Name:	Period:		
Brine Shrimp	and the Great Salt Lake Inquiry Lab		
Purpose: To better unders abiotic and biotic factors.	stand the GSL ecosystem and how it is influenced by		
would like to investigate. The abiotic or biotic factors on t	he problem, in general terms, you and your group his should be something that relates the effects of he ecosystem of the GSL. These factors could ls, insects, weather, nutrients etc.		
variable that will help you in introduced by humans to the different concentrations of the different concentrations.	you have chosen your problem, decide on one nvestigate it. Relate that variable to a real life variable are Great Salt Lake. For example you might test how chlorine affect the growth of Brine shrimp. This all dumping of chlorine done by Magnesium Corp.		
Title : Come up with a creative title for your lab that relates to the problem and the hypothesis.			
Design the Investigation : Describe the conditions of your control jar. A control should mimic the actual GSL ecosystem as closely as possible.			
Also list everything you will	be keeping the same in each of your jars.		
	erials you will need for your lab. Next to each material the GSL ecosystem it is representing.		
Material	What it represents		
Light	Sun		

List any other materials needed:
Procedures: List all the steps you will take to complete your lab.
Experimental Design: Draw a picture and label how you will set up your lab.
Errors: List 4 possible sources of error in your lab and how they might influence your results. (hint: think about how your lab is different than what is actually happening in the GSL)
Write a Hypothesis: Create a hypothesis related to the problem. Remember a hypothesis is what you think the answer to your problem is. A hypothesis may be written as, if this happens, then this will happen. Example: If brine shrimp eggs are exposed tothen will occur.
Approval Signature

Set up the experiment: Pay special attention to any sources of error that you make (did you spill some water or squash your cysts. . .). Make sure that you record these in the space below.

Data Collection: Collect data and record observations 6 times. These should be in the form of tables. Record number of hatched, length in mm, smells, water condition and quality and any other changes you may notice. Make sure you include a drawing for each observation also.

Quantitative Data: (numerical data)

Number of Hatched Shrimp

Day	Jar	Jar	Jar

Length of Shrimp in millimeters

Day	Jar	Jar	Jar

Qualitative Data: (written observations using all 5 senses)

Pictures:

Day	Jar#	Jar#	Jar#

Written Observations (use additional paper as necessary)

Day	Jar#	Jar#	Jar#

Analyze interpre	e the data: This is where you graph your results from your tables and t them. A line graph will probably work best.
length in mm	
L	time in days
# of shrimp	
	time in days

Er	ror	Αı	าล	lys	is
4	ь.				

1. Discuss all possible errors that you encountered with your lab and how they may have affected your results.
2. Is it normal to have errors in a lab? What should you do if you make an error?
3. Explain 3 reasons why you think that your shrimp did not hatch and what you could do next time to assure that they did. (ONLY answer this question if no shrimp in any of your jar hatched,including your control.)
Conclusions 1. Did your results support your hypothesis? Why or why would this be the case?
2. How does your experimental variable (salt levels, acid levels etc) relate to the variable effecting the Great Salt Lake in reality?
3. How would you interpret your results. Are you concerned about the results of your experiment and the implications for the GSL? Why or why not?
4. Explain what would happen to your ecosystem if the problem you investigated goes unchecked?
5. In order to obtain more data describe another experiment you could perform.

6. Draw a picture and explain how the water cycle was functioning in your jar.
7. Draw a picture and explain how the carbon cycle was function in your jar.
8. Please list the abiotic and biotic factors that were a part of your ecosystem.
9. Please list the abiotic and biotic factors that were missing in your ecosystem but are present in the actual GSL ecosystem.
10. How do these missing factors influence the ecosystem?
11. Explain how environmentalists would feel about the results of your experiment? What would be their bias when interpreting the results?
12. Explain how a nonenvironmentalists would feel about the results of your experiment? What would be their bias when interpreting the results?
Summary Analysis: Please explain in complete sentences 4 things you learned from this project.