

STEM

MAGAZINE

Meet Lexi.
ACE Innovator.
Kid Reporter.
Mystical Being.



FALL 2020

The Dayton Regional
STEM
School

Fall 2020 marks the beginning of our 12th year educating future innovators and leaders. This journey has been nothing if not inspiring. Each student, parent, and partner that has crossed our threshold has played a part in our success as a regional STEM school in the state of Ohio.

Our school-wide theme guiding us through this new academic year is “United in Learning and Leading”. This statement highlights our commitment to maintaining a collaborative community during these unprecedented times that have required us to be physically separated as we begin the year. Our traditions -- maintaining an ACE (Accepting Culture for Everyone) culture, delivering STEM-focused Project Based Learning content and preparing our students for the Real World -- remain strong. All of our successes are attributed to the teamwork of an excellent staff who put students first on a daily basis.

As you review our very first issue of the new STEM Magazine, I hope that the stories inspire you to think about education in a new way. In our STEM model, the barriers between the classroom and the outside world are torn down to bring authenticity to the learning experience. Our students are poised to help answer the questions and solve the problems that our community, state, and country face today.

I’m excited to see what our STEM community of Learners and Leaders will accomplish this year!



Dr. Robin Fisher
Superintendent / CAO
The Dayton Regional STEM School



A Letter from Dr. Fisher



In This Issue



ON THE COVER

Alexis Bumah is taking STEM (and the world) by storm! Find out more about her exciting position at *TIME for Kids*, her outlook on youth leadership, and her nickname coined by an Academy Award-winning actor. [PAGE 24]

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POINTS OF PRIDE

#1 Public School

Dayton Business Journal, 2020

100% Graduation Rate

for the Class of 2020

Over 50 Projects

completed by students and faculty

2019 National Blue Ribbon School

U.S. Department of Education

125 New Innovators

admitted to the Class of 2027

BEST Ohio Schools

#24 public school by NICHE

3 Career Pathways

in Healthcare, Engineering, and Computer Science

70% Graduates

pursue STEM degrees

At the Dayton Regional STEM School, we take a lot of pride in the rigor and relevance of not just our academic content, but our commitment to our five qualities and how they prepare our students for success in each step of their academic journey. We integrate academic standards and qualities in a meaningful way through cross-curricular projects and inquiry-based practices. Our five qualities -- persistence, inquiry, creativity, communication, and collaboration -- are the proficiencies that help prepare our students for success at STEM and well beyond into their post-secondary and professional careers.

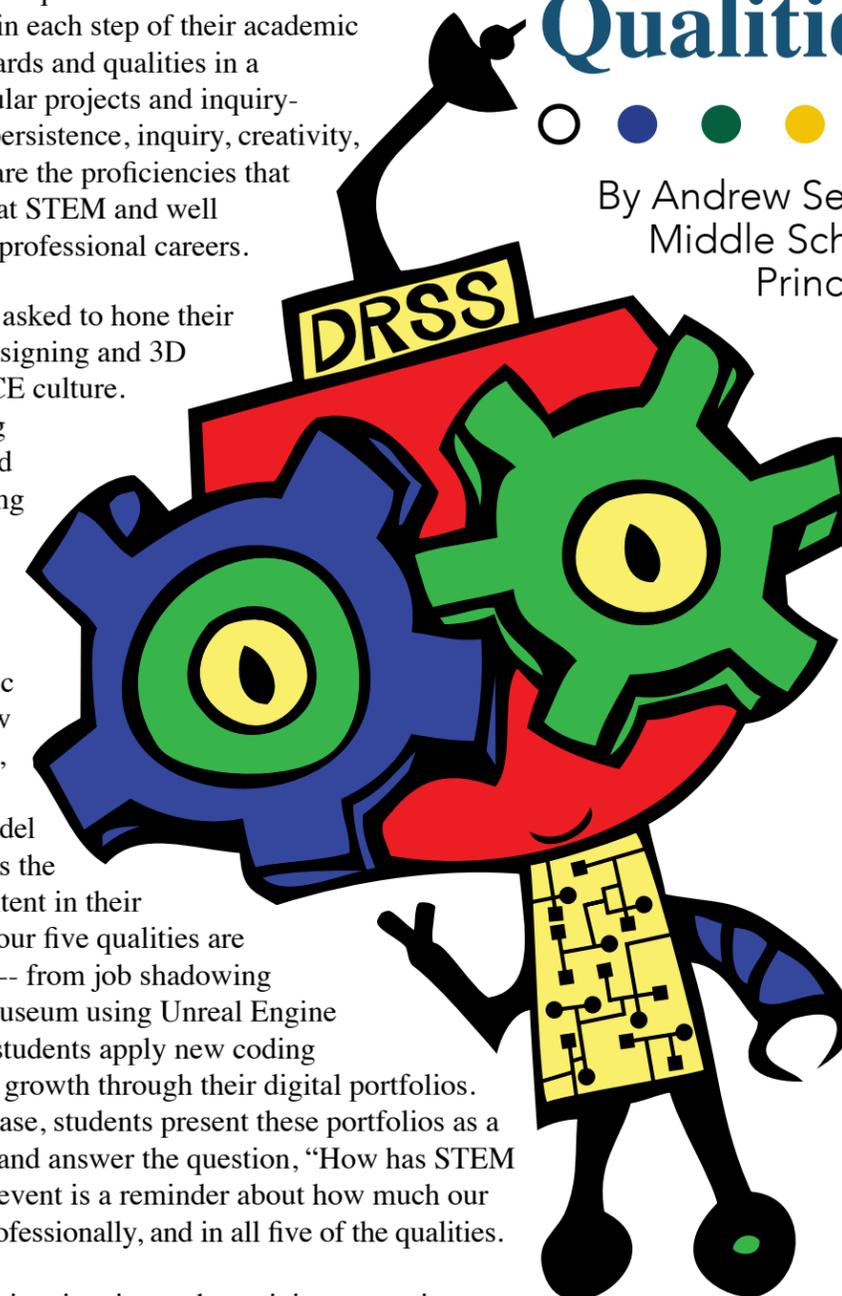
Starting in 6th grade, our students are asked to hone their creative and collaboration skills by designing and 3D printing lanterns that represent our ACE culture. Through this project, they are learning engineering principles, using advanced manufacturing equipment, and applying content from five different academic areas. In 8th grade, students practice the communication and persistence skills they've learned along the way to engineer a fully-functioning tectonic plate boundary model. They utilize new tools, integrate different academic areas, and complete multiple drafts of the project. The result is a high-quality model that is then shared with teachers across the country to help students learn this content in their classrooms. Throughout high school, our five qualities are highlighted in everything students do -- from job shadowing and internships to creating a virtual museum using Unreal Engine in 9th grade U.S. History. Each year, students apply new coding skills and showcase their projects and growth through their digital portfolios. During the culminating Senior Showcase, students present these portfolios as a snapshot of their educational journey and answer the question, "How has STEM prepared me for the real world?" This event is a reminder about how much our kids grow personally, academically, professionally, and in all five of the qualities.

Communication, persistence, collaboration, inquiry, and creativity are not just taught in classrooms; they are utilized and fostered every day. This occurs in Project Based Learning, connections with real-world partners, and continuous exploration of cutting-edge STEM teaching practices. The qualities infiltrate all aspects of the Dayton Regional STEM School, making our adage "The Real World Starts Here" a reality.

Our Five Qualities



By Andrew Sears,
Middle School
Principal



Can you guess which qualities are represented in each story?
Look for the colors near each article's title and check your answers in the key below!

○ COMMUNICATION ● INQUIRY ● CREATIVITY ● PERSISTENCE ● COLLABORATION

In the Classroom



Students in Ms. Chen's **CHINESE** course are connecting with pen pals from Taiwan to exchange language and culture.

HONORS ALGEBRA I students used Excel for data analysis & ThingLink to create collaborative "portraits" of their classmates during the Typical 8th Grader Project. Next, they will compare their grade's variables to high school student data.

Ms. Hickman's **COLLEGE & CAREER READINESS** class is kicking off a college research project.

Ms. Curran and Ms. Schultz have adapted their annual 7th grade Storybook Project for virtual learning. This is an integrated project for **LANGUAGE ARTS** and **WELLNESS & FITNESS**, with the driving question of "How do I create an engaging storybook to advocate for younger students' health?" Students demonstrate design skills and visual composition using Adobe Illustrator through an applied narrative structure to share wellness lessons. Books are typically donated to local children's hospitals, schools, libraries, etc.

Ms. Vanderhorst's 10th graders in **WORLD HISTORY** will be creating Imperialism posters for different countries and later will be updating Billy Joel's *We Didn't Start the Fire* song with present-day events.

ENVIRONMENTAL SUSTAINABILITY is working to redesign energy consumption and production to improve their community.

Students in **FITNESS EVALUATION & ASSESSMENT** will be drawing the bones and muscles on a life-size poster.

Ms. Murakami's **STEM EXPLORATIONS** students are doing design challenges that help the 6th graders understand the steps of the Engineering Design Process.

Students in 8th grade **SCIENCE** made newscasts in Zoom that reported some of Alfred Wegener's evidence of continental drift.

Dr. Schaefer's **MODELING & REASONING** students tracked group-agreed ideas connected to Growth Mindsets for seven school days, and then created a visual representation of their data. The project was inspired by and used resources from Jo Boaler's YouCubed work. Dr. Schaefer hopes to share this project with YouCubed or Jo Boaler's Data Science groups.

Students are learning to code in Python in their 7th grade **DIGITAL EXPLORATION** course.

Senior **LANGUAGE ARTS** students are creating their own post-secondary institutions and hosting a mock college fair.

