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2018-19  
**Community  
Report**



# 10 YEARS OF STEM INNOVATION

## Dear Stakeholders,

WOW... what a year it has been! We marveled at student-engineered bird houses and played probability carnival games. We broke ground (or brick) on our facility expansion and cheered for the ribbon cutting just eight months later. We formed new meaningful partnerships and celebrated longtime supporters. We welcomed the Class of 2025 and said farewell to the Class of 2019.

We are so proud of our STEM students, school, and community for all that we have accomplished, not only during the 2018-19 school year, but over the past decade. It was wonderful to celebrate 10 Years of STEM Innovation with our entire STEM community!

For 10 years, the Dayton Regional STEM School has been changing the way Dayton thinks about education. Our unique education model has allowed us to become the #1 Public School in Dayton on the Dayton Business Journal's annual list. Our success would not be possible without YOU.

Our families, staff, partners, and community leaders have dedicated their time, talents, and treasures to ensure that students can be the explorers, risk takers, leaders, and innovators they were born to be. Our students believe in themselves because Dayton believes in them.

We're excited to share this Community Report as a snapshot of how the students and school continue to thrive. Thank you for your continued commitment to the students and mission of the Dayton Regional STEM School.

Sincerely,

**Board President:**  
David Goldstein

**Superintendent / CAO:**  
Robin Fisher



## OUR MISSION

To prepare and inspire the next generation of leaders and innovators.

## OUR VISION

A vibrant learning community whose members are prepared to lead and serve.

## Board of Trustees:

Dr. Larry Dossler  
Dr. David Goldstein, President  
Mr. Matt Grushon, Secretary  
Dr. Charlotte Harris, Dir. Emeritus  
Dr. Joseph Keferl  
Mr. Chris Kershner, Vice President  
Dr. Nathan Klingbeil  
Mr. Joe Sciabica  
Ms. Beth Search

## School Leadership:

Robin Fisher – Superintendent / CAO  
Jessica Short – High School Principal  
Andrew Sears – Middle School Principal  
Stephanie Adams – Dir. Strategic Partnerships

# #1

## Public School

DAYTON BUSINESS JOURNAL'S  
LIST OF TOP PERFORMING  
HIGH SCHOOLS

**\$5m**  
In Scholarships  
AWARDED TO  
THE CLASS OF 2019

**800**  
Job Shadow Hours  
BY FRESHMEN AND  
SOPHOMORE CLASSES

**110**  
Admitted  
TO THE CLASS OF 2025



**65**  
Innovative Projects  
COMPLETED

**285**  
Educators Trained  
THROUGH DRSS TRAINING CENTER



**70%**  
of Graduates  
PURSUE STEM MAJORS

**360**  
Students Enrolled  
IN AN ENGINEERING  
PATHWAY PROGRAM

**BEST**  
Schools List  
RECOGNIZED BY NICHE

**100%**  
Graduation Rate  
CLASS OF 2019



**4**  
Certifications  
THROUGH I.T. PATHWAY



**7744**  
Miles Traveled  
BY CHINESE 3 STUDENTS TO  
VISIT THEIR PEN PALS IN TAIWAN

**72**  
Internship Hours  
COMPLETED BY EACH JUNIOR

**60**  
Organizations  
REPRESENTED AT THE  
COLLEGE AND CAREER FAIR

# THE REAL WORLD STARTS HERE



The Dayton Regional STEM School is a public independent STEM school serving students in grades 6 through 12. Located in Kettering, Ohio, the school's student-centered education model and focus on workforce preparation makes STEM an attractive public school option. Through Project Based Learning, career exploration, accepting culture, and strong community partnerships, the Dayton Regional STEM School continues to educate the next generation of Dayton innovators.

## Project Based Learning (PBL)

PBL is the innovative teaching method used at the STEM School where students learn by doing. This forward-thinking and student-centered approach is used in every classroom and across grade levels, increasing classroom engagement and understanding.



## STEM Foundations

The STEM Foundations program is a series of middle school courses unique to the STEM School that teaches important soft skills through an IT and engineering infused curriculum. Courses include STEM Explorations, Engineering Design, Coding, and more. STEM Foundations is a cornerstone of the school's educational model and is instrumental in preparing students for a rich learning experience and a bright STEM future.

## Art and STEM

Our students not only focus on STEM principles, but also humanities, languages, and art. The STEM School's Art program has been recognized by the White House for "Integrating Art into STEM Education." Introductory art courses, along with Architecture and Art and Science of Materials help students think outside the box and explore their creativity.



industry field. Exposure to these programs begins in the 6th grade and expands into high school where students select electives and complete career exploration experiences in their chosen field.

## Career Pathways

STEM offers Career Pathway Programs in Engineering, Information Technology, and Healthcare that allow students to deep-dive into an in-demand

## Five Qualities

The STEM School is dedicated to enriching the lives of students, both in and out of the classroom. Beginning in 6th grade, we encourage all students to use our five qualities each and every day in an effort to help them flourish in all areas of their futures.

