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Curriculum Units by Fellows of the National Initiative
2017 Volume IV: Chemistry of Cooking

The Chemistry of Baking Bread

Guide for Curriculum Unit 17.04.02, published September 2017

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Who doesn't love the smell of fresh baked bread? How is bread really made and what makes it smell so good? Many young students are not only unaware of where food comes from, many do not spend time in grocery stores or supermarkets to see and shop for food in its natural, whole-food state. Bread is an interesting case when thinking about natural foods. The focus in this six-week curriculum unit is for 2nd grades scientists to learn that bread is a composition of ingredients and is formed under chemical reactions influenced by those specific ingredients and a heat source.

The curriculum unit begins with the primary mentor text *Everybody Bakes Bread*, a picture book by Norah Dooley that introduces several types of breads, each a typical example or staple from across several cultures. With the bread recipes as a resource, the students will experiment with various basic ingredients (yeast, baking powder, baking soda, eggs, salt, and sugar) to discover why they are necessary to the success of the product. They will explore the chemical reactions that cause breads to rise or not, research why breads brown in the oven or skillet, and discover what makes bread smell so good while it is cooking.

(Developed for Science, grade 2; recommended for Science, grades 1-4)

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