

STEM BEST® Programs of the Iowa Governor's STEM Advisory Council

The STEM BEST (Businesses Engaging Students and Teachers) Program focuses on teachers and industry professionals working side-by-side to craft curriculum and projects that prepare students for exciting STEM careers local to their community in manufacturing, information technology, bioscience (agriculture and medicine), finance and more.

North Central STEM Region:

North Central STEW Region.		
Ames Middle School Awarded in 2020 Contact: Anthony Jones at anthony.jones@ames.k12.ia.us Contact: Boston Freilinger, Principal, boston.freilinger@ames.k12.ia.us	Ames Middle School partners with Ames businesses to learn how STEM is integral to the business. Students will produce interactive demonstrations for public presentations at the Science in the City event held at the Ames Public Library.	
BCLUW Community School District Awarded in 2022 and 2019 Contact: Roberta Vanderah at rvanderah@bcluw.org Matt Price at mprice@bcluw.org	The district provides service-learning through hands-on academic projects within the community to prepare 11-12 grade students for future careers. Students identify and creatively solve a problem. They reach beyond the regular classroom experience through building community, business and higher education partnerships to assist the transition from school to careers. BCLUW provides students with opportunities to explore healthcare careers and makes connections to jobs and training opportunities.	
Boone EDGE Awarded in 2022 and 2016 Contact: Jill Janes jjanes@boone.k12.ia.us or Lindsey Hyman lhyman@boone.k12.ia.us	EDGE stands for Empowering Desire. Guiding Experience. Boone EDGE is a work-based learning continuum of awareness, exploration, training and preparation. Students engage in multiple ways through partnerships with a variety of community partners for grades PK-12. At the high school level, project-based courses, internships, and apprenticeship-based courses are offered, in addition to awareness activities through partner tours, speakers, mentors, and authentic projects in core classes. Our mission is to empower students to reach their goals, help students discover their desire, guide students toward what they want to do and give them the experience needed to continue on their path to success.	
CAL Community School District Awarded in 2023 Contact: Jill Craighton at craightonj@cal.k12.ia.us	The district will expand their farm-to-school program to create agriculture and STEM-centered learning spaces that give students opportunities to understand how their skills and interests relate to job opportunities. The greenhouse and gardens will be updated and expanded for year-round use. Drones, 3D printers and agriculture software will be	

purchased.

Clear Lake Community School District Awarded in 2020 and 2019 Contact: Emily Hill at ehill@clearlakeschools.org Fort Dodge Community School District Awarded in 2023 Contact: Andrew Kavanaugh at akavanaugh@fdschools.org	Clear Lake Community School District exposes students to STEM careers with local employers by bringing in business partners to interact with elementary students. Secondary students participate in internships and apprenticeships with business partners, specifically utilizing the Project Lead the Way curriculum. Our program focuses on manufacturing. The students learn various metalworking skills, including but not limited to, sheet metal layout/fabrication, machining, welding/fabrication, and forging.
Marshalltown Community School District Awarded in 2020 Contact: Jocelyn Frohwein at jfrohwein@marshalltown.k12.ia.us	Marshalltown Community School District expanded their Career Pathways and Career Trees for additional STEM-focused future ready opportunities. Students in grades 8-12 conduct authentic experiences in video broadcasting alongside partners.
Marshalltown Learning Academy Awarded in 2017 Contact: Eric Goslinga at egoslinga@marshalltown.k12.ia.us	The Marshalltown Learning Academy provides a personalized learning environment for students. Apprenticeship programs were added with area businesses that are often already in partnership with the school district.
North Iowa Community School District Awarded in 2017 Contact: Joe Erickson, Superintendent, at erickson@northiowa.org	The district partnered with Next Generation Technology (NGT) to develop Next Generation Kits (NGK's). This is used in the Solution Center and provides hands-on student-led learning opportunities that engages students while aligning to NGSS and other CORE standards. NGK fosters creativity, innovation and problem-solving skills.
St. Mary School (Humboldt) Awarded in 2018 Contact: Sara Bormann, Principal at sbormann@stmaryhumboldt.org	Students and teachers network with local industrial scientists and skilled technicians in various learning environments. This model coordinates technician-in-residency opportunities for educators to learn about local STEM careers to better guide students in their STEM studies.
Ogden Community School District Awarded in 2023 Contact: Bozz Bossard at abossard@boone.k12.ia.us	Create authentic learning opportunities for students through community projects with the goal of engaging students in classes and extending that learning into a real-world setting.
Osage Community School District (Heavy Equipment) Awarded in 2023 Contact: Brent Jennings at bjennings@osage.k12.ia.us Craig Christensen (St Ansgar) at cchristensen@stacsd.org	Osage and St. Ansgar Community School Districts are collaborating with local businesses to create a pathway to introduce students to careers in operating large equipment. Two CAT simulators, a small wheeled loader, and an excavator simulator, are housed in an enclosed trailer that can easily travel between the two districts. These simulators are part of the Industrial Technology Departments at each school. Each school will have the trailer for two of the four quarters of each school year.

