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:

- 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?	Units?	When will I measure?	Where will I measure?
DV:_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Purpose:

How will I know if the water is healthy?_____

How will I know if the water is unsafe?_____

Independent Variable	**Dependent Variable**	**Constant**	**Control**
Part of the experiment changed by the experimenter	Part of the experiment that changes because of the IV- is measured or observed to get data	Parts of the experiment that remain the same to prevent affecting the experiment's outcomes	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?
_____ _____ _____	_____ _____ _____

- O Make a timeline showing the events in your experiment and the times you will measure or observe.
- O Create a Water Monitoring Plan that clearly outlines the purpose of the plan and how the data should be used.
- O Write a clear procedure that other people can follow step by step.
- O Create an organized data table.
- O Complete the experiment.
- O Make adjustments to the written procedure if necessary and explain changes.
- O Display the data in an organized chart or graph (if possible).
- O Complete required follow up for the experiment (questions, lab report, evaluation, etc.).
- O Complete the sections below on results and the next step.
- O Sign and date this form.

Results:

SCIENCE DOES NOT STOP: What is my next step?	What NEW questions need to be answered?

Name _____ Date _____