ENGINEERING DESIGN & DEVELOPMENT is jumping into their big annual project. They'll be identifying, justifying, and researching a real-world problem and working to design a solution.

Students in 10th grade **WELLNESS & FITNESS** are completing their Stress Management Project, where they present different stress management techniques to the class.

GEOMETRY instructor, Mr. Roberts, is currently doing a reasoning curriculum through which students solve puzzles, play games, and write about their thinking. Eventually, the 9th graders will make connections with the type of problem solving and communication done in this course.

Ms. Campbell's **DIGITAL DESIGN** students are reviewing their web design skills, learning new techniques, and working in teams to build a custom website for a client in this annual 8th grade project.

Ms. Miller's 8th graders completed a reader's theater of Shakespeare's *A Midsummer Night's Dream* in **LANGAUGE ARTS**.

GAME DESIGN II students recently started their capstone projects. This is a two-year project where they will create their own development team and original video game.

Students in 6th grade are working with 11th graders to test the usability of instructions for calibrating an oven. This is a collaboration between the **STEM EXPLORATIONS, CHEMISTRY**, and **TECHNICAL READING & WRITING** classes.

Ms. Meena will be launching a project at the end of her quadratic unit for **ALGEBRA II** students.

In an unexpected plot twist, 6th grade students started a debate from one of Ms. Holmes' Do Now prompts in **LANGUAGE ARTS**. They loved it so much that the new-to-STEM teacher has Friday Debates where students have to produce a claim and evidence. They are even exploring a middle school debate team.

During a recent Plan E Day, students created **CHINESE** number character artwork, which showcased how beautiful the written language can be.

Sophomores will soon begin a joint **LANGUAGE ARTS** and **WELLNESS & FITNESS** project -- writing and performing their own monologues that encourage change in wellness.

In the **ENGINEERING DESIGN** course, 8th graders are taking on different design challenges that provide insight into various engineering disciplines, like mechanical and civil engineering. So far, the designs have included a mini-golf course, bridges made for walkers, bikers, and animals, miniature zoo with three exhibits, and arcade games designed for the entire family.

Students in 6th grade **WELLNESS & FITNESS** are creating vision boards that focus on goals they have written for four areas of their life: school, family and friends, personal health, and personal interests. They will be using Flipgrid to explain and share their vision boards with others.

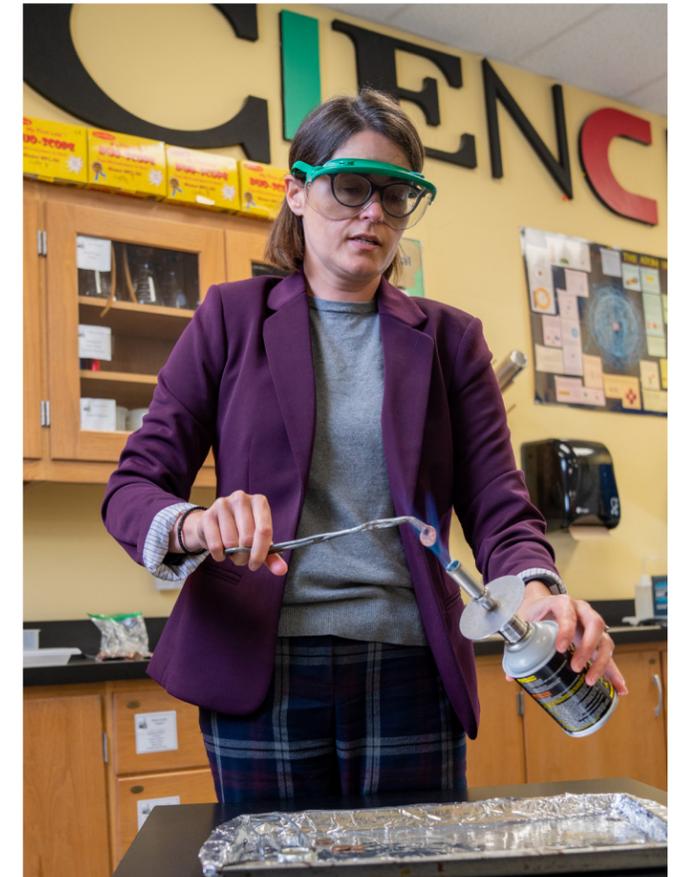
Students in 8th grade will soon begin the annual Plate Tectonics Project, which is a collaborative project between **SCIENCE** and **LANGUAGE ARTS**.

Ms. Kovar and Mr. Lawler are teaming up their 7th graders for the Ancient Greek Python Mad Libs Project. This is the second year for the project between **DIGITAL EXPLORATION** and **SOCIAL STUDIES**.

Through experimentation and observation, 7th grade **SCIENCE** students will learn how properties allow scientists to distinguish one substance from another. They'll then investigate how properties change during chemical reactions. By modeling molecular level processes, students will be able to explain and demonstrate how matter is conserved during a chemical reaction, but the atoms are arranged differently.

Students in 9th grade **LANGUAGE ARTS** will be creating astronauts who will be members of the first crew to go to Mars and begin colonization. The final project will be an e-book collection of stories about preparing for, traveling to, and living on Mars.

Mr. Bottelier is guiding his 9th grade **ENGINEERING SCIENCE** students in creating a puzzle cube out of wood using CAD software.





5 Reasons Why I ♥ to Code

By Ella Meldrum, Class of 2026

Students at the Dayton Regional STEM School begin flexing their coding muscles in 6th grade through the STEM Foundations program. Check out why one student fell in love with computer science through the art of coding.



- 1 It's fun to create something new that you made all by yourself.
 - 2 You can do some amazing things with all the different tags and code.
 - 3 I love experimenting with new code to see what it does. You learn something new every single time.
 - 4 You have free range to make your website anything you want it to be. I add my own detailing and personality using CSS.
 - 5 Coding is all about trial and error, so you are always learning from your mistakes.
-  **BONUS:** My coding teachers are amazing! Ms. Murakami and Ms. Kovar are super nice and always helpful.

Course Offerings



MIDDLE SCHOOL

6TH GRADE

STEM Exploration
Mathematics
Accelerated Math
Language Arts
Science
Social Studies
Wellness and Fitness

7TH GRADE

Digital Exploration
Engineering Exploration
Mathematics
Pre-Algebra
Language Arts
Science
World History
Wellness and Fitness

8TH GRADE

Digital Design
Engineering Design
Mathematics
Algebra
Language Arts
Science
US History
Wellness and Fitness

HIGH SCHOOL

9TH GRADE

Geometry
Algebra I
Language Arts
Engineering Science
US History
Art
Chinese I

10TH GRADE

Geometry
Algebra II
Language Arts
Biology
Modern World History
Financial Literacy
Wellness and Fitness
Chinese II

11TH GRADE

Algebra II
Pre-Calculus
Technical Reading and Writing
Chemistry
Government
Economics

12TH GRADE

Pre-Calculus
AP Calculus
Statistics
English / English (CCP)
Physics

ELECTIVES

Principles of Engineering
Environmental Engineering
Engineering Design and Development
Environmental Sustainability
Modeling and Reasoning
Architecture and Design
Drawing
Art and Science of Materials
Fitness Evaluation and Assessment
Medical Interventions
Anatomy and Physiology
Contemporary World Events
Psychology (CCP)
Sociology (CCP)
Professional Communication
Digital Electronics
Game Design I
Game Design II
Game Design III
Computer Hardware
Networking
Network Security
Operating Systems
Computer Programming
Chinese III
Chinese IV / Chinese IV (CCP)
Independent Research
College and Career Exploration
Experiential Learning

STEMMERSION

End of year exploratory courses designed by STEM staff to allow a fully immersive experience in one subject area. Courses are diverse and vary from year to year.



**NEW
COURSE
ALERT!**

Engineering Design and Development



Rachel Sauder, second-year physics and engineering teacher, discusses the inspiration behind her brand-new engineering course and her excitement for the student projects to come.

Tell us about your new course!

In Engineering Design and Development (EDD), students get to step into the shoes of engineers and work through the Engineering Design Process from start to finish, solving real world problems that they identify. Students work through research, design, testing, and multiple iterations of a product, following the process through all the way through to marketing, professional documentation, and presentation! Students will develop and apply skills they learned in other classes -- CAD, circuit design, high-tech manufacturing, technical writing, and public speaking -- all in the context of their projects.

What was the inspiration for adding this elective?

The Dayton Regional STEM School's motto is "The Real World Starts Here". With this in mind, I wanted students to have an opportunity to actually practice engineering instead of just learning about it.

How does EDD fit into the Engineering Pathway at the STEM School?

Engineering Design and Development is the capstone course for the Engineering Pathway. Students use knowledge from Engineering Science, Principles of Engineering, Environmental Sustainability, and Digital Electronics courses to solve their chosen problem and show what they've learned over the years.

What do you love most about teaching Engineering Design and Development?

EDD is really unique because students are completely in charge of their project. Every group will be working on something completely different, and since it is something they choose, it's a highly engaging experience!

What STEM Qualities do you think students will use the most?

This class emphasizes collaboration and communication, especially with students working virtually. It is crucial that everyone is keeping in touch with their group to make sure that everything is going smoothly.

What is something you hope your students will take away from this course?

I hope my students will have a greater appreciation for the amount of work that goes into everyday products. Additionally, I hope they will have created something amazing that they are proud of!

○ COMMUNICATION ● INQUIRY ● CREATIVITY ● PERSISTENCE ● COLLABORATION

Prioritizing Voice and Choice

By Jenn Reid,
PBL Coach



Project Based Learning (PBL) is a hallmark of the Dayton Regional STEM School learning experience. At the STEM School, we use the definition of PBL created by national educational organization, PBLWorks: “Project Based Learning is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem, or challenge.” So what does PBL look like during a global pandemic?

