

Spring is in the air and the birds are busy building nests and laying eggs. Try this colourful activity to see if you can turn eggs into robin's eggs.

### What you will need:

Eggs, red cabbage, water, pot, cotton swabs, lemon juice or vinegar, baking soda, teaspoon, 2 small cups, spoon, paper towel

### What to do:

1. Fill a pot half way with cold water. Place the eggs in the pot. You can do this in batches depending on the number of eggs you want to make.
2. Tear the red cabbage leaves and place them in the pot. Place one large leaf over top of all of the eggs.  
Note: The more leaves you are able to get in the darker your eggs will be dyed.
3. Ensure that the eggs are completely covered in water and add more if necessary.
4. Bring the water to boil on the stove. Turn off the element once the water is boiled and allow the eggs to sit in the pot overnight.
5. Take the eggs out the pot the next morning and pat dry.
6. In one small cup, create a paste by adding 1 tsp of baking soda to 1 tsp of water. Stir with spoon. In the other cup, pour a small amount of lemon juice or vinegar.
7. Have the children dip a cotton swab in one of the liquids and dab or draw lines with the cotton swab. Have a separate swab for each liquid so that cross contamination does not occur.
8. Observe what happens to the blue on the egg!

### What is happening?

Red cabbage contains a water soluble pigment which belongs to a family of compounds called anthocyanins. Many other fruits and vegetables, such as blueberries and beets, also contain these compounds. Many of these pigments change colour when they come into contact with an acid or a base. In this experiment, the eggshell absorbs the pigment from the cabbage juice, turning the shell blue. Lemon juice and vinegar are acids and will change the shell from blue to red; while baking soda is a base and will change the shell from blue to green.

### Extensions:

Try other natural dyes on the eggs such as blueberries, radishes, onion skin or tea. Try other kitchen liquids to see what colour they will change the egg shell and determine if they are an acid or a base.

