Name:	Date:	12-17-21

Student Exploration: pH Analysis

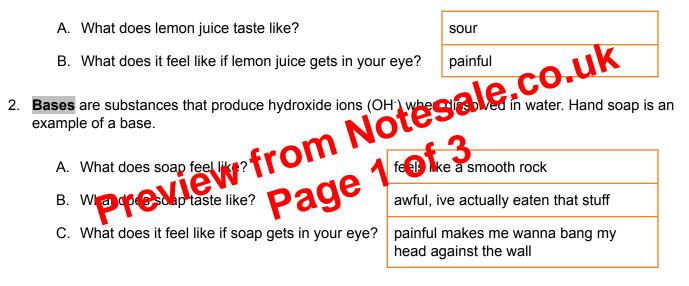
Directions: Follow the instructions to go through the simulation. Respond to the questions and prompts in the orange boxes.

Vocabulary: acid, acidic, alkaline, base, indicator, neutral, pH

Gizmos

Prior Knowledge Questions (Do these BEFORE using the Gizmo.)

1. Acids are substances that produce hydrogen ions (H⁺) when dissolved in water. Lemon juice is an example of an acid.



Gizmo Warm-up

The strength of an acid or base is measured on the **pH** scale. The term "pH" is short for "potential of hydrogen." It is a measure of how many excess H⁺ ions there are in a solution. The pH scale runs from 0 to 14, with 0 representing the highest concentration of hydrogen ions. **Acidic** substances have a pH below 7, while **alkaline** substances (bases) have a pH above 7. Pure water has a pH of 7 and is considered **neutral**.

The *pH Analysis* Gizmo allows you to find the pH of a variety of liquids. In the Gizmo, check that the **Substance in the tube** is **Ammonia**, and click **Test**. Wait until the animation is finished.

- 1. Indicators change color in acids or bases. What is the color of the pH paper?
- 2. Compare the paper to the **pH color chart**. What is the pH of ammonia?
- 3. Is ammonia acidic or alkaline?



blueish
12
alkaline