

# Edible science: Teaching your kids while they cook

By VIRGINIA JUSTICE

Many people don't realize that cooking is a science and recipes are actually formulas. It's true – and it's one of the best ways to teach children science while making it enjoyable. Creating experiments you can eat is a great way to share the joy of science with children.

Author Vicki Cobb has written two books on the subject, entitled "Science Experiments You Can Eat" and "More Science Experiments You Can Eat." Both books focus on easy, edible science experiments that can be done in the classroom or at home. Since the release of the first book in 1984,

the idea caught on and others have written books demonstrating the science of cooking for children such as "The Science Chef: 100 Fun Food Experiments and Recipes for Kids" by Joan D'Amico and Karen E.



Drummond or "Exploring Kitchen Science" by The Exploratorium.

Beyond teaching science, cooking and food are an excellent way to teach math skills, especially fractions. For example, use a pizza to teach the concept of fractions. Typically, pizzas are cut into eight slices; however, you can cut one into as many slices as you like. By bringing math and science into food and cooking, you are making it a real-world application, something tangible and more easily understood. Using a pizza you can demonstrate how  $\frac{2}{8}$  is equal to  $\frac{1}{4}$  and  $\frac{4}{8}$  is equal to  $\frac{1}{2}$ . Then you can eat the lesson!

Did you know that wintergreen lifesavers spark when chewed? Take children into a completely dark room with a mirror and allow them to watch as they bite down on one. On a side note, you may want to hide the lifesavers if you buy them in a large bag; I found the empty bag and many broken lifesavers in our downstairs bathroom after showing my girls this scientific trick.

Bread making is great to highlight chemistry and biology. Start with warm water, yeast and a bit of sugar or honey. Yeast is a living organism that grows in warmth and feeds on the sugar. This organism produces gases, which, when combined with flour (another food source for the yeast), salt, and other ingredients, inflates the dough with air (gas) bubbles, giving bread its light, fluffy texture. You might not think salt would be that important in bread making, however, it is essential. Salt acts as



## Education

a control for the yeast. Without it, the yeast would produce more and more gas and your bread dough would expand out of control.

An easy and inexpensive experiment to demonstrate the need for salt is to take two bowls, fill each with one cup warm water (not over 110 degrees), 1 tsp. of yeast and 1 tsp. of sugar/honey. Mix the yeast and sugar well into the water, place both bowls on a cookie sheet in a warm area free from drafts. After about half an hour add  $\frac{1}{2}$  tsp. of salt to one of the bowls, allow the bowls to sit undisturbed for another hour or more. You should see a considerable difference between the bowl without salt, depending upon how fresh the yeast is. It may even flow over onto the cookie sheet.

For additional edible science experiments, do a Google search for "kitchen science," "science experiments you can eat," or "edible science." Pinterest is another excellent resource for recipes, lesson plans and other ways to connect learning with fun. And you'll find more ideas at [www.cookingwithkids.org](http://www.cookingwithkids.org).

Studies show that retention is greater when learning is meaningful, and most children find experimenting and eating enjoyable. Learning is FUNdamental – why not make it tasty, too!

*Home economist Virginia Justice holds an education degree. The Pendleton resident and her husband have two college-aged daughters.*

## HEATHER A. BACON, PH.D. & JENNIFER K. COOPER, PSY.D.

Licensed Clinical Psychologists



Helping parents discover new ways to shape behavior and reconnect with children.

Currently accepting new patients.  
Most insurance and private pay accepted.  
860 W. Elm Ave., Suite 204, Hermiston, OR 97838  
541-289-7777 • [hermistonpsych.com](http://hermistonpsych.com)