Osage Community School District (CNA)

Awarded in 2022

Contact: Kelley Molitor at kmolitor@osage.k12.ia.us

A CNA program will be developed for junior and senior students then develop a health care career pathway for students. The model will be started with Osage Community Schools students and then offered to students in St. Ansgar and Riceville, creating a county wide academy.

West Marshall Community School District

Awarded in 2022 Contact: Mari Haley at mhaley@wmcsd.org and Amy McKibben amckibben@wmcsd.org The major aim of West Marshall's STEM BEST HD program is to start students younger and to take them farther along the computer science path before graduating from high school. The district works to accomplish this through four different strategies. These include developing a comprehensive K-12 computer science curriculum, building a K-5 STEM lending library, leading STEM teacher academies and hosting an annual K-8 family STEM night.

Northeast STEM Region:

Allamakee Community School District

Awarded in 2023 and 2018 Contact: Ben Rausch,

brausch@allamakee.k12.ia.us

and

Kelli Olson at

kolson@allamakee.k12.ia.us

Waukon High School (WHS) implemented an Allamakee Regional Welding Academy to serve the local community. By partnering with Northeast Iowa Community College (NICC), WHS and Allamakee County Economic Development (ACED), this helps create a talent pipeline to fill current and future welding vacancies within the region. The district also offers a STEM course to expand this CTE program to middle school to begin career exploration at an earlier age. Students will be able to explore physical computing, 3-D printing and design, microbiomes and engineering.

Cedar Falls Community School District

Awarded in 2020, 2018, 2017 Contact: Ethan Wiechman at Ethan.Wiechmann@cfschools.org Cedar Falls Community School District offers Center for Advanced Professional Studies (CAPS) programming through strands that explore business solutions, careers, CAN, education, industries and medical pathways. New strands represent community demand for talent pipeline into critical industries.

Central Community School District - Secondary

Awarded in 2022, 2021 Contact: Leah Imoehl at limoehl@central.k12.ia.us or Ryan Bergan at rbergan@central.k12.ia.us The goal of its Clayton County BEST Program will be to offer unique learning opportunities that connect individual students to authentic workplace experiences and provide a strong focus on career and college readiness as a key outcome. Students will be paired with community organizations and businesses to address real-life concerns using 21st century skills and knowledge to provide solutions and products.

Central Community School District – Elementary

Awarded in 2018
Contact: Leah Imoehl at limoehl@central.k12.ia.us or Nick Trenkamp at ntrenkamp@central.k12.ia.us

The goal of the Central Elementary Makerspace is to equip students with skills to explore, create and discover how things work in the world around them! Students are introduced to computational making activities that promote crosscutting concepts across science, technology, engineering and math. We provide scaffold learning experiences so elementary students in Kindergarten through 6th grade become self-determined learners. In addition, the Makerspace utilizes community support volunteers for time, expertise and donation of supplies.