Our New Normal

In mid-July, STEM School teachers came together for our first professional development day of the 2020-2021 school year. We knew teachers were wondering how we could adapt our PBL curriculum to a socially distanced or online classroom. So we asked this question to begin our day: What Project Design Essentials do we want to emphasize during the 2020-21 school year -- our “new normal”? Project Design Essentials are a set of important elements that teachers keep in mind when designing and implementing PBL with our students. Out of the seven elements, teachers chose to prioritize “Voice and Choice” in their classrooms and projects.

Gold Standard PBL

Seven Essential Project Design Elements



Title: Gold Standard Project Based Learning
By: PBLWorks pblworks.org
Source: <https://www.pblworks.org/what-is-pbl/gold-standard-project-design>
License: CC BY-NC-ND 4.0.

Examples of Voice and Choice

Prioritizing students’ Voice & Choice makes so much sense for this year’s unique educational model at the STEM School. Voice & Choice means that students

may make decisions about how they work on the project. This could include selecting what kind of final product will best help them display their learning, being able to express themselves and their own creativity during the project, and more.

A great example of a project that values Voice & Choice is the 8th grade Plate Tectonics Project. While investigating geologic processes and engineering design principles, Science teacher Erin Lukas asks her students to work in small teams to design a 3D model and write an explanation that answers how and why the geological features and processes occur at various locations on Earth’s surface. Completed models are donated to science classrooms in Ohio and around the country.

In past years, students have constructed their 3D models from foam and duct tape at the school. To prepare for our adapted schedule this year, Ms. Lukas needed to reconsider the logistics of this project. She used the design element Voice & Choice to help her make the following changes:

1. Students may choose to work with a partner or individually to create their model.
2. Students may create a digital or physical model using:
 - Minecraft
 - TinkerCad
 - Stop motion animation
 - Found or recycled materials

The changes to this project honor students’ individual strengths and interests while keeping their learning focused on core content and engineering principles. Students who love Minecraft can design a model using a tool with which they are already experts, pushing their creativity to use this hobby in a new way. Students who enjoy physical modeling can innovate with the materials around their house to best demonstrate the movement of the plates. We hope an emphasis on Voice & Choice will empower our students during this unique time in their learning lives.



Plate Tectonics, 2019

Another rich example is found in the Contemporary World Issues course. In this junior and senior elective, Pablo Nunez wanted to engage interested students in exercises similar to a Model UN. At the beginning of the year, Mr. Nunez asked his students to examine the list of 22 “Global Issues” on the United Nations website. After prioritizing the issues from most to least important, students then defended their choices to their peers. These initial discussions will form the basis for the students’ first project: writing and presenting a resolution for the UN General Assembly about an important world issue. Students will use their research about this issue to inform their choice of country to portray for the session of the General Assembly, which they will role play in class. Allowing students to choose an issue that matters to them most (whether gender equality, ending poverty, climate change, or one of the other 19 UN Global Issues) not only empowers students’ voices but will keep them engaged during this first project of the semester.

The Real World Starts Here

At the STEM School, we strongly believe PBL ensures that every student is engaged and connected to peers, teachers, and content. As we navigate through the changes and unknowns of educating during a pandemic, our students and teachers are well accustomed to experimenting with their learning through projects. This experience will inevitably leave a lasting impact on our students and staff. Our hope is that it reminds all of us that we CAN be successful, given the right mindset. Creativity and persistence, all with a student-centered focus, will allow our STEM community to thrive. So while this school year will look different than ever before, we’re ready to take on the challenge.

DRAWING



▲ Letty Weimer, Class of 2022

▼ Avi Heinz, Class of 2022



● STEM juniors and seniors created these beautiful pieces in September in the new art elective, Drawing. Students used blind and modified contour lines, which are achieved when you spend most of your time looking at your subject and not your paper. The artists were then encouraged to add some personality to their pieces, which resulted in a colorful explosion of abstract fun.

Jenny Montgomery, art instructor at the Dayton Regional STEM School, said, "Drawing is one of my favorite things to do. I love sharing the joy and discovery of learning to see and interpret the world through drawing. I particularly love when students find their own voice through their unique mark making. I take great pleasure in watching them gain confidence and enjoyment as they develop their drawing skills. The observational skills, the hand-eye coordination, and the ability to effectively communicate ideas visually will serve students well, no matter what career path they choose."



Our Virtual Classroom

"Teaching looks and feels a little different right now. The students are with me, but in a new way. I am still writing on the white board, sharing a conversation with students, providing opportunities to collaborate in breakout rooms, holding digital discussions in Schoology, building solutions for design challenges, and asking students to reflect on their work. What gets me through this change is seeing the students' faces everyday, excited to learn and share their ideas. Webcams ON, people... I want to see your beautiful faces!"

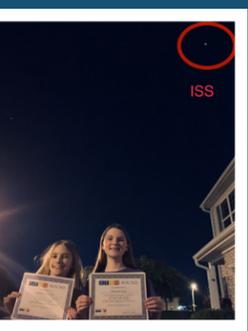
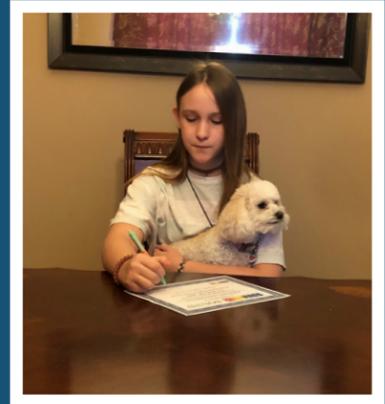
- Pat Murakami, STEM Foundations Faculty



Welcome

New Innovators!

● ● ● ● ● Signing Day 2020



THE IDEAL GRADUATE



◆ PERSISTENCE

Our graduates will demonstrate grit and resilience. They will not give up in the face of difficulty.

✂ CREATIVITY

Our graduates will be creators of products that provide meaning and inspiration.

? INQUIRY

Our graduates will be lifelong learners who continue to question in order to seek important answers.

⚙ COLLABORATION

Our graduates will be able to work with diverse groups of people in order to solve complicated problems.

💬 COMMUNICATION

Our graduates will be able to communicate effectively to diverse audiences in a manner that is respectful, professional and meaningful.

THE REAL WORLD STARTS HERE

TO PREPARE AND INSPIRE THE NEXT GENERATION OF LEADERS AND INNOVATORS

At the STEM School, we are committed to:



Creating equitable learning opportunities

Offering culturally-responsive supports

Fostering an inclusive community

Recognizing and celebrating our diversity

Over these last several months, our staff has been engaging in many conversations surrounding the topics of race, diversity, and inclusion. It is so important that every single STEM student feels safe in their learning environment and receives the best educational experience possible. In order to achieve this goal, we must first listen to the different voices that make up our school community, learn how to best serve their unique set of needs, and actively engage in our school's diversity.

The Dayton Regional STEM School stands firmly against the discrimination of any student or individual on the basis of race, color, ethnicity, socioeconomic status, sex, sexual orientation, gender identity and expression, disability, religion, etc.

For the 2020-21 school year, we are not only enhancing student and staff supports already in place, but also adding a number of initiatives to increase our efforts for diversity and inclusion. These include, but are not limited to, a Diversity and Inclusion staff focus group, the Racial Alliance Collaborative Effort (RACE) student group, and professional development on equity.

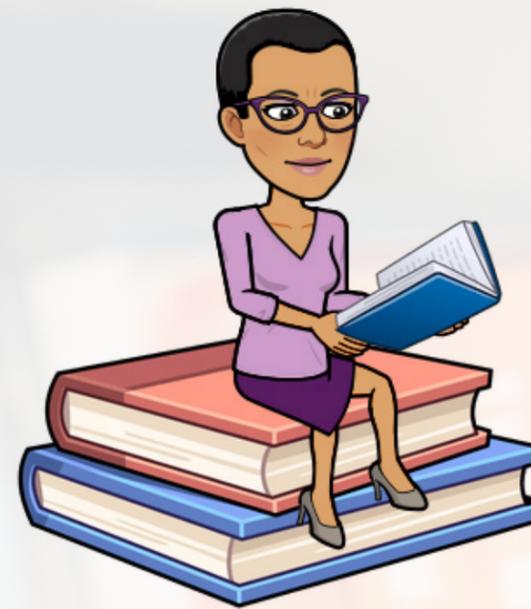
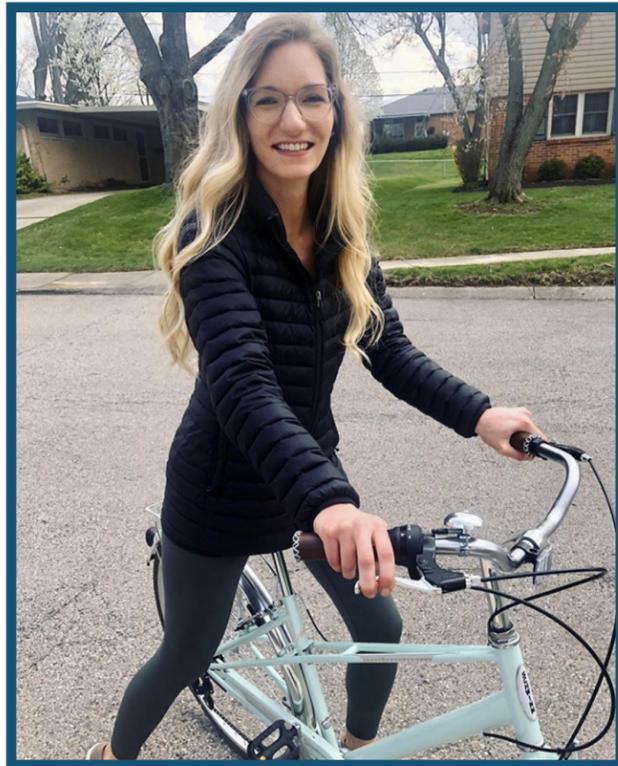
Now, more than ever, engaging in open dialogue, embracing teachable moments, and acting toward change are vital to our school culture. We look forward to listening, learning, reflecting, supporting, and growing together with our students, families, staff, and STEM community.

