

Experiments for clever foodies

Green is not forever

Have you ever noticed that a lot of vegetables are green? It's because the pigment that gives plants their green color plays a very special role in nature. Plants use it to convert sunlight to the energy they need to grow. Researchers have also discovered that the green plant pigment is very healthy for humans. But the pigment in green vegetables can change when you cook them. Try it out!



You need:

- 6 pieces of broccoli that are all roughly the same size
- 1 saucepan
- 1 ladle with holes or large spoon
- 1 kitchen timer or clock/watch

To be able to taste the results of the experiment, make sure you wash the broccoli well and use clean kitchen utensils.

IMPORTANT: Ask an adult to help you use the stove.

Here's how it's done:

- 1 Wash the pieces of broccoli.
- 2 Bring the saucepan of water to the boil.
- 3 Carefully add 5 of the 6 pieces of broccoli to the boiling water. Reduce the temperature so that the water is simmering gently.
- 4 Using the ladle with holes, remove one piece of broccoli from the boiling water after 1 minute, then another one after 3 minutes, 5 minutes, 10 minutes and 20 minutes.

What do you notice? Allow the vegetables to cool and then compare the taste of each piece of broccoli.

Happy experimenting!

Other things you could investigate:

- Do a similar experiment with green beans or another green vegetable. You may need to choose other cooking times to observe the change in the green pigment.
- Cook green vegetables with and without baking soda. Compare the result.
- Do you know any other vegetables that change their appearance when cooked? Ask an adult who likes cooking to suggest some examples, and check it out!

Did you know?

Some cooks add a pinch of baking soda to the cooking water when preparing green vegetables. It keeps the vegetables looking fresh and green for longer. Don't overdo it with the baking soda as it has a soapy taste. If you add too much baking soda, your vegetables will look good but might not taste that great!



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To mark the 20th anniversary of the company's hands-on labs for children, BASF developed the "Clever Foodies" workshop themed around healthy nutrition with fruits and vegetables. The workshop is hosted for elementary school children around the globe. Find more experiments to do at home at: www.basf.com/clever-foodies