STEM INNOVATION ACADEMY

Warren County School District

6820 Market Street

Russell, PA 16345

www.wcsdpa.org

If you have questions contact:

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WARREN COUNTY
SCHOOL DISTRICT

STEM Innovation Academy's Goal

The goal of the STEM Academy program is to engage all learners in STEM. This goal is accomplished through a hands-on, project-based learning 'Creative Learning' system in which STEM disciplines, along with art, communications and social sciences are seamlessly integrated. It's a highly personalized approach that empowers students to shape their learning to meet their individual interests, abilities and learning styles.
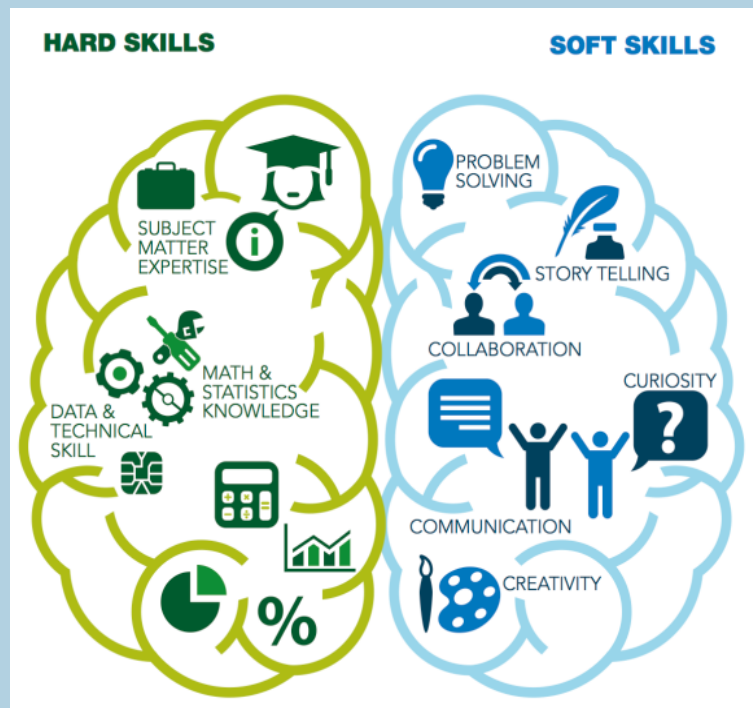
SMARTLAB LEARNING PATHWAYS

For schools keen on offering extended learning through in-depth, semester-long, project-based courses, SmartLab Learning also offers the SmartLab Learning Pathway.

These pathways, including Advanced Physiscs, Aerospace Engineering, Engineering Design, Environmental Science, Media Arts, and Robotic Engineering, ensure that students continue to build on their college- and career-ready skills as they transition from the SmartLab to their post-secondary experiences.

ADVANCED PHYSICS
Gain a deeper understanding of physics concepts as you design, build, and test structures. You'll then collect and analyze data to make connections between what you see in experiments and what the data reveals.

ENVIRONMENTAL SCIENCE
Conduct experiments to learn about the systems and environment while gaining an introduction to measuring soil, air, water, and electricity and how those interrelate in the environment.

AEROSPACE ENGINEERING
Use simulation software to design and build a spacecraft you can fly and modify. You'll also learn to program and fly introductory drones while gaining the skills necessary to create video, aerial survey, and programming projects.

MEDIA ARTS
Use professional-quality tools and resources to complete in-depth projects like advanced audio tracks with multiple sources, production-quality photography and videography, websites, graphics, and audio, and video files.

ENGINEERING DESIGN
Begin with microcircuitry and programming to create everything from circuit boards to advanced wearables. You can also design and build a 3D printer, create a pneumatic assembly line, and design advanced machines to solve unique problems.

ROBOTICS ENGINEERING
Create your own robot that's perfect to participate in FIRST LEGO League, VEX Robotics Competition, and RoboCup events.

Why STEM Skills Matter?

Job Market Trends

17.3 million STEM jobs and continues to grow

93 out of 100 jobs in STEM are above the national average in salary

STEM professionals on average earn 26% more than non-STEM workers

STEM employers looking for both technical and social skills

STEM Career Pathways

Engineering and Industrial Technology Career Pathway

⇒ Circuitry
⇒ Computer Graphics
⇒ Digital Communications
⇒ Mechanics and Structures
⇒ Robotics and Control Technology
⇒ Scientific Data and Analysis
⇒ Software Engineering
⇒ Sustainability
⇒ Future Tech
⇒ 3D Design
⇒ Fabrication
⇒ Coding & Programming
⇒ Drone Technology

Arts and Communications Career Pathway

⇒ Digital Media Arts/Communications
⇒ Computer Graphics
⇒ Film/TV Production
⇒ Film/TV Directing
⇒ Film/TV Broadcasting
⇒ Esports Marketing
⇒ Audio Engineering
⇒ Video Production
⇒ Editing Digital Media