My Top 10 *Self-Care* Tips for Fall

By Kate Kramer,
Middle School Counselor

Taking care of our mental well-being should be on the top of our priority list. It is quite easy to get wrapped up in the hustle and bustle of everyday life. In my experience, self-care is easiest to make a part of my routine when it is also fun. I like to plan my activities out and put them on my calendar, just like I would schedule appointments or work obligations. Here are some ways that you can weave self-care into your daily habits and explore the beautiful city of Dayton while you're at it!

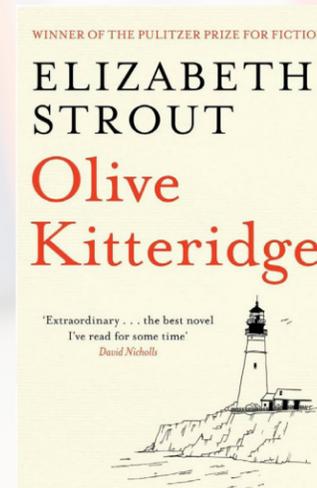
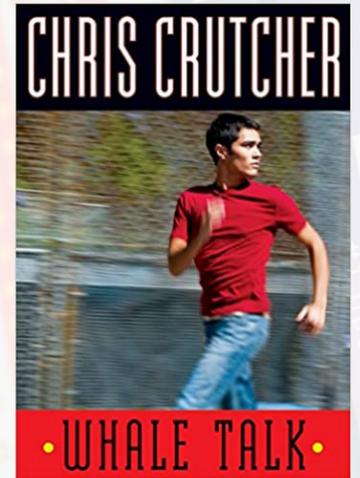
1. **Find a cozy coffee shop** - Grab a cup of coffee and journal about things you are grateful for at Epic Coffee in Kettering. I highly recommend their Affogato.
2. **Human connection** - Reach out to someone you haven't talked to in a while. Nothing fills my cup more than catching up with an old friend.
3. **Get active** - Take a bike ride on Dayton's bike trails. Pro tip – there is a Dairy Queen on Shroyer Road that makes the perfect pit stop.
4. **Order take out and have a picnic** - While in quarantine, ordering take out became its own form of self-care for me. A night without cooking? Sign me up! I love the Pad Thai at Singha Thai in Kettering. Order take out and have a picnic at Delco Park.
5. **Connect with nature** - Take a walk and reconnect with Mother Nature. Sugarcreek Metropark is my favorite hiking spot in the fall.
6. **Meditation** - I cannot say enough good things about apps like Headspace or Calm. These apps are especially helpful if you have trouble settling down for bed in the evenings.
7. **Try something new** - Create your own adventure right here in Dayton! Learn to rock climb at Urban Krag or go kayaking at Bellbrook Canoe Rental.
8. **Have a jam session** - Create a playlist of all of your favorite songs. Think of the songs that immediately put you in a good mood. Save this playlist for a day you are feeling down.
9. **Unplug** - Step away from social media for a day. Setting healthy limits to the mindless scrolling of social media can make a huge impact on your overall mood and mental health.
10. **Tap into your creative side** - Explore YouTube and find a guided craft or painting activity that you can do at home with your family.



WHAT IS MS. HARRIS READING?

Check out these fantastic book recommendations from Language Arts Faculty, Jacqueline Harris. These two novels are perfect for bookworms of all ages!

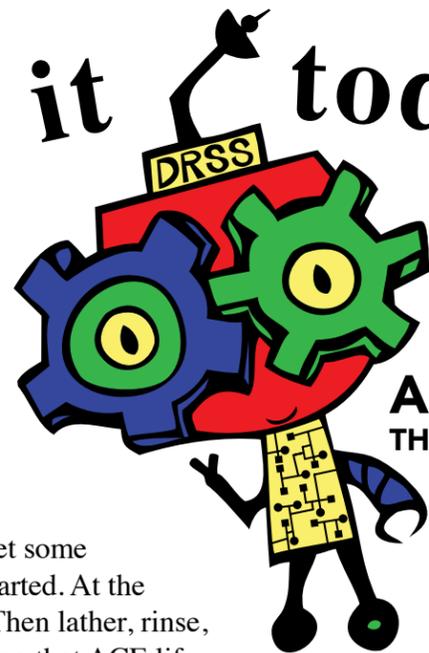
If you are looking for an easy read that let's you root for the underdog, then you might enjoy *Whale Talk* by Chris Crutcher. It has humor and an extremely likable main character in "The Tao" Jones (TJ). TJ is black, Japanese, white, and 17, growing up in a predominantly white town in the northwestern part of the United States. He is an athlete who refuses to conform to expectations. When his English teacher decides to start a swim team – to avoid being the wrestling coach – TJ agrees to be a member if he can do the recruiting: He makes it his mission to recruit the misfits of Cutter High. *Whale Talk* is considered young adult fiction, but it is recommended that the young adult be at least 16 because of language. If you're a full-grown adult, don't shy away because of the YA label; despite the fact that the protagonist is young and the book seems light-hearted on the surface, it also brings to light the frustrations and struggles TJ has experienced growing up an adopted, black child in northwest USA. It's well worth the read.



Olive Kitteridge by Elizabeth Strout is the winner of the Pulitzer Prize – need I say more? Just in case you're not convinced that this is a book worth your time, let me tell you more. The book's namesake, Olive, is a complex, easily dislikable character who will at moments surprise you by her actions. *Olive Kitteridge* is set in the quaint little town of Crosby, Maine, where Olive has retired from teaching and lives with her husband, Henry. What makes this book unique, in addition to the well-developed characters, is that it is a novel told in stories. Each section is not a chapter but rather a story that can stand on its own, yet the link in each story is Olive. In the age we live in where time is limited, this is a book you can pick up, read a story, leave it a while, and still return to it without feeling like you have to start at the beginning. It is a book that has definitely earned its prize.

○ ● ● ● ●

Will you ACE it today?



Are you ready to take the ACE Challenge?

Our goal is to foster an Accepting Culture for Everyone (ACE) at the Dayton Regional STEM School. Each person in our school community can do that through our ACE attributes: kind, respectful, and supportive. Ask yourself the following questions when you wake up and set some simple goals. We've come up with a few ideas to get you started. At the end of the day, think about how great it feels to ACE IT! Then lather, rinse, and repeat the next day. Before you know it, you'll be living that ACE life every single day!

How will you be kind today?

- Strike up a conversation with someone you don't know very well.
- Pay for the coffee order of the person behind you in line.

How will you be respectful today?

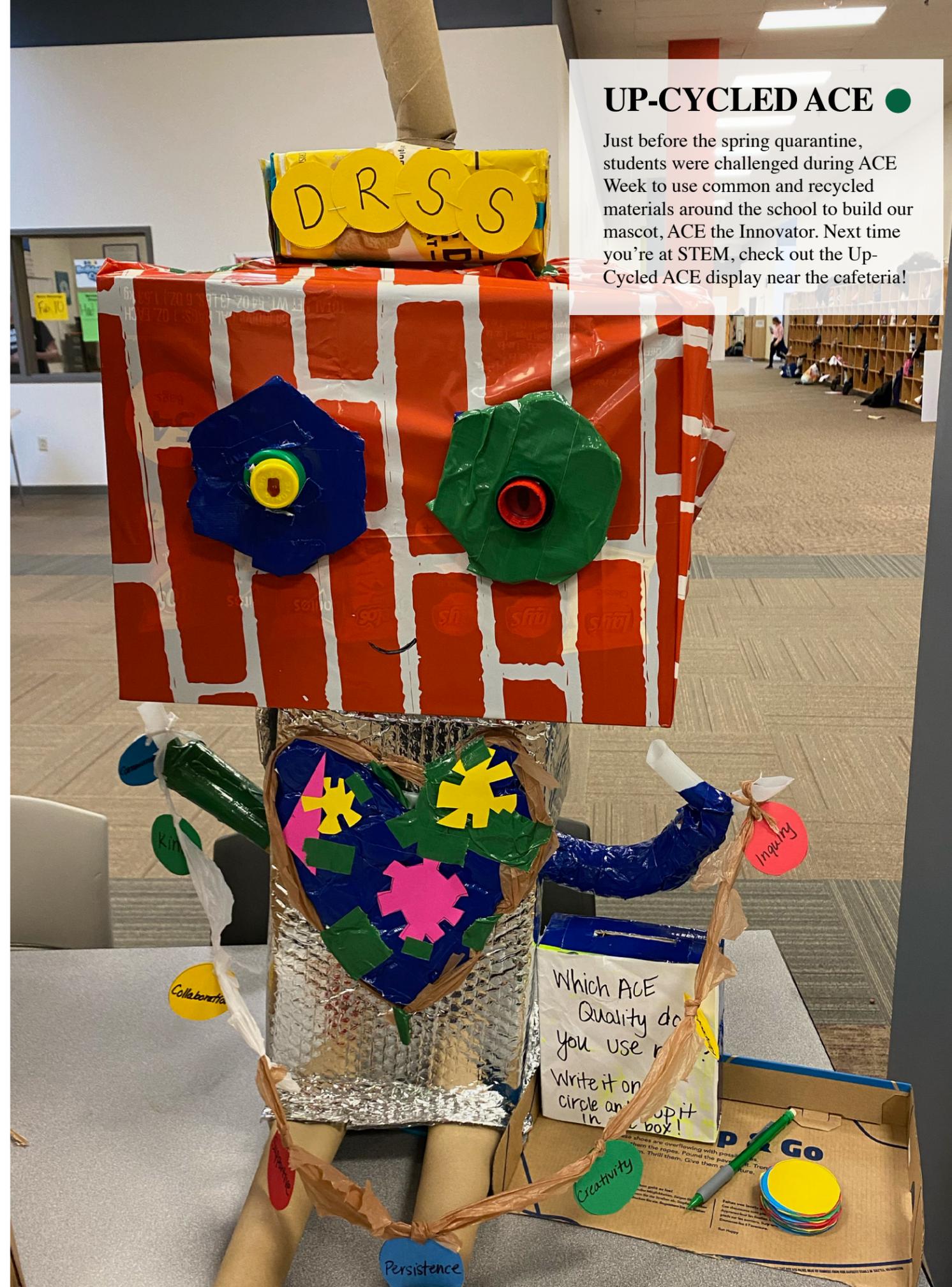
- Take a moment to put yourself in someone else's shoes.
- Respect your neighbor's boundaries -- both physical and emotional.

