

## Science Outside the Box recipe for

# PURPLE CABBAGE ACID-BASE INDICATOR

### What you need:

purple cabbage  
zipper-locking plastic bag  
hot tap water  
labeled storage container

### What to do:

- Tear up 2 or 3 leaves of purple cabbage into your plastic bag.
- Half-fill the bag with hot tap water. ZIP IT TIGHTLY!
- Squish the bag gently for about 5 minutes until you have purple juice in the bag.
- Open the bag at one end of the zipper. Drain the purple juice into your labeled storage container. Put the left-over cabbage bits where food scraps go at your house. Cabbage indicator will keep in the refrigerator for a about a week. Pour it down the drain after that time.
- Use drops of your cabbage indicator solution to test household liquids and foods. What colors do you see?

## Why does it work?

Purple cabbage contains colored pigments that change colors when they meet an acid or a base. Acids make purple cabbage juice turn pink. Bases make the juice turn blue or greenish. Many people cook purple cabbage with a little vinegar or lemon juice to make it a nice pink color. What do you think would happen if you cooked purple cabbage with baking soda?