

Making Red Cabbage acid-base Indicator:

I first did this experiment with my kids when they were about 3-5 years old (we did a lot of Montessori activities at that age). We did it again when studying chemistry (grades 2 and 4)... but I know this experiment is commonly done all the way through middle and high school.

Step 1:

First cut up red cabbage and place it in a saucepan with water, bring it to a boil, turn off the heat and let it sit for a few hours.

Strain out the cabbage and poured the juice into test tubes or cups. We used plastic test tubes that we got from [Oriental Trading](#) a while back, but of course you can use disposable plastic cups, baby food jars or whatever you have on hand.

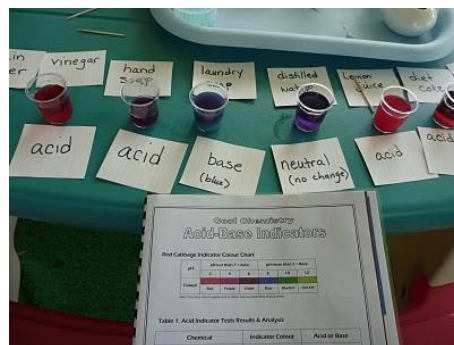
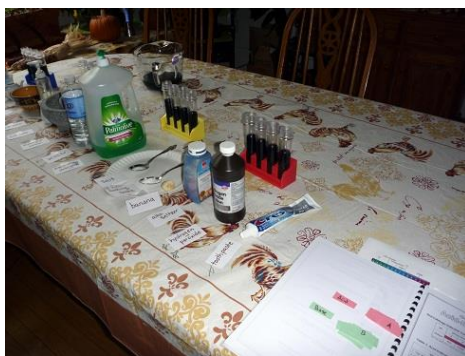


Step 2:

Assemble the chemicals you wish to test. We had a huge selection of items to test -- partly because there are three kids who all want to take part in the action. If I had to narrow down the selection I would recommend

- vinegar or lemon juice (acid)
- Diet Coke (acid)
- baking soda (base)
- glass cleaner (base)
- apple (but let it soak overnight before really assessing the results)
- hydrogen peroxide (because it bleaches the color out)

Here was our setup this year and from a few years ago:



Before we started adding the ingredients to the test tube, I had the kids decide together which they thought were acids and which were bases.



After adding all the ingredients to the test tubes and labeling them, we looked for the top two most acidic items and the top two bases. Just so you know, we found the results easier to determine after adding some water to the test tubes because I had let the cabbage sit on the stove for a long, long time and the indicator was quite strong.



You can freeze your extra red cabbage juice for use later.

You can find the acid-base color chart at [Surfing Scientist](http://SurfingScientist.com) (page 13) or just google "acid base color indicator chart."