

Children Fight BAC!



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Overview

- ◆ Funded by CSREES – 3 years
- ◆ Partners:
 - Utah State University
 - Partnership for Food Safety Education
 - Safe Food Institute
 - LetterPress Software



Science of Instruction

INTEGRATION

ACTIVATION

PROBLEM

APPLICATION

DEMONSTRATION



Science of Instruction

- ◆ Instruction
- ◆ Coaching
- ◆ Feedback
- ◆ Humor
- ◆ Animated flash tutorials, quizzes and simulations



Research Process

- ◆ Identify learning goals and objectives
 - Goal: Students thaw foods properly using the refrigerator, cold water, or the microwave
 - *Learning Objectives – Learners will be able to:*
 - Define the purpose for thawing foods using the refrigerator, cold running water, or the microwave - to minimize the growth of pathogens within raw and ready-to-eat foods.
 - Demonstrate the correct procedures for thawing foods using the refrigerator, cold water (change water every ½ hour), or the microwave (cook right away).

Research Process

- ◆ Audience analysis



Instructional Modules

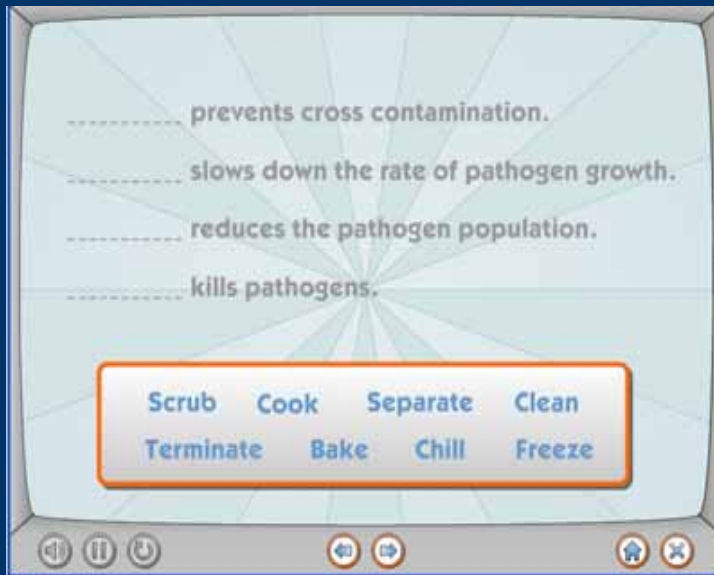
<i>Children Fight BAC! modules:</i>	<i>Teach Fight BAC!TM recommendations:</i>
Microorganisms, Pathogens, and Foodborne Illness	Separate
Shop and Store	Chill and Separate
Clean and Prepare	Clean
Cook and Reheat	Cook

Instructional Modules

- ◆ Each module features:
 - Lessons
 - Activities to apply knowledge
 - Humor
 - Offline activities



Instructional Modules



- ◆ Example of lesson
- ◆ Example of activity



Classroom Evaluation


- ◆ Technology, Life, and Careers classes
- ◆ 130 students participated
- ◆ 6 classes
 - 3 teacher-led
 - 3 student-led



Classroom Evaluation: Pre-Test

- ◆ What is a foodborne illness (food poisoning)?
 - The flu
 - When you feel very, very hungry
 - When a person becomes sick because of the food they ate
 - When a person has a cough and a runny nose
- ◆ What causes foodborne illness (food poisoning)?
 - Rotten food
 - Pathogens (germs)
 - Food that is dropped on the floor and then eaten
 - Food that tastes bad





Classroom Evaluation: Pre-Food Handling Observation

- ◆ Handwashing

Classroom Evaluation

- ◆ Evaluated software for functionality and instructional capability
 - Usability
 - Functionality
 - Attention Gaining
 - Attention Maintenance
 - Educational Value



Post Instruction: Test Results

- ◆ No difference in test scores when comparing teacher-led and student-led learning
- ◆ Pre-test – 59%
- ◆ Post-test – 90%
- ◆ One-month post-test – 83%
- ◆ *This represents an 24% increase in retained food safety knowledge*



Post-Instruction: Observation Results

- ◆ Prior to the instruction, students washed their hands before preparing food for approximately 15 seconds
- ◆ After the instruction, students washed their hands for approximately 26 seconds before handling food
- ◆ *This represents an 80% increase in observed handwashing time*



Evaluation: Conclusions

- ◆ Children Fight BAC![™] is an effective food safety instruction program for 6th grade students to increase their food safety knowledge and improve their food handling practices
- ◆ Children Fight BAC![™] can be used for teacher-led or student-led instruction



Teacher/Leader Guides

- ◆ Connect to state curriculum standards to encourage adoption into classroom curriculums



State Curriculum Standards

- Utah
- Utah Health Education – 6
Standard 4 : The students will understand concepts related to health promotion and disease prevention (Objective 1).
- Utah Technology, Life and Careers - 7
Standard 3 : The student will develop basic skills related to family and consumer sciences and skills necessary to enhance independence and a positive self-concept (Objective 3-3).



Teacher/Leader Guide

- ◆ Suggestions for implementation
 - Learning objectives
 - Preparation
 - Learning activities
 - Summary discussion questions
 - Homework activities



Awards


- ◆ 2004 Education Software Review Award (EDDIE) - Health
- ◆ 2004 AEP Distinguished Achievement Award Finalist - Science
- ◆ 2005 AEP Distinguished Achievement Award Winner - Science
- ◆ 2005 AEP Distinguished Achievement Award Finalist - Most Innovative Software
- ◆ 2005 Best Educational Software Award (BESSIE) - Health



Dissemination

- ◆ Sold as curriculum





“Children Fight BAC is superb! With the limited time I have, it is ideal. It provides comprehensive food safety education presented in a way that kids remember. My students have a lot of fun with it; they laugh out loud”.

Cathryn Davies