

ALL ABOUT LEARNING AND TEACHING

Igniting Innovation

What began as a childhood pastime is setting the stage for Katie Darlage’s future.

“Ever since I was a kid, I’ve loved building Legos®,” she divulges. Today, that passion has grown to encompass robotics.

Earlier this year, she proudly took part in the annual City of Indianapolis VEX Robotics Competition (IndyVRC).

“It was fun,” she observes before adding, “It was nerve wracking because it was my first competition!”

Launched in 2012, the Indy VRC Robotics Grant Program provides free robotics kits to elementary, middle and high school students. The goal is to introduce students to science, technology, engineering and mathematics (STEM) careers. It’s a partnership among government, corporate and non-profit organizations.

“(Then Indianapolis) Mayor Ballard put together a team and said, ‘Let’s raise money. Let’s reach out to schools and make sure they have everything they need to start a program,’ ” explains Laura Dodds, executive director at TechPoint Foundation for Youth. “That basically was, ‘Here’s your robot and we’re paying for your registration fee.’ And then, ‘Let’s make sure they have coaches to coach the team and let’s make sure the coaches know what they’re doing. Let’s provide professional development and make sure they have an absolutely awesome and inspiring event to compete at.’ ”

In 2016, the grant program expanded statewide. Currently, it targets elementary schools. The goal is to eventually include middle schools and high schools.

“This year, we started 347 new elementary robotics teams with this program around the state,” Dodds affirms. “What’s exciting about that is now Indiana is the state with the most Vex IQ teams in the country. It really catapulted the state to a position of being a leader and an innovator in how you get hands-on STEM learning into the classroom.”

Max Schultz, a senior at Lawrence North High School, calls robotics “a great way to introduce kids to the world of mechanical engineering.” Along with providing leadership training, he asserts that, “Things can go wrong really quickly, so you have to find a way to fix those problems in a timely



More than 150 teams competed in the 2017 IndyVRC robotics event (Ellie Sophia photos).



manner.”

Darlage, a junior at Lawrence Central High School, casts a different light on the stereotypical robotics student.

“People always think of people who are focused on their work and don’t want to

socialize with anybody,” she contends, “but when you get into a room with a bunch of other people who love what they’re doing, you see that they’re learning how to work together as a team. They’re having fun and making friends.”

RESOURCES: Laura Dodds, TechPoint Foundation for Youth, at www.techpointyouth.org | IndyVRC at oei.indy.gov/indy-vex-robotics-competitions

Engaging Entrepreneurs Early

What can we do to make a difference in the world?

Last spring, the collective response of a third-grade class led to a profitable paper-making business.

Their teacher, Barbara Tilley of Mintonye Elementary in Lafayette, received training through the Classroom Business Enterprise program coordinated by the Purdue Center for Economic Education (PCEE).

“Barbara is one of our best examples in terms of creating an ingenious production process,” comments PCEE Director David Perkis. “She made paper. And when I say she made paper, I don’t mean she bought paper and colored it to make it look fancy. She actually went through the work of figuring out how to make paper from pulp.”

Tilley enjoyed every minute.

“We decided there would be six pieces in a package of stationery,” she explains. “Students brainstormed how they were going to package it and how they were going to market it. Using blenders – that was one of their favorite jobs because they never get to use blenders!”

Parents who invested \$5 in the business were reimbursed \$5.25.

“That gave us some seed money up front so we could buy supplies we needed, like paint and glitter to make our stationery perfect,” Tilley notes. “We were excited! I had stations they worked through. They were shredding the paper, making the pulp, drying it, flattening it and adding the detail to it.”

Other activities revolved around deadline completion, problem solving, supply and demand, equipment safety and more.

“I made them collect the data,” Tilley recalls. “We had measurements. We made graphs of how much money was coming in – true life skills.”

Using a portion of the profits, students sank their teeth into a new venture: selling snacks.

“We had scoops and assembly lines. We were putting marshmallows, raisins, M&Ms, pretzels, Cheerios and things in baggies,” Tilley describes. “We decided we’d make 150 baggies to sell for three days. The snacks were going to cost 50 cents, so we had them figure out how to make change.”

Payday arrived with a festive after-school pizza party.



Paper-making is all in a day’s work for students in teacher Barbara Tilley’s third-grade class.

RESOURCES: David Perkis, Purdue Center for Economic Education, at www.krannert.purdue.edu/centers/pcee/home.php | Barbara Tilley, Mintonye Elementary, at mes.tsc.k12.in.us

Trying to Tackle the Teacher Shortage

Have the desire to be a teacher? Check. Enjoy providing youth with learning opportunities? Check. Possess the currency? Not exactly.

It’s an all-too common scenario that can bring a student’s aspirations to a screeching halt. The Achieve Your Degree™ program at Ivy Tech Community College Southwest in Evansville is helping to remove financial barriers for potential teachers and others by providing a free community college education.

Launched in 2016, Achieve Your Degree offers a unique take on tuition reimbursement by deferring it until the end of each semester. Individuals are required to complete federal financial aid applications, with many receiving funds. The employer then covers the cost difference.

Once students earn an associate’s degree at Ivy Tech, they can transfer their credits to the University of Southern Indiana (USI) or University of Evansville (UE) to pursue a bachelor’s degree.

Jonathan Weinzapfel, chancellor of Ivy Tech’s Southwest and Wabash Valley regions, contrasts Achieve Your Degree with the traditional tuition reimbursement model.

“At Ivy Tech, tuition costs range from \$1,500 to \$2,000 depending on the number of credit hours,” he shares. “Students would have to carry that, typically on a credit card or pay out of pocket, for three to four months until the semester is over. When you’re talking about entry-level employees without a college degree, typically their income level is not going to be such that allows them to carry that kind of debt.”

In addition to area employers covering a variety of industries, Vigo County School Corporation (Terre Haute) and the Evansville Vanderburgh School Corporation (EVSC) are partnering with Ivy Tech.

A cohort of teaching assistants and paraprofessionals at EVSC, for instance, is working toward associate degrees and career development certifications in one of two pathways: elementary education or early childhood education.

“As we look at one of the many challenges facing our K-12 educational system, one of them is a teacher shortage and how difficult it is to find and hire and keep talented teachers. With this partnership, we can work together to help stem the ongoing teacher shortage in Indiana,” Weinzapfel declares.

RESOURCE: Jonathan Weinzapfel, Ivy Tech Community College, at www.ivytech.edu