· Communication · Inquiry · Collaboration · Persistence · Creativity



## Training Center

The STEM School is committed to doing what is best for not only our students, but students everywhere. That's why we created the Training Center, where we collaborate with, educate, and inspire teachers, near and far, through workshops, conferences, networking, and more. By connecting educators and sharing best practices, the potential for enriching young minds is endless.



## ACE Culture

Creating an Accepting Culture for Everyone (ACE) is so important to student, staff, and school-wide success. Our students take great pride in living up to our ACE qualities and attributes, spreading kindness, embracing diversity, and fostering a welcoming environment for the entire STEM family.



# COMMUNITY PARTNERSHIPS AT WORK



From our founding year, partnerships with community organizations has been vital to the success of the Dayton Regional STEM School. Check out some of the highlights from our STEM partnerships this year!

## STEM Supporters of the Decade Award

At the 10 Year Celebration Gala, we were thrilled to honor six of our many deserving community partners for their commitment to STEM education. These individuals and organizations have been vital partners, volunteers, and advocates to the school throughout the past decade and have contributed extensively to student and school-wide successes.

Northrop Grumman  
Wright State University  
Matt Grushon

Production Control Units  
Kettering Police Department  
Susan and David Bodary



## Northrop Grumman Sends Students to Space Camp

Northrop Grumman, a longtime partner of the STEM School, sent four students and two teachers to Space Camp at the U.S. Space & Rocket Center, the Official Visitor Center for NASA's Marshall Space Flight Center in Huntsville, Alabama. All expenses were paid for these lucky innovators, and it's safe to say they had a BLAST!



## Engineering Pathway Powered by Vectren

For the third year, Vectren has supported the Engineering Career Pathway students. Vectren is committed to developing the future engineering workforce by encouraging students to explore the wide variety of careers in this field. Their funding contributed to materials for middle and high school engineering courses, including robotics, hydraulics, bridge-building kits, and other tools. STEM hosts employees for Vectren Days twice a year to engage students in engineering challenges and share career insights.



## STEM Fights World Hunger with Lesotho Nutrition Initiative

10th grade students and Key Club members teamed up with the Lesotho Nutrition Initiative and Wright State University to package meals for orphaned and malnourished children in the African country of Lesotho. 20,000 meals were created in just three hours, and students were proud to make a difference in the lives of others.



## Happy Wife Acres Creates "Feet for Peggy" Challenge

When a chicken at a local farm lost her foot from frostbite, her owners put students' engineering design skills to the test. Peggy the Chicken, along with her support chicken, Penny, took up residence at the STEM School as students worked to create a prosthetic foot to provide her with a better quality of life.

Teams of students studied the animals, conducted research, met with industry partners, vetted designs, and 3D printed final products. By the end of the school year, students watched Peggy take her first steps in her new prosthetic!



# EXPANDING OUR FOOTPRINT



The Dayton Regional STEM School is committed to providing our students with an environment that inspires their educational experiences. We are proud to have completed a 30,000 square foot building expansion project that will achieve this and launch us into our next decade of success!

## New Building Features:

- Four new classrooms to accommodate our growing student body
- Science laboratory to support the addition of a Health Science Pathway
- Vectren Innovation Lab to provide an industrial and flexible workspace for projects
- Center for Advanced Manufacturing and Photonics to inspire exploration of in-demand careers
- Assembly Hall to host presentations, demonstrations, and special events
- Breakout spaces to encourage student collaboration



## Gaming Research Integration for Learning Laboratory

The Air Force Research Laboratory's 711th Human Performance Wing has co-located its educational outreach program in 5,000 square feet of the school's newly expanded facility. The Gaming Research Integration for Learning Laboratory (GRILL<sup>®</sup>) inspires student interest in STEM through modeling and simulation software, helping equip the region's next generation of critical defense workforce. Because the GRILL and STEM have missions that closely align, this co-location is sure to make a positive and lasting impact on the Dayton community.



## A Partnership for the Community

To help inspire students to pursue technical skills required by the Air Force and related industries, the GRILL program will impact more than 20,000 students over the next 5 years.

