

Name:

Water, pH, and Buffers – Report File

Exercise 1: Water and its Unique Properties

Data Table 1 – Needle Observations

Observations	
Vertical:	Horizontal:

Data Table 2 – Paper clips needed to break surface tension

Hypothesis:	Result:
_____ Paper clips	_____ Paper clips

Data Table 3 – Drops of water

Hypothesis:	Result:
_____ Drops of water	_____ Drops of water

Questions for Part I, Part II, and Part III:

- A. How did the experiment in Part I demonstrate surface tension? Use your experiment observations when answering this question.

Answer→

- B. In Part I, when adding the needle to the water, which approach worked best to balance the needle on the water – the vertical or horizontal placement? Explain your answer.

Answer→

- C. In Part II, how did your paper clip hypothesis compare to your paper clip results?

Answer→

- D. In Part III, how were the properties of adhesion and cohesion demonstrated in the experiment?

Answer→

Data Table 4 – Part IV observations

Observations:

Question for Part IV:

- A. How did this activity demonstrate capillary action? Explain your answer using your experiment results and observations.

Answer→

Exercise 3: Testing Common Household Materials for pH Values

Data Table 5 – pH observations

Well Plate	Item tested	Homemade pH strip	
		Color	pH
1	Water		
2			
3			
4			
5			
6			
7			
8			
9			
10			

Data Table 6 — Analysis of results

Well plate	Item tested	Acid/Base/Neutral?	Explanation:
1	Water		
2			
3			
4			
5			
6			
7			
8			
9			
10			

Questions:

A. Why is the pH scale important in science? Give one example of scientific applications.

Answer→

B. If a chemical has a pH of 3, how could you change its pH value to be more basic?

Answer→