

# pH Lab

Go to the following web page:

[https://phet.colorado.edu/sims/html/acid-base-solutions/latest/acid-base-solutions\\_en.html](https://phet.colorado.edu/sims/html/acid-base-solutions/latest/acid-base-solutions_en.html)

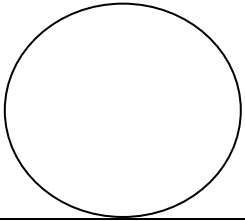
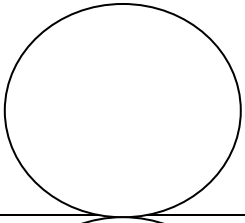
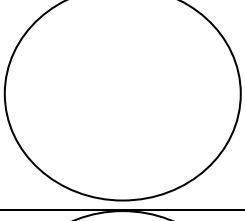
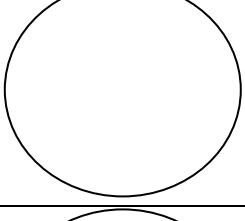
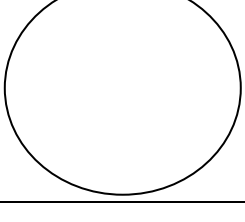
Step 1: Play around for 5 minutes (or less) to see what options there are and what you can manipulate.

Step 2: Look at the following pages and begin working on the handout (page 2). If you need help, ask.

Step 3: Begin answering the questions (page 3) on the back of the handout (page 2).

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

## pHET Lab: Acid/Base Solutions

Solutions	View (draw ions)	Equation	Color of pH paper	pH	Strength of Conductivity
Water					
Strong acid					
Weak acid					
Strong base					
Weak base					

## Discussion Questions:

1. Which ions are most abundant in an acid? \_\_\_\_\_
2. Which ions are most abundant in a base? \_\_\_\_\_
3. Which ions are most abundant in water? \_\_\_\_\_
4. How does the concentration of ions in a strong acid differ from a weak acid?
5. How does the concentration of ions in a strong base differ from a weak base?
6. Explain to someone in 3-4 steps how to use pH paper to determine the pH of a substance:  
  
Step 1 -  
Step 2-  
Step 3-

## Custom Solution

1. Set Strength to a strong acid. Adjust the concentrations and record the pH of the solutions.

Concentration	pH meter
0.001	
0.01	
0.1	
1	

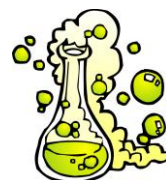
2. Set Strength to a strong base. Adjust the concentrations and record the pH of the solutions.

Concentration	pH meter
0.001	
0.01	
0.1	
1	

3. As concentration increases by a tenth, what happens to the pH?

4. As concentration increases, what happens to the number of ions in the solution?

Name: \_\_\_\_\_ Period \_\_\_\_\_



## Acid/Base – 3, 2, 1 Exit Ticket

<b>3</b>	Describe the activity! Give a brief description of the activity that you completed
<b>2</b>	Things I found interesting when I was playing the game...
<b>1</b>	Question I have....

**What do you think we should do next?**