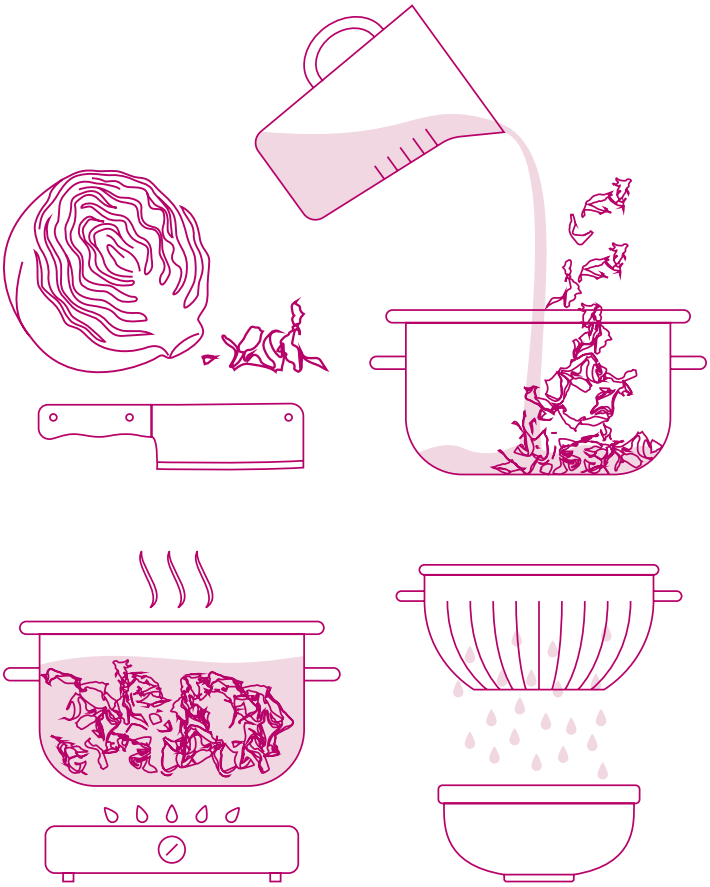
Shaping the Future of STEM

pH EXPERIMENTS at home

Side 1

LIST OF MATERIALS

- HEAD OF RED CABBAGE
- 1 LARGE POT
- WATER
- HOUSEHOLD ITEMS TO TEST: LEMON JUICE, MILK, SODA
- FRUITS/VEGGIES: BLUEBERRIES, BEETS, FLOWER PETALS



COLOR	pH
Red	2
Purple	4
Violet	6
Blue	8
Blue-green	10
Yellow	12

Here is a method for creating your own pH indicator at home.

Cut up about a half head of red cabbage and place it in a pot. Pour in just enough water to cover the cabbage, then boil the water for about one hour. Allow the water to cool, then strain out the cabbage and keep the liquid. You should be left with a liquid that is either purple or blue in color. The color of the liquid will change depending upon the pH.

Next, test various household solutions with indicators such as lemon juice, milk or soda. Add some of the liquid from above to a small amount of fruit or veggie you want to test and note the color change. It's important to use separate containers for each household solution; you don't want to mix chemicals that don't go well together or contaminate your results.

Use the chart to identify the pH of your solution. Under normal conditions, if the pH is less than seven, it is an acid; if it is greater than seven it is a base.

Other fruits and vegetables can also be used as pH indicators. Try using things like blueberries, beets and flower petals to make other indicator solutions and pH charts.

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Side 2

TEST SUBSTANCE	pH	IS IT AN ACID OR A BASE?

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