How will you be supportive today?

- Be an active listener for someone who needs it.
- Highlight or compliment someone for doing their best.

UP-CYCLED ACE ●

Just before the spring quarantine, students were challenged during ACE Week to use common and recycled materials around the school to build our mascot, ACE the Innovator. Next time you're at STEM, check out the Up-Cycled ACE display near the cafeteria!





LEXI

Just your typical 8th grader

By Stephanie Adams Taylor
and Alexa Bergin

Alexis Bumah opens the curtains as morning sun floods her bedroom, which now doubles as her virtual classroom. *Who RU* by Jufu serves as her caffeine fix before the full day ahead. The ping of a new email draws her to the laptop on her desk, where she prepares for her first period. Today, her 8th grade Algebra teacher, Ms. Vazquez, is launching a new project called The Typical 8th Grader, where students will conduct a data analysis on their peers, creating collaborative and data-driven portraits of the Class of 2025. Little does Ms. Vazquez know, Lexi may not be the typical 8th grader.

Fast forward to 3:15pm when Lexi bolts up from her study zone and transitions toward her work space to clock in. Headphones on. Mic check. Script in hand. She's about to hit record for the latest episode of the *TIME for Kids (TFK) Explains* podcast. When she applied for *TFK* in 2019, she never expected for the 12-month student reporter gig to evolve into so much more.

Last May, Lexi submitted an application for the *TIME for Kids* contest to find their next cohort of Kid Reporters. It was a long shot, competing against hundreds of her peers from across the nation. *TFK* Editors judged application essays and article samples on "originality, grammar, clarity, and 'that special something'" to select 10 lucky winners.

"It was the first day of school and I was so nervous because it was a new school and a new environment for me," said Lexi. "I got in the car to go home and my mom told me I had gotten a call. I said, 'Okay, well I get a lot of calls...' She went on to tell me that *Time for Kids* had called and I was chosen to be one of their reporters!"

That was the day Lexi boarded the rollercoaster that she's still riding today.

As a *TFK* Kid Reporter, she has had the opportunity to interview a number of household names, including *black-ish* star, Marsai Martin, NASA astronaut, Cady Coleman, and more. Academy Award-winner, Octavia Spencer (most notable for her roles in *The Help*, *Hidden Figures*, and *Onward*), described Lexi as a "mystical being" during their interview together.

When asked if she ever gets star-struck, she didn't miss a beat. "I am nervous for every interview I do! I am very shy but being a *TFK* reporter has helped me come out of my shell a lot. It has given me a lot more confidence."

Her dream interview? Without question, Michelle Obama. As a Gen Zer, the Obamas have had a strong, influential presence in her home for more than half of her life. Lexi looks up to Michelle Obama as an "amazing and powerful woman".

With her extensive reporting experience, the teen would love to localize the focus for her next article. The topic: STEM School Culture Fest, an annual celebration of the unique cultures that make up our school and our world. "I learned all about diversity and acceptance. It would make for a really great

read and one that everyone could learn a lot from."

Lexi attributes much of her success as a *TFK* Kid Reporter to the various projects and lessons from the Dayton Regional STEM School. The 7th grade Story-book Project helped hone her writing skills and she uses STEM's Collaboration quality in her work on a daily basis. She also couldn't have made it this far without her amazing family.

"Everything I have ever wanted to try, whether it was sports, acting, modeling, reporting, etc. my mom always let me try it," Lexi warmly expressed. "[My family is] so supportive and has always told me that I was going to be great."

In a private interview, Lexi's mom, Tiffani, said, "I am so proud of her. Her overall attitude towards learning and life in general is just incredible. She's definitely made it easy for me. I don't have to help her much when it comes to her education. The *TFK* gig has helped her become more efficient and has helped her in her speaking and in her journalism. I am so proud of who she has become."

So what's next for Lex? In true STEM fashion, she's already done her fair share of career exploration.

"I have always wanted to be a medical research scientist -- probably since like the second grade. I just recently learned the correct medical terminology is 'oncology' or 'oncologist'."

She has high hopes to continue writing and reporting in the future, perhaps for the Center for Disease Control or the World Health Organization. In the meantime, she'll continue her work with *TIME for Kids* as their newest Kid Podcaster and enjoy her experience as an ACE Innovator at the Dayton Regional STEM School.

This go-getter already has an extensive resume and is well on her way to BIG things in her future. But when Alexis Bumah winds down at the end of the day, curled up on the couch and watching *Wheel of Fortune* with her mom, she is just your typical 8th grader.



What's something people don't know about you?

"I'm super shy! I can be really rambunctious with my friends and around people I know. Sometimes, I'll even go up to people and be like "hi, do you want to be my friend!?" I'm really positive and upbeat. But once COVID-19 hit, everyone was worried about not being able to be around people and I didn't mind it!"

DID YOU KNOW THAT LEXI...

- plays the violin, volleyball, and soccer?
- is writing a top secret book to be released soon?
- is an advocate for social justice?
- is a member of MENSA organization?
- played Taylor in a High School Musical production?
- does freelance modeling?





Screen Grab from PAX Virtual Conference

You're Never Too Young To Learn



Nick Pant, Social Studies Faculty at the Dayton Regional STEM School, earned some major cool points with his students when he shared that he was featured on a panel during the *PAX* international gaming conference this fall.

The session centered around game design in schools, which Mr. Pant was perfectly poised to chat about, given his innovative curriculum. In 9th grade, students use the Unreal Engine platform (most known from the *Fortnite* fan-fave video game) to create a virtual museum of their U.S. History lessons. This is the first opportunity to dabble in modeling and simulation, which they can later dive further into as upperclassmen in the Game Design elective series.

According to the conference program, “there are increasing numbers of schools integrating the development of games and interactive technologies as part of a comprehensive STEAM curriculum. This diverse panel explore[d] how getting an early start in games can change your life, from the perspective of both students and educators.”

Panelists in the session included:

- Linda Sellheim - Education Lead, Epic Games
- Steve Isaacs - Teacher, William Annin MS / Ridge HS
- Josh Caratelli - Software Engineer, Sledgehammer Games
- Nick Pant - Teacher, Dayton Regional STEM School
- Carina Kom - Development Manager, Electronic Arts



Five STEM Students Score in Top 1% on National Test ●●

Five seniors from the Dayton Regional STEM School were named National Merit Semifinalists after scoring in the top 1% of all students taking the PSAT exam.



**KYLE
ESKEW**



**REBEKAH
PORTER**



**PUSHKAR
SHIRAHATTI**



**JOHN
WRIGHT**



**RILO
OBERG**



CHALK IT UP TO 2020

In years past, students have often used chalk art to promote ACE Culture and happy vibes to their peers. When we left the school building, we felt like we could conquer the world, thanks to these super inspiring messages on the sidewalks. With the pandemic and other challenges affecting our lives today, we all could use a dose of this positivity. So grab some chalk, head out into the sunshine, and create something that will brighten someone else's day (and your own)! Don't forget to tag @daytonstemschool on social media so we can help you share the love!

Four billion squirrels in the world and for some reason, they all seem to love making themselves at home in your backyard. You've tried everything from spray deterrents to spicy foods, but somehow it just isn't enough. STEM Senior, Hayden Ferguson, just might have an answer for you: squirrel tables.

It all started when COVID-19 hijacked the school year and caused students to miss out on the much-anticipated STEMmersion experience. Instead, students participated in STAYmersion, where they dove into passion projects that provided opportunities for exploration, growth, and virtual socialization. While his peers dabbled in robotics, photography, drumming, and podcasting, Hayden decided to take up woodworking.

Inspiration for his squirrel tables struck while scrolling through Facebook, and Hayden set out for his grandpa's house to start building. His creation included a miniature wooden picnic table, just big enough for a furry friend, with a delicious corn cob perched in the middle as a squirrely snack.

"My first prototypes weren't the greatest and that's when I was spending 12-14 hours a day working on them," he noted. Hayden's grandfather and uncle taught him everything when it comes to building and fixing projects. The rest is chalked up to trial and error. After ironing out the kinks, it now takes him about one hour to complete each table—40 minutes with cuts and 20 minutes for assembly.

Being enrolled in Mr. Nunez's economics course helped Hayden learn how to measure profit margins and calculate costs for his new business venture. He sold 12 squirrel tables his first day and 50 within just one week.