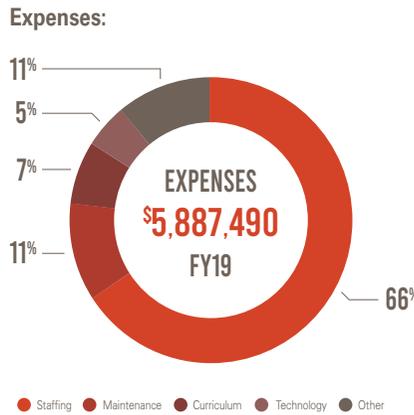
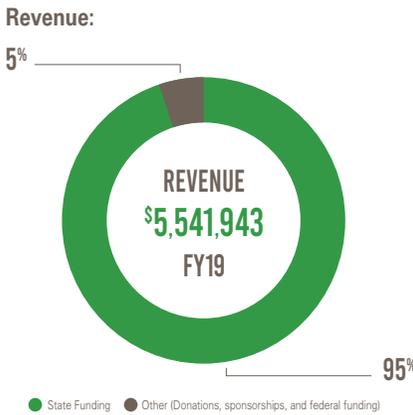
Participants will distribute innovative STEM curriculum to schools throughout Ohio and beyond. The opportunities for STEM students and teachers to interact with the GRILL's staff and cutting-edge resources are limitless.





# FUNDING THE MISSION

While state funding provides 95% of our operating income, community support provides an extra boost to a tight budget. Generous donations and sponsorships make a great impact on the educational experience of each STEM student and the overall success and sustainability of the school.



**Fundraising:**

Restricted Projects  
**\$14,900**  
(Donations designated to a specific project or extracurricular opportunity offered at the STEM School)

Unrestricted Operating Support  
**\$59,239**  
(Donations that provide general operating funds for curriculum, technology, maintenance, and staffing)

Growing Together Capital Campaign  
**\$141,716**  
(Donations made toward the facility expansion)

The Dayton Regional STEM School is so thankful to have such a supportive community that has allowed us to achieve our most successful fundraising year to date!

Total  
**\$215,855**

# YOUR GIFTS IN ACTION



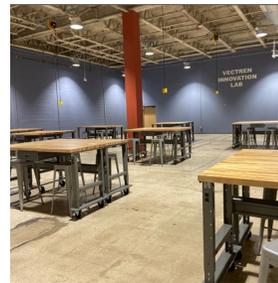
How do your gifts make an impact to the students and mission of the Dayton Regional STEM School? Find out as we highlight some of this year's contributions!

## Growing Together Campaign

STEM parents, partners, staff, and board members supported the 2019-20 Growing Together Capital Campaign. These funds went directly toward our building expansion project, creating more spaces to support STEM curriculum, career exploration, and partner engagement. The project included four new classrooms, science laboratory, project space, assembly hall, manufacturing lab, and more! Our expanded footprint will also allow for an increase in student population, which means more students will have the opportunity to join our vibrant community of learners and prepare for the real world.

## Vectren Innovation Lab

Vectren, a longtime STEM partner, was the lead donor in the Growing Campaign, naming the Vectren Innovation Lab, the flexible learning space with an industrial vibe for students to design and fabricate STEM projects.

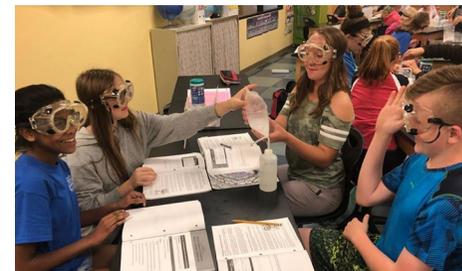


## CAMP Dosser

The Center for Advanced Manufacturing and Photonics provides an opportunity for students to explore high-tech equipment, such as 3D printers, laser cutters, vinyl printers, and more. These new resources lend themselves well to Project Based Learning and can be used in any course or grade level. This space was made possible by the generous support, guidance, and advocacy of Dr. Larry and Elaine Dosser.

## STEMmerison

After the regular school year ends, STEMmerison begins! For 10 days, students choose one of over 20 course offerings where they are immersed in Project Based Learning. STEMmerison is unique to DRSS, and students love the opportunity to explore a subject of interest, or even try something new. Courses range from video production and photography to outdoor learning and volunteering. This year, our sponsors donated \$20,000 and made it possible for all students to have access to materials, tools, software, and transportation for their STEMmerison experiences.



## Assembly Hall

On November 8th, we paid homage to our mascot, ACE the Innovator, for our annual NOV8 Giving Day (get it... in-nov-ate?!). Stakeholders of all kinds supported this exciting 24-hour initiative and raised more than \$7,000 for the new Assembly Hall, equipping the space with a stage, podium, and audio/visual system.

## 10 Year Celebration Gala

As we celebrated our major milestone with friends, food, and lots of crazy dance moves, our sponsors, silent auction bidders, and attendees helped us raise over \$7000 to propel the Dayton Regional STEM School into the next decade! Students were the direct beneficiaries of these funds, which supported classroom needs like the 1:1 laptop initiative, textbooks, and lab equipment.



## STEM 5K and Fun Run

Hosted on May 4th, this Star Wars themed event was a hit for students, families, and friends of STEM! The event featured costume contests, movie characters, vendor booths, and more. It was a beautiful morning for a run, and a freshman student took home the first-place award! Thanks to our sponsors and runners, STEM generated \$2000 in operating funds for day-to-day needs of the school.

