

### December 4, 2013 - Staunton City Schools Tip Sheet

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#### STEM CLUB KICKS OFF AT WARE

In November, Ware kicked off its first STEM Club, featuring activities designed to engage students in STEM education: Science, Technology, Engineering and Mathematics. The afterschool club is offered to clusters of students in grades 4 and 5, and in grades 2 and 3. Each cluster meets 4 weeks in a row, twice a week, for a total of eight sessions. During these sessions, the students will act as scientists, engineers and mathematicians -- investigating the world around them, searching for answers to interesting challenges, using their hands to gather evidence and engaging their minds to draw conclusions.

On the first meeting day, club members were issued a challenge --- to create some kind of instrument that would remove a fruit roll up that was taped to the wall. To accomplish this task, the students had only a limited and prescribed number of straws and tape available to them. These activities were crafted to introduce students to the engineering design process of: (1) identifying the problem, (2) brainstorming potential ideas and solutions, (3) designing/planning/building, (4) testing/retesting/improving the product, and (5) sharing the solution.

Math Coach, Sandra McGrath, said, "Today's elementary students will be responsible for answering tomorrow's complex questions, for investigating tomorrow's global issues, and for solving tomorrow's real-world problems. STEM education is the interdisciplinary approach to instruction that will best prepare our students for their futures. Our Ware students have enthusiastically embraced STEM, both inside the classroom and in our afterschool club."



Ware 4<sup>th</sup> grade students, Tyler Bussiere and Khalil Crawford work on a design challenge for their STEM project.



Ware 4<sup>th</sup> grade student, Emma Witt attempts to free the fruit roll up.

### **SHELBURNE STUDENTS PARTICIPATE IN MATH COMPETITION**

On November 19, Shelburne Middle School had 31 students from 7<sup>th</sup> and 8<sup>th</sup> grade attend the American Mathematics Competition, known as AMC8, at the Virginia Military Institute. This AMC8 gathering was the largest in the history of the competition with over 800 students from across Virginia participating. Students participated in the competition and then listened to math talks from Col. Troy Siemers and the VMI keydets. The day ended with lunch and a tour of the post.

The day was a community outreach activity of the VMI Applied Mathematics Department, the VMI Mathematics Education and Resource Center, and the American Mathematics Competitions program of the Mathematical Association of America (MAA). The mission of the MAA Competitions is to increase interest in mathematics and to develop problem solving through a fun competition. The emphasis is on problem-solving, not just computation. The problems are for all students with a healthy mix of easy, challenging, and fun questions. Teachers and schools benefit from challenging students with interesting mathematical questions aligned with curriculum standards. Students learn and achieve through competition with students in their school and from around the world. Top scorers receive recognition through special honors and awards, including an honor roll and merit roll featuring the highest scoring students. These contests are the first in the series that lead to the U.S. team at the International Mathematical Olympiad.

Mr. Robert Craft, Principal at Shelburne Middle School said, “Problem solving and competing in this way allows our students to show what they have learned in rich context, which is hard to replicate in the classroom. These opportunities do not come along every day, and I am proud that Shelburne's mathematicians were able to represent Staunton City Schools in such a rigorous event.”