



GREENVILLE ISD
LESSONS FOR WHEREVER LIFE LEADS

Lessons for Wherever Life Leads
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“It started as a piece of steel pipe,” former Greenville High School student Press Alford said about the origins of the GHS Iron Lion Solar Car. The Iron Lion, a three-wheeled vehicle built from the ground up by GHS students, raced on electrical power completely supplied by solar energy to second place success in an eight-day cross country Solar Car Challenge in 2013. “To me,” Alford said, “it’s one of the most important things I’ve done.”

Alford’s summation of his solar car experience represents one of the benefits of incorporating STEM programs at Greenville ISD. Stemming from the Product Oriented Education (POE) concept, GISD introduced a STEM Academy in 2007 with specific focus on the field’s names in the STEM acronym – science, technology, engineering and mathematics.

STEM students engage in advanced level projects and are frequently seen racing life-sized cardboard boats, constructing bridges and building electric cars from lawnmower batteries. Rather than the typical “chalk and talk” pedagogy of engineering education, product oriented activities are incorporated at every level of the STEM Academy curriculum.

With a continued desire to design STEM curriculum relevant and essential to today’s workforce, GISD works diligently to forge relationships with the local business community. To aid in this initiative, Superintendent Don Jefferies designed a position specifically for community and business development, a unique job description model for a public school district. The position



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works to capitalize on community strengths and develop mutually-beneficial partnerships that enhance district programs.

“STEM directly affects what is closest and dearest to us — our children,” said GISD Superintendent Don Jefferies. “It’s the technological age they live in. It is their future, and their opportunity for careers in the most demanding fields.”

Jefferies said students in GISD STEM programs have the added benefit of working with the city’s business leaders. “It is our hope our students will in turn be business owners and leaders in the community,” he said.

Two of the most formidable business partnerships developed greatly enhance the districts’ robotics program. An extension of the STEM academy and POE platform, Greenville ISD boasts a world-champion high school program. Greenville High School teams participate in For Inspiration and Recognition of Science and Technology (FIRST) Robotics and VEX Robotics regional and world competitions. In addition to a world championship, GISD teams have achieved two FIRST world championship division wins, 11 regional wins, 15 robot design awards, and 1 judges award in the past 6 years. Additionally, based upon a track record of stellar performances, GISD students were invited to China to help facilitate the development of a similar robotics competition there. The GHS team was one of only two teams in the United States that received the invitation.

Recently, the pre-engineering robotics model was expanded to the other GISD campuses to create a comprehensive, vertically-aligned program. GISD elementary and intermediate campuses compete on a world stage in Vex Robotics. With its scalable potential and modular curriculum options, VEX creates a pipeline that benefits both educators and students. Since the



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program's inception in 2011, VEX teams have won two world awards, eight national awards and sixty-five local awards.

The successes of the robotics programs are due in part to relationships forged with L3 Communications and Innovation First. Both companies are native to Greenville. Eric Larsen, a mentor to the GHS Robotics team, Robowranglers, said of the partnership and its relevance to the workforce, "I am very impressed with the students and their ability to quickly seek out new ideas and use the skills they have learned in school. The FIRST Robotics Competition program combines the excitement of sports with the rigors of science, technology, engineering and math. Under strict rules, limited resources and time limits, teams of 25 students or more are challenged to raise funds, design a team 'brand,' hone teamwork skills, build and program robots to perform prescribed tasks against a field of competitors. It's as close to 'real world' engineering as a student can get."

In addition to supporting the robotics program, L3 also hosted Electrical Workshops to provide students "excellent interaction to teach our future engineering and design workforce. The workshops enable students to acquire real project experience and also allow them to see future employment opportunities that are available," Larsen said.

To give back to the businesses that enhance and support GISD programs, the district works diligently to offer products and opportunities to bolster the revenue and productivity of these businesses. One way is by offering strategic branding and marketing opportunities for local businesses.

This mutually-beneficial initiative offers visual positioning and branding options to local businesses through eBlasts to district employees, report card and bus advertisements and website ads. The district helps businesses advertise job openings, announce special discounts for



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educators and enhance overall branding efforts through the offer of print and online mediums with a targeted and engaged audience. With an in-house graphic designer and professional printers, the district is able to offer turn-key design work to the businesses.

“The collaboration between businesses and GISD benefits us all,” Jefferies said. “It helps owners and corporations promote their businesses, while investing their advertising dollars in a way that funds initiatives for our students.”

The district also serves on the Greenville Area Business Retention and Expansion Committee (BREC), designing the group’s marketing materials and creating a system of networking opportunities for STEM teachers to directly engage with local executives. The BREC recently organized an event at Greenville High School for area plant managers to listen to students speak of their experience in STEM and career and technology classes, enjoy a meal catered by the high school’s culinary art class, and take a tour of the campus.

In 2012, in partnership with Greenville Economic Development Corporation (EDC), Greenville ISD passed the Freeport Exemption, rescinding the taxation of goods that qualify as Freeport goods. The Freeport Exemption continues to enhance the community’s ability to retain local companies from relocating their businesses and is instrumental in attracting future businesses.

Greg Sims, President and CEO of the Greenville EDC said, “The Greenville EDC is very pleased to partner with our public school district, Greenville ISD, to foster a more educated and trained future workforce for our existing and future corporate employers. STEM curriculum is a vital resource to the growing global competition our local industries face today in all facets of industrial production and service. Learning the foundation of STEM and team building assignments to apply their knowledge will only enhance their ability to be hired. As productive



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members of our local workforce, GISD students and future workers will elevate our economic development efforts and enhance quality of life in our growing community."

Embracing a diverse and multi-talented student population, Greenville ISD also boasts world-class career and technology course offerings. GISD students have the ability to earn five certifications and take over forty-three CATE classes ranging from Welding and Metal Technologies to Culinary Arts and Entrepreneurship.

The completion of the CATE Auto Body Shop serves as a true testament to the dynamic harmony attainable by a business-school alliance. Sherwin Williams, 3M, SouthWest Ford and The Shop Designs donated more than \$25,000 in materials and Sherwin Williams' employees provided countless hours of free labor to completely remodel the space and outfit to operate as a professional studio. Students in the program gave back to the community by repainting welcome signs that line major thoroughfares entering and exiting Greenville roadways.

What started from just a "piece of steel pipe" has manifested into a whole new way to view education. Education is no longer limited to four brick and mortar walls, but rather has expanded to encompass the world as it is today, and Greenville ISD strives to arm students with lessons that transcend those walls. By working with community and business partners, Greenville ISD equips students with lessons for wherever life leads.

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