



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2009 Volume III: Science and Engineering in the Kitchen

It's Alive! Using Microorganisms in Cooking

Guide for Curriculum Unit 09.03.06
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Are all microorganisms harmful? Which are some of the beneficial microorganisms that are used in cooking? What are the differences between starters and yeast? What are some modern alternatives to yeast and how do they work? Which are some of the common bacteria that are used in cooking? How can the use of bacteria and yeast in cooking aid the classroom teacher to introduce some basic principles and ideas about chemistry? These are some of the central questions that this curricular unit begins to answer and attempts to clarify.

In this unit, we explore some basic physical, chemical, and engineering principles as we explore the way that microorganisms (yeast and bacteria) aid us in preparing some simple foods such as pancakes, flat breads, or ginger ale. Students will proceed through a series of hands-on activities that will allow studying the elements of the scientific method, and in the process, the design of a science fair project.

A list of student, teacher, and electronic resources, evaluation rubrics, extension activities and standards is provided for the implementation of the unit.

(Recommended for Integrated Language Arts, Science, and Social Studies, grades 5-7)

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