Dike- New Hartford Community At Dike-New Hartford, a more relevant and vibrant industrial **School District** technology curriculum will be developed. Specifically, improvements will be made to facility and equipment to offer Awarded in 2022 courses in advanced welding, CNC machining, product Contact: Lane Stahlberg at development and enterprise, and laser fabrication. lane.stahlberg@dnhcsd.org **Don Bosco Catholic School** All 11-12 grade students participate in a minimum of one semester of work-based learning experience. Students will System Awarded in 2021 explore different career paths, network with businesses and Shelby Douglas translate what they have learned in the classroom to real-life sdouglas@boscocatholic.org applications. **Dubuque Community School** Hempstead High school will purchase a CNC machine to District increase student awareness and experience of quality Awarded in 2023 careers available in manufacturing. Contact: David Moeller at dmoeller@dbqschools.org **Eastern Allamakee Community** The district's community partnership program connects local **School District** business and industry partners with students in grades 9-12 of all ability levels and academic status. The program Awarded in 2021 Contact: Sarah Updegraff at consists of student-created and business/industry-driven supdegraff@kee.k12.ia.us projects. **Holy Family System (Dubuque)** A community supported Agriculture (CSA) business will be created and run by students who can enroll in one of three Awarded in 2023 course pathways, including Agriculture Research, Contact: Sarah Martineau at Construction, and Business and Marketing. Students smartineau@holvfamilvdbg.org enrolled in Agriculture Research will plan for a successful or growing season as well as plant, care for, and harvest Korrin Schriver, produce. In the Business and Marketing course, students will kschriver@holyfamilydbq.orq manage branding and promotion, as well as pricing and inventory. In the construction pathway, students will plan for and build the necessary items for the CSA such as a chicken coop and farmers market stand. **Howard-Winneshiek Community** The "Cadet Zone" project enhances job readiness skills for **School District** students by partnering with area businesses to promote Awarded in 2021 creativity and 21st century skills. "Cadet Zone Cafe", "Cadet Zone Merchandise Store", and "Cadet Zone Media Contact: Luke Jansen at Productions" are the three branches that offer students ljansen@howard-winn.k12.ia.us opportunities to work alongside businesses, obtaining a unique set of skills for the workforce. Iowa BIG North offers students the opportunity to experience **Iowa Big North** Awarded in 2017, 2015, 2014 in-depth and more sustained projects in professional business, community, and/or government settings. Students Contact: Mike Kuennen at will engage in pursuing answers to professional problems m kuennen@new-hampton.k12.ia.u and projects while being immersed in a professional work S environment. Development of 21st century and employability or skills (Universal Constructs) will be a strong focus of this Krissy Anderson program. IBN is competency-based, so students will be k anderson@new-hampton.k12.ia.u expected to demonstrate their understanding of the <u>S</u>

standards and content of the course in contextual

performances for authentic audiences.

Jesup Community School District

Awarded in 2019 Contact: Paul Rea

at prea@jesup.k12.ia.us

Jesup Community School District expands work-based learning through partnership and collaboration with Cedar Falls' STEM BEST Program (called CAPS). Students are provided opportunities for their knowledge and skills to intersect in real-world learning opportunities. They are able to explore careers, make connections to businesses and understand how the concepts and information they are learning in the classroom translate into real life.

MFL MarMac Community School District

Awarded in 2022 and 2021 Contact: Melissa Haberichter at melissa.haberichter@mflmm.k12.ia.

us

MORE is the authentic work-based learning program at MFL MarMac High School. MORE stands for More Opportunities. Real Experiences. The curriculum is driven by student interests as well as business and community needs. Students work closely with community partners and mentors to develop workplace skills and complete authentic projects that result in deliverable products/services. By working in the community, students also build a personal learning network and increase their awareness of career opportunities.

New Hampton Community School District

Awarded in 2019

Contact: Rachel Bauler at

r bauler@new-hampton.k12.ia.us

New Hampton Community School District provides the opportunity for students to explore the agricultural career field of precision technology through use of precision agriculture software and hand held equipment as they work with precision agriculture employers.

North Cedar Elementary School

Awarded in 2016 Jaymie Odell, Principal Jaymie.Odell@cfschools.org Students work hand-in-hand with Sidecar Coffee (local chain) to learn about the science of roasting and brewing coffee in order to create their own product and market it to the community.

