

## Acids & Bases

Name \_\_\_\_\_

Visit the **Acids & Bases** links page of the **Kid Zone** at <http://sciencespot.net/>.

### Site: The pH Factor

Click the purple “Explore” button on the main page.

After the pH panel loads all the way, click on the button with the lemon. Record the pH & other information in the the chart.

Click the buttons for the other items to complete the chart.

Substance	pH	Acid, Base, or Neutral?	Color of pH Paper	Color of C. Water
Lemon				
Baking Soda				
Aspirin				
Ammonia				
Milk of Magnesia				
Lava Soap				
Borax				
Water				
Lemon Soap				
Vinegar				
Tonic Water				
Liquid Plumber				

### Site: Alien Juice Bar

**Challenge 1** - Click the button for Challenge 1 to learn more about acids and bases.

(1) Click the cup with the purple juice in it and drag it to the different liquids to check the pH. What happens to the color in each one?

Lemon Juice - \_\_\_\_\_ Window cleaner - \_\_\_\_\_ Water - \_\_\_\_\_

(2) Drag each liquid to the correct shelf before clicking the “Check Me” lever.

(3) Click the “Test More” button under the lever. When you are finished checking all of those liquids, click the “Check Me” lever. Once you get them all correct, click the “continue” button to return to the main menu.

**Challenge 2** - Click the button for Challenge 2 to use your knowledge of acids and bases.

(1) Read the directions before clicking the “Start” button!

(2) Tips for the Flying Cabbage ... If you are not sure if a liquid is an acid or base, click and drag the cup of cabbage juice to the bottle to test the pH. Click and drag the bottle of liquid to the clear cup in front of the alien to pour a drink.

(3) How did you do? If you kept everyone alive, click the “Main Menu” button. If you didn’t keep everyone alive, click the “Try Again” button.

**Challenge 3** - Click the button for Challenge 3 to test your knowledge of acids and bases .

(1) Click and drag the cup of cabbage juice to each drink on the tray to check the pH.

(2) To change the pH of a liquid, click a bottle of liquid from the shelf and drag it to a glass. Watch the pH increase or decrease.

(3) If you need a lower/higher reading, keep adding acids/bases until the pH is in the correct range. Once all the drinks are correct, you will see a “Continue” button. Click it to move on to the next set of drinks. Continue adding acids and bases to the drinks until you get the pH at the correct level. **HINT:** For this section, neutral equals anything between 6.80 and 7.20!

(4) Which acid and base caused the biggest changes in pH? (Based on one click and drag!)

Acid - \_\_\_\_\_ Base - \_\_\_\_\_