



## **aSTEAM Village: Leading Youth and Families to New Possibilities**

aSTEAM Village (pronounced “esteem” Village) is founded on the vision to provide students an alternate pathway to success. To frame the aSTEAM Village concept, imagine education as a one lane road with the State Department of Education filling the role of law enforcement while School Boards, Universities and other Education agencies are the stoplights and street signs. The Department of Transportation, the road builder, dictates the route of the road. In order to travel down this one lane road, your vehicle must abide by the rules of the road or be subject to getting a ticket (identified as a underperforming school) or have your license revoked (closed because you received too many tickets). The wheels are the students and the vehicles are the schools. Some vehicles are high-performance, built for speed and style, while others are economy vehicles, built for mileage and the size of passengers. The rules of the road were made to provide safety for all vehicles based on the environment through which the road winds (i.e., residential, commercial or rural) as opposed to accommodating ALL of the vehicles based on the purpose of their design.

Now a second private road is created. This carpool lane does not rival the first road but instead it is an ally for the first road because the private road allows the freedom of specialized travel based on the design of the vehicle. aSTEAM Village is this pathway or carpool lane by making five programs available to students and families. These programs, 1) FIRST robotics, 2) Student Spaceflight Experiments Program, 3) DigiPen Video Game Design, 4) DigiPen Animation and 5) Computer Coding, will be offered in an expanded learning (before and after school) program. With a focus on teaching computational thinking and building our program based on the foundation and adoption of the FIRST Robotics Core Values, aSTEAM Village is able to accelerate the preparedness of 21<sup>st</sup> century problem solvers who are critical thinkers and cooperative learners who are engaged and eager to expand their learning because now their brains are activated and deprogrammed from being receivers of information to producers of information.

It's a painful fact that many students attending Kansas City-area schools are graduating without the necessary skills to enter college or the workforce. Businesses in our community report that they experience difficulty finding enough qualified employees to fill their open positions, especially in the science, technology, engineering, and math (STEM) fields. According to a report produced by the Black Point Policy Solutions, LLC for the National Governors Association Center for Best Practices (NGA Center), “STEM occupations are among the highest-paying, fastest-growing, and most influential in driving economic growth and innovation. Individuals employed in STEM fields enjoy low unemployment, prosperity, and career flexibility. In short, STEM education is a powerful foundation for individual and societal economic success.”



Unfortunately, not all students are exposed to STEM-related careers in school or in their homes. Even if students do participate in STEM-focused extracurricular programs, they have limited connections to real-world, hands-on experiences that move them from the classroom into the workplace. Therefore, it is imperative that under-represented groups of students learn not only the skills they need to succeed in these high-demand professions but that they also get introduced to the mentors and companies that can make their dreams a reality.

Moving beyond K-12 STEM is of equal importance. This project addresses the needs to be to improve the undergraduate level related to the preparation of K-12 STEM teachers thereby becoming an effective K-16 model of research, learning and professional development.

While it is our vision for aSTEAM to accomplish all of the above stated goals, specific program outcomes for this project are as follows:

- Student participation in the five programs of aSTEAM Village will increase student achievement in the area of Math and Science.
- Student participation in the five programs of aSTEAM Village will increase the awareness of careers in STEM fields.
- Parent training as coaches and facilitators will result in increased awareness of digital literacy.
- Parent training as coaches and facilitators will result in enrollment in a community college or university in the STEM fields.

The aSTEAM Village program was created not only to raise the level of education, but also to emphasize the “village” concept in raising the entire community, resulting in higher esteem, both internally and externally.