North Tama County Community School District

Awarded in 2021 Contact: Susan Johnson at susan.iohnson@ntredhawks.org This STEM and literacy environment for K-2 classrooms engages local partners in STEM learning, equipping innovative classrooms and providing professional learning for faculty to be leaders in integrative STEM and literacy.

Oelwein Community School District

Awarded in 2017 Contact: Deb Kaeppel at dkaeppel@oelwein.k12.ia.us PROJECT ONE was created by the district in conjunction with the Oelwein Economic and Area Development to create opportunities for students to flourish in robust work-based learning environments. With support from local businesses, authentic learning opportunities will provide students with a rich opportunity to explore interests, learn in cross-curricular classrooms and develop skills of the universal constructs.

Starmont Community School District

Awarded in 2022

Contact: Cassie Gruman at

cassiegruman@starmont.k12.ia.us

Payton Rundle at

prundle@starmont.k12.ia.us

Our program is a pull out program where students K-12th grade have the option to explore a Makerspace. Sometimes small groups come or whole classrooms. The elementary classes have an eight day rotation and the opportunity to come twice in that rotation to the Makerspace. The secondary come to the Makerspace on their own time when they have STAR(Intervention) or study hall. Our Makerspace teachers also co teach with teachers if requested. The goal is for all K-12th Grade to have access and explore the Makerspace throughout the year.

Turkey Valley Community School District Awarded in 2022 Contact: Steve Pfaffle at spfaffle@turkey-v.k12.ia.us	The Turkey Valley Ag Ed/FFA Department will build a greenhouse. This will be a student-run center, teaching sustainability, horticulture and marketing. K-12 grade students will be creating a farmer's market where they will advertise and market the products they produce.
Wapsie Valley Community School District Awarded in 2021 Contact: TJ Murphy at tmurphy@wapsievalleyschools.org	This model immerses students in a business environment and encourages innovation while developing professional skills, problem solving and expanded career exploration opportunities through Cedar Valley CAPS.
Waterloo Community School District Awarded in 2023, 2022, 2019 Contact: Amy Miehe at miehea2@waterlooschools.org and Jeff Frost at frostj@waterlooschools.org	A Biomedical Lab Technician program will be added as part of the Health Sciences pathways in their career center. The partnership will utilize skills learned through classroom instruction to navigate scenarios in health professions. The Computer Science/IT pathway will be expanded to offer a Cyber Security Pathway. Students will be able to obtain certifications, including Security Pro, COMP TIA and other ethical hacking certifications. The district will enhance the Electrical Career Pathway with the purchase of a Switch Vehicle. This will provide students the challenge of building a full size, road-worthy electric vehicle.

Northwest STEM Region:

Boyden-Hull Community School District Awarded in 2023	Students will be immersed in the Center for Advanced Professional Studies (CAPS) for career exploration and professional training with local businesses. Students will participate in mock interviews, career discovery meetings and authentic learning.
Carroll Community School District Awarded in 2023 Contact: Kourtney Abbotts at kabbotts@carrolltigers.org	The district will implement a new freshman pathways course, Introduction to Pathways, while also assisting in providing staff with Project Lead the Way certification to provide students Introduction to Engineering, Cybersecurity, Biomedical Science and Environmental Sustainability.
Cherokee Community School District Awarded in 2022 Contact: Tim Stoneking at tstoneking@ccsd.k12.ia.us	A Cherokee Future Ready BEST Program will be launched in the next academic school year, with the goal for students to step out of the classroom and have a more in-depth, work-based learning experience that will build skills and awareness to help students to become Future Ready. The district will focus on connecting students with local industry partners targeting the areas of health professions and advanced manufacturing.

Emmetsburg Community School District

Awarded in 2020

Contact: Tracie Christensen at tchristensen@e-hawks.org

or

Darca Saxon

dSaxton@e-hawks.org

Emmetsburg STEM Program: Increases opportunities for our students to explore career opportunities available that will help to make our students future ready. Incorporate STEM through various implementation steps throughout the District. Create a pathway using the Stem Innovator program from Kindergarten through 12th grade to engage students in learning and motivate them to complete their education. Expand this program to allow our students to collaborate with area partners and help them realize that they can stay or return to our community. Establish key partners within our community to develop real-world projects for students to help them develop real-world skills.

