WHO WE ARE

STEAMTechTeams is a group of volunteers who work to support STEAM (Science. Technology, Engineering, Art and Math) programs in the schools located in the Greenville, South Carolina metropolitan area. Most of our volunteers are retired professionals active in the Osher Lifelong Learning Institute (OLLI) at Furman University. We have a number of self-contained programs which we bring into the classroom. In addition to the expertise derived from offering the programs at a number of schools, we bring various tools and supplies that are not normally available at the schools. Generally, our volunteers practiced in professions such as the Medical Arts, Engineering, Research, Accounting/ Finance, Logistics, General Management, etc. We do insist that teachers remain in the classroom when we implement our programs. Should teachers choose to implement our programs themselves, program materials such as procedures, scripts, illustrations, project bills of material and budgets can be downloaded from our website. We are affiliated with the SC Upstate STEM Collaborative in the Greenville Area.

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STEAM Tech Teams

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STEAM Tech Teams

A VOLUNTEER ORGANIZATION SUPPORTING SCIENCE, TECHNOLOGY, ENGINEERING, ART and MATH IN OUR SCHOOLS

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OUR PROGRAMS

E-Nable Prosthetic Hands

We help teachers and their students to size, 3D print and assemble simple prosthetic hands designed by E-Nable, an Internet-based worldwide volunteer organization. E-Nable provides prosthetic hands free of charge to people around the world who are without hands due to birth anomalies, accident or war.

Vex Competition Robotics

We support school– and organization-based competitive robotics teams and promote local competitions. This world-wide program supports robotics education at the elementary through university education levels. In addition to collaborative learning, our program introduces students to the Engineering Design process, robot simulation and programming in the RobotC and C++ languages.

Biomolecules

We collaborate with teachers to facilitate a basic understanding of biomolecules and how these molecules are used in forensics, disease diagnosis, biocomputing and bioengineering. In certain circumstances, we can bring the lab into the classroom. Concepts and skills include:

- Introduction to basic lab procedures,
- DNA and protein gel electrophoresis,
- How molecular structure produces function and
- Fold-It, an online game for protein structural research.

OUR PROGRAMS (CONTINUED)

Quadcopters and Drones

We work with teachers and students to develop quadcopter drone programs in their schools. Concepts and skills include:

- How various systems in a quadcopter work,
- Rules for safe flying,
- Using a drone simulator,
- Flying practice with small drones and drone racing,
- Drone photography,
- 3D printing and assembly of quadcopters, and
- Development of schools' policies and procedures for safe flying.

How A Computer Really, Really, Really Works

This is a 10– to 14-hour program that explains how today's computers work at the most fundamental level. Concepts and skills include:

- Introduction to basic electrical concepts such as voltage, current, resistance and Ohm's Law,
- How simple logic gates are used to add numbers,
- Introduction to the Binary numbering system,
- Using a multimeter and a
- Cursory introduction to quantum computing.

OUR PROGRAMS (CONTINUED)

Hacking the Mind Through Magic

Researchers in Neuroscience are beginning to learn that magicians have been using the foibles of our neurological systems to hide their "method." This offers an opportunity to introduce basic neuroscience in an entertaining way. Concepts demonstrated include:

- Neuron function and structure,
- Optical and "physics" illusions,
- Cognitive illusions,
- Bottom-up and Top-down illusions,
- Attention management and misdirection,
- Multi-tasking and interference.

Support in 3D Printing & Design

We assist teachers and administrators to establish 3D printing and 3D design programs in their classrooms. These concepts and processes can be applied to students who want to explore Art as well as Engineering. Services include:

- Assistance in setting up 3D printers,
- Basic instruction in the use of 3D printers,
- Design courses in Autodesk's TinkerCad 3D design software and
- Basic 3D design concepts and processes.