

Name _____

Exploring Familiar Acids and Bases: From Lemons to Soap

Open-Ended Response Answer Key

1. One scenario where vinegar can be used as a cleaning agent at home is to remove mineral deposits and soap scum from bathroom fixtures. Its acidity helps dissolve these deposits, making cleaning easier.
2. A unique use for baking soda is as a natural toothpaste. Baking soda can be mixed with a small amount of water to create a paste that is used for brushing teeth, thanks to its mild abrasive properties and ability to neutralize odors.
3. To maintain the pH balance in a swimming pool, I would regularly test the water using pH testing kits. If the pH is too low (acidic) or too high (basic), I would adjust it by adding specific chemicals to bring it to the desired level. Proper filtration and circulation of the water would also play a role in maintaining the balance.
4. Acids and bases are used in the pharmaceutical industry to create and adjust the pH of medicines. For instance, citric acid may be used to make a medicine more palatable, while sodium hydroxide may be used to neutralize the acidity of certain medications. These processes ensure that medicines are safe and effective for patients.