MMCRU Community School District

Awarded in 2023 and 2019 Contact: Matthew Hansen at matt.hansen@mmcruroyals.org New manufacturing equipment was purchased including a CNC machining center, advanced millwork processing technologies and welding robotic cells to provide industry grade technology to 9th-12th grade students. This will help prepare students for local careers with the tools, equipment and technology used by local tradesmen for metal fabrication and general machining sectors in an economic development effort in northwest lowa.

MOC-Floyd Valley Community School District – High School

Awarded in 2023, 2022, 2021, 2020 Contact: Michael Mulder at mmulder@mocfv.org and Grant Hegstead at ghegstad@mocfv.org Students at MOC-Floyd Valley High School are provided with a range of opportunities along a continuum of authentic learning experiences, including our Dutch Designs Program, Extended Career Experiences Program, and Registered Apprenticeships in Welding and Education. We also have CAPS Solutions, CAPS Education, and CAPS Medical pathways. The foundation of each of these programs is the relationship that exists between students, teachers, and community partners, allowing for value-added benefits for all.

MOC-Floyd Valley Community School District – Elementary

Awarded in 2022 Contact: Sandy Groom-Meeks at sgroommeeks@mocfv.org Working with community computer science education consultants, on-site professional development opportunities are available to prepare K-5 grade teachers to teach customized integrated lessons and integrate computer science into daily classroom activities.

No Boundaries and Iowa Middles

Awarded in 2023 and 2018 Contact: Becky Rients at brients@okobojischools.org

A consortium of schools, including the Okoboji, Graettinger-Terril, Ruthven-Ayrshire and Spencer Community School Districts, developed No Boundaries for high school students and lowa Middles for 8th graders at Okoboji Middle School. The vision of this project is to provide real-world and relevant opportunities that don't exist in the traditional school setting and to expand this model to students across the region.

Okoboji Community School District

Awarded in 2023 Contact: Ryan Cunningham at rcunningham@okobojischools.org The district will launch Curious Minds to 6-8 grade students with new course creations to explore concepts of graphic designers, architects, game designers and engineers. Project-based learning will be integrated into general education classes.

Rock Valley Community School District - Rocket Manufacturing

Awarded in 2014
Contact Micah Weber at
mweber@rvclass.org and
Todd VanderVelde at
tvanderv@rvclass.org

Rocket Manufacturing is a student-run manufacturer that works with local businesses by crafting metal machined parts and tools requested by businesses or individuals. Students carry out the marketing, accounting, design, production and customer communications.

Sergeant Bluff-Luton Community School District

Awarded in 2023 Contact: Chads Janzen at janzecha@sblschools.com An expansion of healthcare pathways and biology courses to work with community partners and expose students to the breadth of healthcare careers with use of Anatomage Table.

Sheldon Community School District

Awarded in 2022
Contact: Cindy Prewitt at cindy.prewitt@sheldonschools.com

The Siouxland CAPS schools will work together to offer more strand-specific classes specifically in the areas of health care, manufacturing and education. Through planning with Sanford, the students can continue with CAPS-specific training building career skills and connections between the Siouxland CAPS schools and get experience in the health field.

Sioux Center Christian School

Awarded in 2023 Contact: Josh Bowar at jbowar@siouxcenterchristian.com A new space will be created where students can practice STEM future-ready skills while being led by industry experts. This strategy will help develop leaders for tomorrow, increase classroom engagement and help students discover careers in STEM fields.

Sioux Center Community School District

Awarded in 2022 and 2021 Contact: Gary McEldowney at gary.mceldowney@scwarriors.org Students explore their gifts, talents, career interests, and complete real-world projects and simulations that allow them to experience their chosen career. A Career Explorations class is available for 9-10 grade students and a Makerspace lab is available for 6-8 grade.

Sioux Central Community School District

Awarded in 2023 Contact: Melanie Bloom at mbloom@siouxcentral.org Partnering with Interstates Engineering, Sioux Center Christian School will construct a future-focused STEM lab that features equipment, materials and collaborative learning spaces for students to be able to nurture and develop their skills and talents.

