

Water Quality Experimental Design Graphic Organizer

Question:	What is the Dependent Variable (DV) ?(What are you monitoring for?)		
What is this about?			
What affects the DV?	How will I manage the effect of these? (Look to right)	Options:	
_____ → _____ → _____ → _____ → _____ → _____ → _____ → _____ → _____ → _____ → _____ →	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____	<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 	
***From the list above, circle or highlight the Independent Variable (IV).			
Comparison: You are comparing your water samples to a standard “healthy” range. What are the healthy ranges for each test?			
What am I measuring or observing? DV:	Units?	When will I measure?	Where will I measure?
_____ _____ _____ _____	_____ _____ _____ _____	_____ _____ _____ _____	_____ _____ _____ _____
Purpose:			
How will I know if the water is healthy? _____			
How will I know if the water is unsafe? _____			
Independent Variable Part of the experiment changed by the experimenter	Dependent Variable Part of the experiment that changes because of the IV- is measured or observed to get data	Constant Parts of the experiment that remain the same to prevent affecting the experiment’s outcomes	Control 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? _____ _____ _____
--	---

- Make a timeline showing the events in your experiment and the times you will measure or observe.
- Create a Water Monitoring Plan that clearly outlines the purpose of the plan and how the data should be used.
- 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:

--

SCIENCE DOES NOT STOP: What is my next step?

What NEW questions need to be answered?

Name _____

Date _____