Red cabbage juice is an indicator; something that turns color when it is mixed with an acid or a base. Depending on the color you see, you will know if your test item is acidic, basic or neutral.

Gather Your Materials:
- Small head of purple cabbage
- Mixing bowl
- Boiling hot water
- Knife and cutting board (adults only!)
- Squeeze bottle
- Test items: vinegar, baking soda, lemon juice, dish soap, water, table salt; each in a small bowl or cup

What to do:
1. Make sure all of your bowls and cooking tools are very clean and free of any materials that could contaminate the experiment, like soap residue.
2. Have an adult chop or shred the cabbage, as if you were making coleslaw, and place it in the mixing bowl.
3. Have an adult pour the boiling water over the cabbage. Let the cabbage sit until the water is room-temperature, or overnight.
4. Strain the cabbage juice into a squeeze bottle.
5. Add about a teaspoon of the cabbage juice indicator to each sample. Use the pH scale to determine if your test item is an acid, base, or neutral.

Did You Know?
Acids are usually sour-tasting. If you look at the special scale for measuring acids and bases, called a pH scale, anything less than 7 is an acid—these items turned our indicator pink.
Bases are bitter tasting. On a pH scale, anything greater than 7 is a base—these items turned our indicator green or blue. If something has a pH of exactly 7, or did not change color in our experiment, it is neither acidic nor basic, and is called neutral.

Acids and bases are opposites. If you mix an acid and a base it will result in neutralization because the reaction creates salt and water—two neutral items!