

Data Sheet

Field Study Section:

You are going to conduct a field study to see how water quality (including contaminants) affect a fish's risk of being caught by a predator. There are 3 fish tanks with different water conditions in each.

1. IDENTIFY the two independent and one dependent variables.

Manipulated / Independent Variable #1:	
Manipulated / Independent Variable #2:	
Responding /Dependent Variable #1:	

2. For each independent variable what is the field study QUESTION (*how does the independent variable affect the dependent variable?*), and what is **your** HYPOTHESIS (*prediction of what will happen*)?

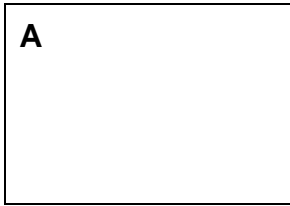
1	Question: Hypothesis:
2	Question: Hypothesis:

3. For each tank, WRITE or SKETCH what is in each tank (A, B, and C). IDENTIFY what about the water quality will affect the amount of time it takes for the predator to capture the fish. PREDICT (from #1-#3) which tank will have the shortest (#1) to the longest (#3) time for the predator to catch the prey. Then RECORD the data of you predation trials. Finally, CALCULATE the average predation time for each tank.

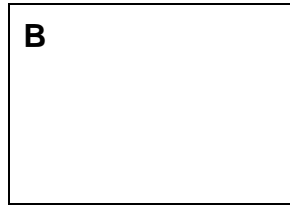
A	Identify what is expected to affect catch time:	Record of observations:	
	Predicted order to catch:		Average time to catch:
B	Identify what is expected to affect catch time:	Record of observations:	
	Predicted order to catch:		Average time to catch:
C	Identify what is expected to affect catch time:	Record of observations:	
	Predicted order to catch:		Average time to catch:

4. **Results:** Which tanks had the shortest (#1), middle (#2) and longest (#3) times for a predator to catch the fish:

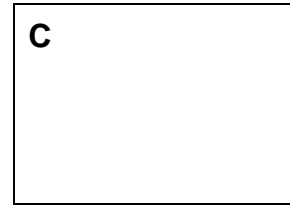
A



B



C



Discuss: Were your hypothesis correct? How close were your predictions for each tank? How might you explain any unexpected results? How many measurements do you think you should take? How can you better control the experiment? What else could you do to test for presence of contaminants in one of the aquariums?

5. Write a Conclusion for this experiment.

Answer the experimental **question**. Include supporting data from the Manipulated (Independent) Variable vs. Responding (Dependent) Variable table. Explain how these data support your conclusion. Provide a scientific explanation for the trend in the data.

Question: What is the effect of the different water qualities on the time to catch the fish?
Conclusion:

6. How would you use this information in the development planning of property that is located along or near a river or body of water?