Sioux City Community School District

Awarded in 2022 and 2018 Contact: MacKenzie Hiserote hiserom@live.siouxcityschools.com The district expanded the GeoPhysics (Geometry + Physics) STEM curriculum to establish authentic partnerships with new business partners. Community partnerships integrate real-world questions for students to practice problem-solving utilizing 21st century skills of collaboration, creativity, communication and critical thinking.

Spencer High School Awarded in 2016 Contact: Will Dible at wdible@spencerschools.org	Students have multiple career experience pathways to choose from. No Boundaries is a passion-driven, project-based learning experience where students tackle real world issues for community organizations and develop professional skills along the way. Students can also take extended career experience classes focusing on agriculture, manufacturing, health sciences, entrepreneurship, construction, or even a custom-made experience to fit the interests of the students.
Spirit Lake Middle School Awarded in 2017 Contact: Angela Olsen at aolsen@spirit-lake.k12.ia.us	A multipurpose educational makerspace was created to connect the school with the community and provide hands-on, creative ways for students to innovate while engaging in all academic disciplines.
Storm Lake Community School District Awarded STEM BEST HD in 2022 and Spring 2022 Contact: Jacquie Drey at jdrey@slcsd.org	A Beacon of Success Pathway is available for students to access work-based learning options, reflecting a more student-centered, 21st century teaching and learning approach. K-2 students can experience an outdoor learning space for learning across core content while connecting with the community.
West Lyon Community School District Awarded STEM BEST HD in 2022 Contact: Shane Peterson at speterson@wlwildcats.org	Day-long field trips will take place to tour businesses in the advanced manufacturing sector. Students will be connected with businesses to meet employers, have the students witness what is happening in those facilities and come back to our program and practice skills that relate to those careers.

South Central STEM Region:

South Schilar STEM Region	•
Albia Community School District Awarded in 2017 Contact: Kevin Crall, Albia Community School District Superintendent, at kevin.crall@albia.k12.ia.us	This collaborative learning model brings relevant, rigorous and authentic learning experiences to life for students while working with business partners and Indian Hills Community College. Students are immersed in community projects with a STEM focus that solve real problems in the area, thus improving the living and working conditions for our citizens.
Ankeny Community School District	The district created a college and career readiness program called Orbis. Students engage in a collaboration space for
Awarded in 2023 and 2017 Contact: Joel Fox at joel.fox@ankenyschools.org Jessica Dirks at jessica.dirks@ankenyschools.org	project planning and design. The district is adding a secondary school experience that focuses on extensive, authentic community partnerships to support student learning and ensure all students have access to post-secondary experiences. The program will scale and evolve their online access to inform more career pathways, such as social media and business.
Bondurant-Farrar Community School District Awarded in 2022 and 2019 Contact: Donovan Hill at hilld@bfschools.org	Students experience work-based learning opportunities partnering with local businesses. Students share projects with business representatives, participate in mock interviews, learn about local career fields and receive mentoring for specific extracurricular groups.

Chariton Community School District

Awarded in 2017

Contact: Tracy Hall, Chariton High

School Principal, at

tracy.hall@chariton.k12.ia.us

Through a partnership with the Lucas County Development Corporation, the REAL (Relevant, Engaged, Applied, Learning) program was created to engage high school students in on-site, work-based projects. Students are exposed to high-demand fields such as design/engineering, diesel mechanics, IT, nursing, coding, finance and supply chain. The program will also include a welding and advanced manufacturing lab area to increase student capacity with updated equipment and allow the use of industry standard equipment for more professional level projects.

Des Moines Hoover High School

Awarded in 2017 and 2015 Contact: Jonathan Temple at jonathan.temple@dmschools.org Hoover's STEM Academy focuses on providing robust experiences for all students to connect with businesses and institutes of higher education in authentic, collaborative and challenging ways. Students conduct research at a university or intern with local businesses.

Johnston Community School District

Awarded in 2022 Contact: Jyll Johnson-Miner at ijminer@johnston.k12.ia.us The Johnston Community School District will provide students opportunity to explore, develop skills and receive EMS certification in emergency medical care and transportation for critical and noncritical patients who access the emergency medical system.

