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Locally developed program uses vittles to help teach science and math

The fastest way to students' brains is through their stomachs. That's what a new teaching tool developed at Ohio University called FoodMASTER is showing. Recently, teachers from throughout the region learned how to use FoodMASTER to make science and math more digestible for grade-schoolers.

Former OU researcher and current East Carolina University assistant professor Melani Duffrin and Federal Hocking Local School District teacher Sharon Phillips developed the program seven years ago to bring science and math concepts to life using common household items such as measuring cups, high-fiber cereals and apples, according to a news release.

Phillips initially studied food science with Duffrin and then created a 14-week curriculum for students at elementary schools in Amesville and Coolville. The FoodMASTER curriculum is now taught in 10 lessons that focus on edible items such as fruits, vegetables, eggs and milk.

In a lesson on making apple crisp, for example, Phillips provided ingredients but took away certain measuring cups to prompt kids to convert fractions of flour using math skills learned in class. The lab also illustrated how to use acid to slow the browning of fruit. In another exercise, students conducted research and created theories on what would happen to a recipe if they used egg whites instead of egg yolks.

FoodMASTER has been in beta testing for the past two years, and is now ready for rollout. The training session in July prepared teachers to implement the program in their classrooms. As part of the training, they worked in the test kitchen to put the concepts into practice.

The training sessions took place at Grover Center at OU July 24-26. The training included 15 southeast Ohio third-grade teachers from six school districts in Athens, Meigs and Washington counties.

Since 2005, the FoodMASTER program has been supported by a $600,000 National Institutes of Health-Science Education Partnership Award presented to the College of Communication. The program includes the hands-on curriculum and the Virtual FoodMASTER game developed by OU School of Telecommunications faculty members John Bowditch and Beth Novak and six undergraduate students to teach the same information via computer simulation.

"The advantages of the Virtual FoodMASTER game are there is no clean-up. You can save your progress and come back later, and it can be downloaded on almost any computer," Bowditch said in the news release. "The disadvantage is you can't taste it or eat the end result!"

Following this training, participating teachers will use FoodMASTER in the classroom during the 2007-08 academic year. Throughout the year, Duffrin, Project Coordinator Sharon Romina and Curriculum Specialist Jana Hovland will analyze and compare the learning progress and health of students of participating teachers and non-participating teachers. They also will compare the knowledge levels, health and academic performance of students whose teachers have experienced the hands-on training in the kitchen with those who have experienced virtual training on the computer.

FoodMASTER administrators eventually hope to expand the program to more schools in southeast Ohio.

"It is exciting to finally take the FoodMASTER training to the classroom," said Romina in the release. "The program has been revamped during the last two years, and now it's time to see how effective it can be in third-grade classrooms."

Curriculum Specialist Jana Hovland, left, discusses a project that involved yeast and flour with some Meigs elementary teachers during the FoodMaster program at Grover Center recently.

Photo by Ed Venrick.