"My favorite part about building the squirrel tables is seeing people happy with the work I did. My customers will send me pictures of the squirrels using the tables and then 15 minutes later, the cob is all gone!"

Feelin' Squirrely in Quarantine



The future of Hayden's Woodshop carries lots of promise. The teen entrepreneur has expanded his products beyond squirrel picnic tables and is now making squirrel swings, pet beds, yard signs, potato bins, garden benches, and drill holders. He even plans on creating some festive designs for the upcoming holidays.

Check out Hayden's creations on Facebook at Hayden's Woodshop Ohio or Hayden's Squirrel Tables and follow him on Instagram @haydenswoodshopoh.



Art in the Digital World ●●



Artist - Seren C.

Class of 2024

When Dayton Regional STEM School student, Seren, got his hands on some new digital art supplies, he was so excited to try out some new techniques! Digital art is a new medium that perfectly blends this talented student's passion for STEM and creativity.

Check out the artist's self-portrait on the left. If you're a *Supernatural* fan, you may also recognize the portrait of actor, Jensen Ackles, to the right. Fun fact: the television show originally aired the year that Seren was born!

Keep letting that creativity quality shine, Seren!



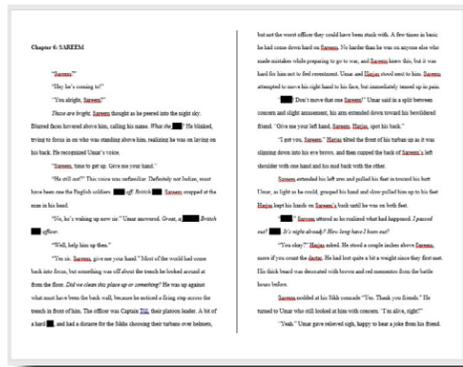
PET RESCUER BY NIGHT ● ●
Sarah Paul, Social Studies Faculty



I am passionate about history and helping students make connections from the ancient world to our modern lives, asking silly attendance questions (my most recent favorite was “What’s your favorite type of potato chip?”), and animals! I am so lucky to be able to act on these passions in my work at the STEM School and also in my part-time job at SICSA Pet Adoption Center. I have worked at SICSA during the weekends and summer vacations for about two and a half years and I really love my work as an adoption counselor and customer service representative.

A few years ago in my Language Arts class, I read a personal narrative I had written about my dog, Windsor, who had recently passed away. I was feeling sad after sharing the story about my puppy pal and wanted to visit some dogs after school when I happened upon SICSA. I saw an incredibly cute dog named Pumpkin Spice, who I would later adopt and change her name to Ruby! After learning about all of the time, care, and money SICSA puts into each of the animals they help, I was thrilled when my students decided they wanted to donate the profits from the Economics Project to SICSA. Since that year, three different classes have contributed around \$6500 to share with the people and animals of SICSA.

When I found out that SICSA was hiring, I was quick to apply and have loved spending my Saturdays matching families with the perfect cat or dog furry friend. Nowadays, you can find me at the front desk greeting visitors, scheduling appointments, answering phone calls and emails, and helping people navigate SICSA’s new building in Washington Township. If we ever happen to pass in the STEM halls, stop me to share your pictures of your pets or feel free to ask about animals at SICSA. Spending my weekends with cute adoptable pets and watching them leave with their new loving families brings me so much joy!



NOVELIST BY NIGHT ○ ●
Pablo Nunez, Social Studies Faculty

I recently began working on a novel based on the events of the Indian Independence Movement and the eventual split of India and Pakistan. This is a topic I’ve been passionate about teaching in my World History classes, and I wanted a way to share these compelling events with a wider audience. I’ve enjoyed many conversations with our Indian and Pakistani students at STEM, especially about how these

events impact their lives. This past spring, with no knowledge of how to write a book and with students working on their own individual STAYmersion projects, I decided to finally start.

My working title is *You Were My Brother*. The story follows two characters: a Hindu man named Ravi and a Muslim man named Sareem. They meet in the trenches of World War I, both serving in the British military, and spark a bond that they use to navigate ferocious combat, tensions between Hindus and Muslims, the fight for independence from the British Empire, and the tragic separation of India and Pakistan. I’m also looking into creating different volumes to continue the story. The history is highly relevant to world issues today. I’m hoping to finish the first volume by the holidays and then look into how to actually get a book published. We’ll see what happens!



PENSMITH BY NIGHT ● ●
James Smith, Social Studies Faculty

Have you ever thought about the craftsmanship and engineering process of the writing instrument you use? I hadn’t either, until I started making pens in 2013! My grandfather, a master woodworker, presented the idea of buying a lathe to make smaller projects and that is how The Pensmiths came to fruition. Since that suggestion, I have gone on to make hundreds of pens, pencils, and other projects.

My favorite part of the pen making process is creating the resin blank because it allows for endless combinations. A blank is the plastic part of the pen that gets shaved down, sanded, and polished into the barrel of the finished product. I use a premium urethane resin, mixed with dyes and pearl mica powders to create unique color selections for blanks.

In 2018 and 2019, I traveled to Belpre, Ohio and to Chicago, Illinois to attend the Midwest Penturners Gathering. In doing so, I made the leap from a garage hobby to a small business adventure. Since 2013, I have launched my own website (shopthepensmiths.com) where I have made and sold hundreds of pens and thousands of blanks. Joining the maker community has been incredibly rewarding and has allowed me to connect and collaborate with people all over the world.



EQUESTRIAN BY NIGHT ○ ●
Robin Fisher, Superintendent

I began riding when I was eight years old, but have had a fascination and love for horses for as long as I can remember. Every picture I drew growing up was of horses and I couldn’t find enough horse camps to get me through the summer. My parents bought my first horse when I was eleven. He was a palomino, Tennessee Walking Horse named Shannon that I rode throughout the hills of Western Pennsylvania.

There have been many other horses in my life over the years and all have taught me lessons about patience, forgiveness, humility, and grace. My current horse, Cool Night Heir (aka – Remy), is an American Saddlebred who

is goofy, afraid of his own shadow, but still tries to protect me in the saddle. We’ve been in the show ring together and have tackled trails, but my favorite times are hanging out with him in the barn, listening to the sound of horses slowly munching hay.

I think Winston Churchill said it best -- “There is something about the outside of a horse that is good for the inside of a man.”

Congratulations, Graduates!



It's our greatest pleasure to introduce the STEM School's eighth graduating class!



My Great Adventure

By Anna Crichton, Class of 2017



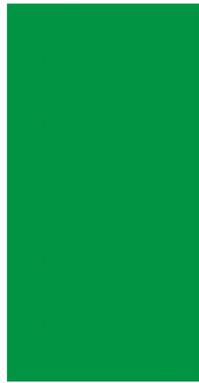
Working at an archaeological dig site typically means sunburns, fingernails caked with dirt, and lots of indecision (unfortunately, important medieval pottery looks strikingly similar to useless pieces of rock). Archaeology in Ireland was no different, except for more bouts of rain and more teasing about my constant midwestern usage of the word “ope”. It was fantastic. I was situated in the chapel section of the castle, which was in ruins and hardly recognizable as a castle. The only way to describe it was *surreal*. When I found nails at my trench in Ireland, barely recognizable as mere clumps of corroded metal. It was hard to conceptualize that these were nails from 1169. It felt almost sacrilegious as I was told to simply toss them into a bucket. This was an 850-year-old item that had likely last been touched by the builder who nailed it into the structure. For the next five weeks, I would continue to find nails, bits of ceramics, and other materials from the site, but largely wonder in amazement at the work I was being given the opportunity to do—knowing that I could have never guessed that halfway through my college career, I would be caked in dirt in a six-foot pit, digging up a 12th century castle in Ireland.



When I enrolled at Wittenberg, I knew I wanted to be a history major. Though I had loved my STEM-oriented classes at DRSS, it was always the history and English classes that captured my particular attention. I took two history courses my freshman year, one in American history and the other in Medieval Europe and found myself intrigued with Pre-Modern history. Suddenly, terms like “antiquity” and “medievalism” became common features of my vocabulary. I was refining my interest in history, and it was so incredibly exciting. As I delved more and more into my major, I began to see the different possibilities I could have with my future career—curation, archivism, and even just being a professor suddenly seemed like the perfect career paths for me. But, while I loved researching the textual aspects of history, I had a growing interest in archaeology. I had become fascinated with the bioarcheological excavation of Richard III, whose remains had been found in a parking lot and revealed much about the well-known English king. This interest led me to enroll in my Archaeology 101 course, one that would propel me to declare an archeology minor and begin working at the new campus dig site, Columbia Street Cemetery. By my junior year in college, I had become the field director for this site, and had given multiple talks to the public about it, and also presented a paper on it at the Society for Historical Archaeology Conference.

One of the requirements for my minor though, had been participating in a field school. Field schools are unique archaeological sites that act as educational resources in addition to simply conducting research on the site. I searched for field schools through the Institute for Field Research and was stunned by the opportunities I would have. There were sites all over the world, from classical sites in Greece to Indigenous sites in South America. But, my choice became clear when I saw a program being offered in Wexford, Ireland focusing on the first Anglo Norman castle to be established in Ireland in 1169. It was perfect. I had traveled to Ireland before, but this would be an opportunity for me to fully dive into not just the history, but also the culture of Ireland for five weeks. I made the decision in February 2019, and by June, I was on a plane en route to Dublin to begin my adventure.

