

## Join our Robotics Club!

Part of St. Mary's STEM initiative (Science, Technology, Engineering and Math), the Robotics Club combines elements of all four areas, as club members learn how to build and control robotic devices, and design their devices to compete in First Lego League competitions.

The programming concepts in SCRATCH are similar to the NXT programming for the Robots (NXT also came out of the MIT Media Lab MindStorms project).

This year, over 200 Maryland teams competed at local, district and state levels. Both of St. Mary's teams competed well; one finished in the top 20 in the Maryland State competition.



## We welcome you to International SCRATCH Day at St. Mary's!

May 18, 2013

We are one of 177 events in 45 countries celebrating SCRATCH activities this weekend.



### St. Mary's k-8 School

600 Veirs Mill Road  
Rockville, MD 20852  
Phone: 301-762-4179  
E-mail: smsrockville@yahoo.com

## St. Mary's SCRATCH Club



*Is your school's STEM program running low on energy? Use SCRATCH to give it some STEAM!*

*Students use SCRATCH and Computers to create original stories and games around Art, Music, Drama and Dance*



## What is SCRATCH Club?

This semester we have begun an after-school activity called SCRATCH Club. Scratch is a creative learning community with over 3 million shared kid-developed applications.

With Scratch, kids can program their own interactive stories, games, and animations — and share their creations with others in the online community. Scratch helps young people learn to think creatively, reason systematically, and work collaboratively — essential skills for life in the 21st century.

Scratch is a project of the Lifelong Kindergarten Group at the MIT Media Lab. It is provided free of charge at <http://scratch.mit.edu>.

## Why change STEM to STEAM?

“When American education is in crisis, policy makers and thought leaders roll out the STEM argument, that the science, technology, engineering and math curriculum needs to be emphasized as the cornerstone of American competitiveness in a world where Chinese students do lightning drills on the periodic table of the elements at age 4 (lol).

There is certainly no question that STEM education and STEM skills are a vital part of this country's edge, but many educators would argue that STEM is missing a key set of creativity-related components that are equally critical to fostering a competitive and innovative workforce, and those skills are summarized under the letter “A” for Arts.

Two years ago, the Conference Board and Americans for the Arts, in association with the American Association of School Administrators (AASA), conducted a survey of executives and school superintendents. The study, called [Ready to Innovate](#), demonstrated that more and more companies are looking for skill sets in their new employees that are much more arts/creativity-related than science/math-related. Companies want workers who can brainstorm, problem-solve, collaborate creatively and contribute/communicate new ideas.”

*- John Tarnoff, Head of Industry Relations, Master of Entertainment Industry Management program at Carnegie Mellon University*

## How does SCRATCH relate to STEAM?

At St. Mary's we have challenged the club members to create programs that are based on one or more of the arts... traditional art, music, drama or dance.

Creating programs makes use of Science, Technology, Engineering and Math... known as STEM and currently a hot topic in education. Our approach is called STEAM and takes advantage of the inherently creative aspects of working in the arts, using STEM features to accomplish student projects.

This is not an original idea, but it is an important one... (see <http://STEAM-NotSTEM.com> for background information).

To see a SCRATCH project that puts the A in STEM, see “Day Dream” <http://scratch.mit.edu/projects/40150/>

Scratch Club members are mostly in grades 4-6, but 7<sup>th</sup> and 8<sup>th</sup> grade students are encouraged to become mentors to younger students.

This semester we were fortunate to have a very experienced 8<sup>th</sup> grade student as our chief mentor... search for programs by “Scratchem” to see some of her work!

