

Developing High Impact Active Learning Programs Based on Agriculture to Meet State Education Standards in STEM

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Developing an early interest in the fun and excitement of science is critical to successfully encouraging students to pursue a higher education in science, technology, engineering, and mathematics (STEM). Agriculture Awareness Day is a one day program developed as a collaborative partnership among Virginia Tech, Virginia Cooperative Extension (VCE), King Arthur Flour Company (KAF), Future Farmers of America, and Southside Gleaning Network. All fifth grade students from public and private schools in four counties participated in this program.



King Arthur Flour conducted the Life Skills Bread Baking Program® which provides students with a fun, real-world application for the skills they are already learning in school such as math, science, reading, planning, problem-solving, and more. Each future baker was provided all materials necessary to make two delicious loaves of bread at home – one to enjoy and the other for donation to a community organization.



VCE conducted hands-on inquiry-based learning modules based on the state education standards.



Students extracted DNA from strawberries and made a necklace with the DNA in it.



Students learned about the earth's resources by dissecting an apple.



Each student built an animal cell model.



Students learned about molecules and polymers by playing with oobleck.



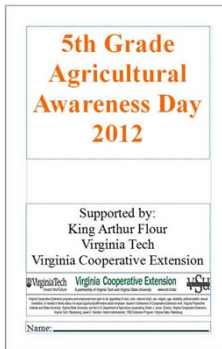
Students studied wheat production and how it becomes flour.



Students learn the value of gleaning and community service.



Teachers stated that the program contributed to the students' preparation for standardized state tests, the hands-on learning reinforced the topics taught in the classroom, and that this is the only program where students could have these experiences.



Each student was also provided with a journal so teachers could have follow-up discussions in the classroom.

Virginia Cooperative Extension