While the archaeological work itself was incredibly educational, this particular field school had an



interesting factor: it was situated within the Irish National Heritage Park. That meant that while we were responsible for participating in the dig (and preparing the afternoon tea and biscuits for everyone), we were also asked to interact with visitors to the site and explain our research. One of the greatest lessons I learned while working at the site was the significance of public history and archaeology. History is not meant to be kept on a high shelf, only accessible to scholars. It is about people, and therefore should be accessible to people. For the park visitors, this was their history. It was likely that their ancestors had either been the Anglo Normans, or their ancestors had been impacted by their arrival. It only made sense that they should be involved in the research. Having conversations with the guests was so fascinating. It allowed me to better understand the history I was researching, as I explained it to them and was asked questions I’d have to consider. It also allowed me to simply see how populations consider history differently. I reached a deeper understanding and appreciation for the study of history while I was in Ireland. While I had quickly learned that history was so much more than dates and important events, it allowed me to understand and appreciate the significance of interpretation and human interaction with the past.

In a way, I’ve begun to realize that studying history is kind of like a large critique session. I can present history in a way that makes sense to me. I can do my research and produce a polished paper that reflects my understanding of a topic, but then someone can come along and view it in a completely different manner. It doesn’t make it better or worse - my thoughts are not devalued because they differ from someone else’s -- but those differences should still be taken into consideration. A better history is then built based upon those differing perspectives, understandings, and critiques. That’s what studying history is; it’s abstract and varied in its approaches. There are no wrong answers, just different ones that work better than others. It seems that those lessons—though I learned them quite a few years ago— still stick with me as I continue shaping my future and learning about my field; I think there will always be a part of me that wonders what color hat I’m wearing when I am working on something.

“Ideal Graduate” is inspired by mom, chases car industry dream

By Jeremy P. Kelly, syndicated from Dayton Daily News

The coronavirus shutdown of Ohio schools caught everyone by surprise this spring. But Dayton Regional STEM School graduate Caven Stanley said students should get used to expecting the unexpected in their high school years.

Stanley found plenty of examples of the unexpected in his own life.

- His favorite memory from high school didn't happen in school, but in a canoe hundreds of miles away.
- The subject that stands out most in retrospect is math, the one he's struggled with for years.
- And if you're driving fast and a deer pops out of the woods, it can put quite a kink in your senior year.

But even when the unexpected news is a challenge, Stanley, a Dayton resident, maintains an upbeat attitude.

“Being raised by a single mom and seeing how she always has made it work, my whole life, no matter what situation we get into, has kind of driven me and shown me, like, anything's possible,” Stanley said.

Some of his favorite high school experiences have been out-of-class projects that integrate the science, technology, engineering and math concepts the STEM School is named for. The school has been working on a zero-waste program for years and tried composting cafeteria waste. After struggles with early efforts, Stanley said he and other students volunteered after school with engineering teacher Philip Bottelier to build a greenhouse.

“I learned a lot about general carpentry, with how to measure angles,” Stanley said. “Plus how to know what your optimum sunlight angle is with a greenhouse to make compost most efficient.”

In the last two weeks of each school year, students drop their regular classes and do a deep-dive “STEMmersion” adventure. As both a sophomore and a junior, Stanley was part of the 20-student group, led by Bottelier, who canoed the 120-mile Au Sable river in Michigan, sleeping in tents and cooking over campfires for a week.

“It was just the experience of going there, and getting away from the general society of being on your phone and having all this technology around you,” he said.

STEM School teachers and administrators had high praise for Stanley, with [Principal Jessica Short] calling him “one of the hardest working, kindest, and most beloved students at STEM.” That's why she said it shook the school when Stanley was injured in a major car accident in February.

Stanley, who said he “absolutely loves everything about cars,” acknowledges he and his friends were going too fast when they saw a deer hop out onto the wooded road. His friend swerved then overcorrected and they went into the woods. One hospital trip later, all the friends were healing, but Stanley was recovering from a concussion and punctured lung, and one friend had four screws and a plate in his foot.

Stanley said he was “beyond thankful” that his teachers, especially calculus teacher Nancy Schaefer, went out of their way to give him flexible options when he returned to school about two weeks later. He said Schaefer had always been willing to spend extra time helping him.



That became even more important when, just days after that, schools shut down and switched to online learning, while Stanley had restrictions on screen time due to his concussion.

Adam Bolden, the STEM School's fitness and wellness teacher, said the mood in the school changed for the better when Stanley came back from his accident.

“We have a model for the ‘Ideal Graduate’ and it would have been a lot easier to just put Caven's picture (on it),” Bolden said.

Bolden said he and Stanley got to know each other because of their shared love for cars and Stanley's desire to learn.

“When he is passionate about something, he wants to know everything about it so he can be the most knowledgeable person in the room on that subject,” Bolden said, saying that was one example of Stanley's work ethic. “I have never once heard him complain or gripe about having to do something, whether it's school work or just a favor for someone else. He's always willing.”

Stanley is excited to attend Warren Wilson College, a small school in North Carolina where students have work and service requirements on top of academics. He said he's already had adult responsibilities like paying his own car insurance and helping care for his little brother, so his biggest concern with the transition is moving away from family.

Stanley said his mother, Syble Brown, has always encouraged him to follow his dreams. His long-term dream, after earning a business degree, is to own his own high-performance motorsports shop, and to “go big” by partnering with bigger companies like Chevrolet Performance, Roush and Shelby American.

He feels like he's grown in high school and gotten more prepared for what life throws at him.

“I feel like I became a lot more persistent than I was,” Stanley said. “The challenges that come your way, you kind of have to learn to adapt to those a little bit differently than maybe what somebody says.”

Alumni Notes

'13 **Joshua Jordan** graduated from Wright State University in 2017 with a degree in Mathematics and Physics. He received his Masters in Mathematics and is now pursuing a PhD at the University of California, Irvine. He has published one paper and has gotten accepted to a journal.

'13 **Sierra Davis** graduated from Bowie State University with a degree in Business Administration, concentrating in accounting. She now works as a tax examiner in Maryland.

'13 **Jessica Howard** will receive her Nursing degree from Fortis College of Centerville in less than one year. She has a 2 1/2 year old son, Edward, and is newly married. She is currently an STNA at Randall Residence in Centerville.

'13 **Anna Bowsher** graduated from Texas A&M University – Commerce in 2016 with a degree in Biological Sciences. She was recently accepted into the Doctor of Osteopathic Medicine program at Ohio University. She currently works as a researcher at Bates College in Maine, thanks to former STEM Biology teacher, Kate Cook-Whitt, who sent her the job posting.

'13 **Samantha Mrozinski** graduated from California University of Pennsylvania in 2018 with a degree in Meteorology. She started student teaching Earth and Space Science while pursuing a masters degree.

'13 **Ysmeen Jilani** graduated from Wilmington College in 2019 with a degree in Sports Management. She is currently working as a management trainee at Enterprise Holdings.

'13 **Killian Macnish** is working his first job as an eCommerce Clerk.

'14 **Tanner Banks** graduated from Bellarmine University in 2017 with a degree in Business Administration and is married to Vy Nguyen.

'14 **Dieter Archer** graduated from Wright State University in 2018 and is currently working at deciBel Research Inc. as a software developer.

'15 **Emily Jenney** graduated from Wittenberg University in 2019 with a double major in biochemistry/molecular biology and dance. She is working as a central supply technician at the Community Tissue Center.

'16 **Ben French** graduated Cum Laude with a degree in Biochemistry from Rose Hulman, where he was the Service chair in Alpha Chi Sigma, an orientation leader, and a NETA-certified group fitness instructor. He is now pursuing a PhD in Molecular Medicine at the University of Toledo.

'16 **Martin Archer** graduated from Miami University, Magna Cum Laude, in 2019, completing his B.S. degree in three years. He was hired full-time as a software developer for Kroger Headquarters in Cincinnati, pharmacy division. Martin got engaged to Harley Bergnes in August 2020.

'16 **Ian Mobley** married his STEM sweetheart, Amanda Kramer in 2019. He completed his mission for the Church of Jesus Christ of Latter-Day Saints where he served in Seattle.

'16 **Alexander Landolfi** is attending Western Governors University and majoring in cyber-security and information assurance while working in an IT position at Northrop Grumman.



'17 **Ray Hampton** is on track to graduate a year early from the University of Cincinnati with his Doctorate of Pharmacy.

'17 **Rhyse Mobley** completed a mission for the Church of Jesus Christ of Latter-Day Saints where he served in Sidney, Australia. He was called to teach in Chinese during his mission and served in many areas where this was a requirement.

'17 **KeShawn Mellon** founded the first all-Black theater group at Ohio University.

'17 **Lauren Drewing** and fellow STEM alum, **Joel Baker**, recently celebrated their first wedding anniversary. They added a puppy to their family this April, and are both about to enter their senior year of undergraduate school in Grand Rapids, MI. Lauren has recently started a part-time job as a nurse tech in one of Michigan's largest hospitals and has made the Dean's List every semester in Calvin University's nursing program.

'18 **Evan Gehret** completed his first internship this summer at Rhinestahl Corporation.

'18 **Kamran Sandhu** is majoring in chemical engineering at the University of Dayton. He still hangs out with his "STEM" crowd (Amin, Jonathon, Adam, Sam, Chaz, Maya, Zayneb, Jessica and Katie) and they have been on several trips together, enjoying life.

'18 **Maya Quale** is attending University of Dayton and majoring in psychology with a neuroscience minor. She made Dean's List and has been working in a faculty research lab.

'18 **Nicole Sword** is attending Ohio University and majoring in political science. She visited the United Nations in Thailand for a peace conference and traveled through Northern Ireland to research the Troubles. She has made the Dean's List and won the Jenkins King Award for best undergraduate political science paper.

'18 **Joseph McDavis Jr.** is now a Lance Corporal, soon to be Corporal, in the United States Marine Corps. He is stationed in Iwakuni, Japan, and has received multiple certificates, awards and promotions in his short career. He has trained on Mt. Fuji and worked in civilian aide throughout this global pandemic.