Newton Community School District

Awarded in 2017

Contact: Bill Peters, High School

Principal, at

petersb@newtoncsd.org

Fledge Innovator, a partnership between the high school, businesses and the community, provides authentic projects for students to work collaboratively on site or at the new NHS STEM Innovation Center called "The Incubator." The course supports STEM initiatives and follows the University of Iowa's STEM Engineering or Biz Innovator Curriculums.

Ottumwa Community School District

Awarded in 2018

An off-campus, hands-on learning opportunity for students to link instruction with authentic work experiences through partnerships with local employers. Two additional strands include STEM summer camps for middle and high school students and professional development for teachers to incorporate more career exploration opportunities.

Pella Community School District

Awarded in 2023, 2022, 2021, 2020 Contact: Lowell Ernst at lowell.ernst@pellaschools.org and

Teri Vos at

vost@central.edu

WorkSMART Connector guides K-12 students from career awareness through career experiences and into local careers. Modules were identified based on in-demand careers in Marion County, including technology, hospitality, patient care and early childhood education. A new automation cell in advanced manufacturing will provide opportunities to work in teams to understand the inputs and outputs of an automated system. The automation cell provides learning competencies which are key to the Industrial Technology program and Engineering Assistant Apprenticeship.

St. Theresa School (Des Moines) Awarded in 2018 Contact: Ronda McCarthy at rmccarthy@sainttheresaiowa.org	By partnering with local businesses, students learn from industry professionals, implement that learning in projects and present that learning in meaningful and professional ways. Through business partnerships, students will have the experience and confidence to explore STEM courses in high school and eventually become STEM professionals.
Waukee APEX Awarded in 2022 and 2016 Contact: Michelle Hill, Director, at mhill@waukeeschools.org	Waukee Aspiring Professional Experience (APEX) develops highly skilled, adaptable, global innovators and leaders. Waukee APEX draws on the expertise of Des Moines-area business partners to bring passion-based learning, authentic experience to high-schoolers. Students add value to business partners while exploring career possibilities identified by economic trends within the metro area and state. The program guides high school seniors in learning past the initial APEX course in manufacturing, construction and technology fields. Students gain valuable experience, earn credentials and college credits and connect to community business partners.
West Des Moines Community School District Awarded in 2022 and 2019 Contact: Jim Martin at martinja@wdmcs.org	Equipment was added to the manufacturing lab, including the HAAS Lathe and Wireless Probe. These additions will help build classroom hours and skill development towards apprenticeship agreements with partners for welding, computer integrated manufacturing, and beyond.

Southeast STEM Region:

Anamosa Community School District	Teachers will engage in quality professional development in conjunction with community partners to offer authentic learning experiences in existing classrooms like geometry in Construction and AMPED, Algebra, Manufacturing, Processes and Entrepreneurship & Design.
Awarded in 2023 Contact: Darren Hanna at dhanna@anamosa.k12.ia.us	
Alburnett Community School District Awarded in 2017 Contact: Brian Moretz, Principal, at bmoretz@alburnettcsd.org	The Pirate Collaborative was established to bridge the needs of local businesses with increased applicability and relevance in learning for students. This program aims to provide career awareness, preparation and exploration for students.
Assumption High School in Davenport Awarded in 2016 Contact: Andrew Craig, President, at andy.craig@assumptionhigh.org	The school works with Victory Enterprises to develop a Virtual Reality STEM Career Exploration program for students that introduces them to STEM careers in Iowa and across the U.S.
Belle Plaine Community School District Awarded in 2018 Contact: Frank Jowitt at fjowitt@belle-plaine.k12.ia.us	A manufacturing/production or "makerspace" facility in the STEM Lab is offered for students to create projects and artifacts. The formation of "BP-ROCKS." (Recognizing Opportunity from Commercial Knowledge and Skills) program provides an enhanced and in-depth after-school option focused primarily on local business and industry needs. Students are engaged in training and education with local community partners and post-secondary institutions.

