



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

The Power of Extracts

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Through this three week high school Chemistry curriculum unit, students will learn about flavor chemistry. This unit is designed for 10th through 12th graders. The big idea of this unit to capture the interest of my students and to promote their learning of chemistry by appealing to their love of food. I want them to know that flavors are chemicals and that chemistry plays a major role in their everyday lives. The unit encompasses several topics including chemicals in flavors, how our bodies process tastes and smells, natural vs. artificial flavors, extractions, and flavor enhancers. Objectives addressed in the unit include connections among sciences, demonstrating and understanding safe laboratory practices, procedures, and techniques, identifying basic lab equipment needed to measure volume, mass, temperature, and pressure, making measurements and recording data, introduction to bonding types: covalent and ionic, and construction and defense of a scientific viewpoint. Throughout the lessons, I use an *I do, We do, You do* model to outline each lesson for ease of use. The culminating end of unit activity will have students making their own extracts and using them to prepare a bath salt scrub to take home.

(Developed for Chemistry, grades 10-12; recommended for Chemistry and Environmental Science, grades 9-12)

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