'18 **Steffi Cooper** spent two weeks through Monash University's Global Immersion in Prato, Tuscany, Cinque Terre, Florence and Rome as part of her Bachelor of Arts studies. After finishing her studies, she explored solo for another month making her way south from Rome to Naples, Sicily and then finally Malta. She currently resides in Australia.

'18 **Rachel Stowe** is attending University of Pittsburgh and majoring in applied developmental psychology with minors in social work and chemistry. She was chosen to serve as the chairwoman for the Pitt Fraternity and Sorority Life Committee on Diversity and Inclusion. She works part-time as a tutor for a Pittsburgh-based nonprofit that provides educational and social support to children and their families.

'18 **Kyle Cullen** is pursuing a Mechanical Engineering degree at the University of Dayton.

'18 **Adam Mitchell** is attending Wright State University and majoring in computer science.

'18 **Gloria Campos** is attending Case Western Reserve University and majoring in mechanical engineering.

'19 **Emilee Weir** is attending Rochester Institute of Technology majoring in mechanical engineering (aerospace), where she made the Dean's List. She was awarded the DoD SMART Scholarship and will be working for Wright Patterson Air Force Base.

'19 **Samuel Martin** completed an internship with Infoscitex on a Department of Defense contract. He was working on modeling of blast wave propagation, analyzing effects of blasts for men and women working with IEDs.

'19 **Grant Shaffer** is attending Wright State University and majoring in neuroscience, where he made the Dean's List and is on track to graduate a semester early. He is certified by Dance Masters of America and Ohio Dance Masters Chapter 16 to teach tap and modern.

'19 **Beth (Snyder) Walker** is attending the University of Southern Mississippi and majoring in industrial engineering technologies. She recently moved to Maryland after marrying STEM Sweetheart, **Isaac Walker**. Isaac enlisted in the Air Force Dec. 17th, 2019. He is currently stationed at Ft. George Meade, MD and is attending the Community College of the Air Force and majoring in computer networking.

'19 **Felix Rautio** is studying psychology at the University of Dayton and moving into their first apartment.

'19 **Athena Fretz** is in the honors program at Bowling Green State University, majoring in biology with specializations in marine and aquatic biology. She was named Ohio Youth of the Year for 2018 and is a Certified Mentor through MentorCollective.

'19 **Kalie Roundtree** is attending Kent State University and majoring in materials chemistry.

'20 **Elizabeth Tracy** accepted a job with Premier Health as a patient care technician at Miami Valley Hospital. She is studying nursing at Wright State University.

'20 **Sarah O'Connor** joined the Women's Golf Team at the University of Dayton. She is pursuing a degree in Chemical Engineering.

'20 **Clara Schultze** earned enough scholarship funds for her full first year at the University of Dayton, where she is studying biology/pre-medicine in the honors program.

'20 **Jessica Arthur** is studying special education at Cedarville University.

'20 **Cory Fife** earned several scholarships to the University of Dayton, where he's pursuing a degree in Electrical Engineering.

'20 **Isabela Nguyen** is attending Case Western Reserve University double majoring in finance and business management.

'20 **Umar Atlagh** is pursuing a Computer Science degree at Wright State University.

'20 **Molly King** attends Wittenberg University and is majoring in biochemistry/molecular biology.

'20 **Leah Dalton** is majoring in discover engineering technology at the University of Dayton.

'20 **Edwin Culpepper Jr** is attending North Carolina A&T and majoring in computer science.

'20 **Miracle Wilcoxson** earned a full ride to Central State University through the 1890 Student Scholarship Program.

MEETING THE MISSION

The mission of the Dayton Regional STEM School is to *prepare* and *inspire* the next generation of *leaders* and *innovators*.



2019-2020 Highlights

50 community exhibitors attended the annual College and Career Fair

66 Career Pathway Specializations were earned by the Class of 2020

40 partners shared their expertise as Science Fair Judges

\$111,000 in donations supported STEM students

65 students participated in the first Students Lead Dayton leadership conference hosted by STEM

The STEM Parent Alliance convened quarterly to foster connections in the parent community

Over 50 projects were completed by students and faculty

46 virtual learning days were overcome during Spring Semester

○ COMMUNICATION ● INQUIRY ● CREATIVITY ● PERSISTENCE ● COLLABORATION

Setting the bar for Ohio's future through STEM education



Did you know that the Dayton Regional STEM School is part of a network of seven independent STEM schools all over Ohio? The Ohio Alliance of Independent STEM Schools is working together to promote the sustainability and growth of Ohio's public, independent STEM schools to meet Ohio's workforce demands.

WHAT IS OAISS

Ohio's seven independent STEM schools have always been collaborative in nature, given their unique education model, strengths, and challenges.

These schools have been tasked with developing and using innovative instructional methods with an emphasis on Science, Technology, Engineering and Math (STEM). Driven to prepare students for success in the modern economy and striving to keep more students in Ohio and our workforce development pipeline after graduation, we have built relationships with businesses and institutes of higher education to ensure we are equipping our students with the skills they need.

In 2019, school leaders created an official alliance to tackle strategic initiatives and advocate for STEM education state-wide.

OUR CURRENT GOALS

- Ensure the long term sustainability of Ohio's independent STEM schools
- Promote the growth and success of independent STEM schools across Ohio
- Form collaborative teams to improve STEM education for all Ohio students

LEARN MORE AT WWW.OHAISS.ORG

OUR STEM SCHOOLS

- ★ Bio-Med Science Academy STEM School
- ★ Dayton Regional STEM School
- ★ Global Impact STEM Academy
- ★ iSTEM Geauga Early College High School
- ★ Metro Early College High School
- ★ Tri-State STEM+M Early College High School
- ★ Valley STEM+ME2 Academy



STEM School Leads Dayton's STEM Initiatives

Dayton has long been known as an incubator for innovation, with many professionals and organizations passionately working to advance STEM initiatives in our community. The Dayton Regional STEM School is perfectly positioned to help lead the charge.



OSLN'S DAYTON STEM HUB

The Ohio STEM Learning Network has officially named the Dayton Regional STEM School as the home for the Dayton STEM Hub.

The Hub will serve its stakeholders by facilitating professional development opportunities, regional STEM outreach, and support to those exploring OSLN's STE(A)M designation process.

Jenn Reid, PBL Coach and Training Center Coordinator, and Stephanie Adams Taylor, Director of Strategic Partnerships, will join Wright State University's Brian Boyd as co-directors for the Dayton STEM Hub. Together, they'll create conversations and connections to benefit the region's STEM designated schools and community partners.

DO STEM ECOSYSTEM

The newly formed Dayton Ohio STEM (DO STEM) Ecosystem is a collaborative of regional partners committed to leveraging resources and opportunities to engage students in STEM activities throughout the Dayton region. At the group's core, we believe in aggressively open arms, equitable opportunities, and a focused future.

The Dayton Regional STEM School is proud to be one of the founding partners and a part of the leadership council for the Ecosystem. Other partners include Montgomery County Educational Services Center, Wright Patterson Air Force Base, Air Camp, Mad River Local Schools, and many other industry, education, and non-profit organizations throughout the Dayton community.

An inaugural event for the Ecosystem will be the DO STEM Future Fair, tentatively scheduled for February 4, 2021. This pilot event will be open to students and families from across the Dayton region and feature local representatives from a variety of in-demand STEM fields. Not only will students learn about each organization, but more importantly the diverse paths that professionals take and the technical and personal skills needed to succeed in the workforce. We are currently exploring both in-person and virtual options, which will be announced later this fall.



STEPHANIE ADAMS TAYLOR



JENN REID



Partner with STEM.



Dear STEM Supporters,

A new school year brings new opportunities to collaborate and engage with our partners, and we have the best around! If you are reading this... YOU are an MVP (Most Valuable Partner). Whether you are a parent, a professional, a community leader, or just a lover of all things STEM, you are a vital piece of the puzzle in providing an exceptional and authentic education for Dayton's future workforce. Our school motto is "the real world starts here." These are the formative years that set the tone for a young leader's future. This is when inspiration strikes in an innovator's mind. And this is the perfect time to show a young Daytonian how rich with opportunity their own community is. You have supported, mentored, guided, and championed our incredible students throughout their STEM journey. You have believed in them, as well as "that school in the old Value City Department Store,"

and helped us become a thriving and renowned institution of learning, both regionally and nationally. Our success, and that of our students, would not be possible without the steadfast support of our community partners.

Thank you for continuing to invest your time, talent, and treasure in the Dayton Regional STEM School!



Stephanie Adams Taylor
Director of Strategic Partnerships
stephanie.adamstaylor@daytonstemschool.org
daytonstemschool.org/supportus

Invest in YOUR future.



Save the Date

DO STEM Future Fair February 4, 2021	Senior Showcase March 11, 2021
Virtual Science Fair February 13, 2021	STEMmersion May 13-26, 2021
College and Career Fair February 25, 2021	Exhibition Night May 26, 2021

Connect with Us

Get inspired, join our Partner email list, and see the latest STEM news at daytonstemschool.org/supportus.

Contact our Director of Strategic Partnerships at stephanie.adamstaylor@daytonstemschool.org to chat about how you'd like to partner with the school.

Don't forget to follow us on social media!



Give the Gift of STEM

Interested in donating to the Dayton Regional STEM School? Go to daytonstemschool.org/give for a link to give or ways to contribute.

CHECK OUT
A FEW OF OUR
TOP PARTNERS!



WRIGHT STATE
UNIVERSITY



NORTHROP GRUMMAN





The Dayton Regional

S T E M

School

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