**Measuring Acids and Bases**

Before You Start

In this activity, you will use pH paper to determine the pH of substances. A colour guide will help you measure the pH of acids and bases.

The Question

What are the pHs of some common substances?

Procedure

1. Place 10 mL of each solution in separate test tubes.
2. Use a clean strip of pH paper for each solution. Dip the end of the pH paper into the solution. After about 2s, remove the paper. Compare the colour of the wet end of the paper with the colour guide. Record the pH.

Observations

|  |  |  |  |
| --- | --- | --- | --- |
| Substance | Colour | pH # | Tape Strip Here |
| *Vinegar* |  |  |  |
| *Tap Water* |  |  |  |
| *Bottled Water* |  |  |  |
| *Antacid Solution* |  |  |  |
| *Cola* |  |  |  |
| *Dish Soap* |  |  |  |

Analyzing and Interpreting

1. Which is the manipulated variable and which is the responding variable in this activity?

*Manipulated: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*Responding: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

1. Describe how you determined the pHs of the substances tested (*consider those that appeared to be “in between”)*.

Forming Conclusions

Which solutions were acids? How would you know?

Which solutions were bases? How would you know?

Which ones were neutral? How would you know?

Extending Understanding

Why is it important to understand and test the acidity of substances? Use a real world scenario in your description.