV constant at _____ Equal numbers of ____&____ Use same subject at different times: _____ Divide equally between control and experimental groups Observe and measure Ignore </div> </div>			
<p>Comparison: Is this control VS experimental? ____ OR Is this group VS group? ____</p>			
<div style="display: flex; justify-content: space-between;"> <p>What is the first group or control?</p> <p>What is the second group or experimental?</p> </div>			
<div style="display: flex; justify-content: space-between;"> <p>What am I measuring or observing?</p> <p>Units?</p> <p>When will I measure?</p> <p>What formula will I use?</p> </div>			
<p>DV: _____</p>			
<p>IV: _____</p>			
<p>Hypothesis:</p> <p>If [I.V.] _____,</p> <p>Then [D.V.] _____.</p>			
<p>How will data look if I am correct? _____</p> <p>How will data look if I am wrong? _____</p>			
<p>Independent Variable</p> <p>Part of the experiment changed by the experimenter</p>	<p>Dependent Variable</p> <p>Part of the experiment that changes because of the IV- is measured or observed to get data</p>	<p>Constant</p> <p>Parts of the experiment that remain the same to prevent affecting the experiment's outcomes</p>	<p>Control</p> <p>Level of the IV that you compare back to- unchanged or in the natural state</p>

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.

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

Name _____

Date _____