Student F	Page	Name Period		
Title: pH Changes in a Small Ecosystem				
Introduction: An ecosystem contain microorganisms can be developed and observed. The microorganisms are like all living things because they need certain conditions to survive. Unlike us, they need to be constantly submersed in water. Like most organisms, they are very dependent on a property of water called pH. pH is a measure of the levels of acid or base the water contains. Acidic water contains H+ ions, basic water contains OH- ions. In this experiment, you will see what range of pH microorganisms can tolerate. Draw the pH scale here:				
Procedu 1. Create		hav that is available. Label the beaker.		
 Create your ecosystem from the water and hay that is available. Label the beaker. Observe the ecosystem and record the number and kinds of organisms you see. You will have to make estimates. Add 50 mL of the acid or base your teacher assigns. Your pH Observe the ecosystem again a day or two later and draw and write your observations. 				
Data:				
Day	Drawing of microorganisms:	Written Observations		

Day	Drawing of microorganisms:	Written Observations

Analysis:
1. Summarize the changes in the ecosystem in the days before you added the acid or base:
2. What effect did the pH solution have on your ecosystem?
3. Using the class data, which pH solutions did the microorganisms survive? Not survive?
4. Human blood is a solution with a pH near 7. Our blood cells are the same size as some of the microorganisms you observed and are surrounded by cell membranes in the same way. What might happen to a human if the pH of blood changed?
5. A pond ecosystem food chain is dependent on microorganisms. If a pollutant changes the pH dramatically, what will happened to the pond?
Conclusion: