Name: _____ **Date:** _____

Measuring pH of Common Substances Worksheet
Answers

1. Name all the items that are **acidic** according to your tests.

   Vinegar, lemon juice, tomato/apple juice

2. What characteristics do all these items have in common?

   Tastes sour, turns litmus paper red, turns cabbage juice red

3. Name all the items that are **basic** according to your tests.

   Salt water, bleach (ammonia), Milk of Magnesia, baking soda

4. What characteristics do all these items have in common?

   Tastes bitter; feels slimy; turns litmus paper blue; turns cabbage juice blue, green or yellow, depending on the concentration of the solution

Think about the two samples (vinegar and water) to which you added the Alka-Seltzer...

5. Did the pH of the solutions change when you added the Alka-Seltzer? How?

   Yes. It made both items more basic (more alkaline, less acidic).

6. Do you think Alka-Seltzer would be good for what it is marketed and sold? Explain why or why not.

   Yes. It neutralized a solution that was acidic. (Stomach acid is acidic.) Advertising for Alka-Seltzer and other antacids says it is for "fast relief from acid indigestion."

7. Why would an engineer need to know the pH of the substance with which s/he is working?

   Knowing whether a substance (pollutants such as acid rain) is an acid or a base helps environmental engineers figure out what kind of reaction it might cause to water, wildlife, forests, crops, bridges, cars, statues, buildings, etc. Knowing the pH of a substance (such as pollution) helps engineers figure out ways to neutralize its impacts.