STEM/STEAM skills are a vital part of a 21st century education, interweaving engineering, science, technology, mathematics, and the arts across the curriculum through project-based, hands-on learning activities. STEAM academies are cutting edge programs that address students’ interests while incorporating the national standards in math, science, and technology. Through the use of iPads, laptops, and computer labs, technology is infused into the curriculum and used as a tool to foster creativity, collaboration, and communication among students. STEAM education differs from the traditional science and math education through the use of a blended learning environment which allows students to experience how the scientific method can be applied to everyday life. STEAM students are innovators and critical thinkers who are able to make meaningful connections between school, community, work and global issues. A STEAM program high school graduate can enroll in a college-level course of study in science, technology, engineering, and math without the need for remediation. There is solid evidence to suggest that employees in all fields will need to utilize STEAM skills for problem solving in a wide range of industries.

Elementary level STEAM education uses inquiry-based and real world problem-based learning approaches to pique students’ interest in the STEAM subjects. Hands-on learning and problem solving using the scientific method are incorporated across all areas of the curriculum.

Middle School level STEAM courses become more rigorous and challenging. Students explore STEAM related careers, fields, and occupations, as well as the academic requirements of such fields.

High School level STEAM programs of study focus on the application of the subjects in a challenging and rigorous manner. More emphasis is placed on bridging in-school and out-of-school STEAM opportunities, including experiences in STEAM fields and occupations, as well as preparation for post-secondary education and employment.

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