Bettendorf/Pleasant Valley The districts collaborate to offer an internship academy Schools structure with local business on authentic computer science problems and solutions. Awarded in 2014 Contact: Haleigh Hoyt at hhoyt@bettendorf.k12.ia.us **Burlington Community School** Burlington Community High School has partnered with area **District** education institutions, Southeastern Community College and Awarded in 2022 Iowa Wesleyan University, along with area health care Contact: Brian Johnson at providers such as Great River Health to expand work based brian.johnson@bcsds.org learning opportunities for BHS Health Occupation students. This includes updating and expanding the health occupation lab for a real "on the job experience" for students. This has also better prepared our students for when they participate in WBL programs, so that they have a better understanding of the experience. **Cedar Rapids Community School** Students can explore aquaculture, aquaponics, microgreens, District (Metro High School) flowers and other seasonal plant products in a community Awarded in 2023, 2022, 2019 garden which supports refugee and migrant farming efforts to grow culturally relevant produce for the community. The Contact: Chuck Tonelli at cross-curricular learning space offers a farm-to-table mtonelli@crschools.us nutrition/health program, an entrepreneurship outlet and a culinary arts workforce development. City View Community High School students will also engage in the community through job shadows, internships and business, nonprofit and government projects. **Cedar Rapids Community School** A makerspace program for K-6 grade students to partner with community and business volunteers and address local **District (Thomas Jefferson H.S.)** Awarded in 2021 needs using 21st century skills. Contact: Charlie Goetzinger at cgoetzinger@crschools.us **Central Dewitt Community School** Community partners work in collaboration with staff to create a food truck with student opportunities for learning about **District** food production, food preparation, delivery, budgeting and Awarded in 2023 marketing for a small business. Contact: Jen Vance at jen.vance@cd-csd.org Central Lee Community School A science lab will incorporate industry grade chemical and **District** biology vent hoods to replicate industry grade laboratories.

Awarded in 2023 Contact: Angie Fransk at afransk@centrallee.org

Community partners will provide job shadow opportunities and hands-on experience.

Clinton Community School A partnership with Keep Iowa Beautiful and Downtown District Clinton Alliance to rebuild mural programs and provide professional development for staff to further develop Awarded in 2021 project-based learning experiences. Contact: Matthew Tobin at matt.tobin@csdkq.org **College Community School** An Anatomage Table will be added to the District's career District readiness program. The table offers a technologically advanced 3D anatomy visualization and virtual dissection Awarded in 2023 tool for anatomy and physiology education. Community Contact: Amber Osterkamp at partners will provide feedback and help students explore aosterkamp@crprairie.org their interest areas. **Davenport West High School** The district's "INSPIRE" program partners with local Awarded in 2023, 2017, 2015 businesses MA Ford, Alcoa, Phoenix Closures and more, to Contact: Greg Smith at immerse high school students in the business environment and explore manufacturing curriculum and pathways in their smithgr@davenportschools.org and community. West High School purchased a Haas CNC Mill Alene Vandermyde at and a Haas CNC lathe. With this equipment, students work vandermydea@davenport.k12.ia.us with local businesses and learn CNC programming and operating. Students will also have updated access to machinery used in industry for the welding pathway. This will allow students to learn fabrication and better align with industry needs of welders. **Fort Madison Community High** Educators and industry partners introduce students to STEM School careers in their community, leading to job shadows and Awarded in 2016 internships. Contact: Greg Smith, Principal, at greg.smith@fmcsd.org **Iowa City Community School** STEM-driven programs involving local businesses that are District available to all students. Awarded in 2017 Contact: Matt Degner, Assistant Superintendent, at degner.matt@iowacityschools.org **Keokuk Community School** Keokuk and Fort Madison high schools partnered with District business and industry and economic development groups to Awarded in 2021 and 2018 create a regional career exploration center. The center Contact: Adam Magliari at provides students expanded opportunities in different career strands to build on the CTE courses currently offered at the adam.magliari@keokukschools.org high schools. **Linn-Mar Community School** Venture Academics is a project-based learning program **District** offered at Linn-Mar High School in Marion, IA. Students in Venture Academics will build on traditional, foundational Awarded in 2021 learning and extend STEM concepts and processes through Contact: Mark Hutcheson at application and analysis. Though some traditional teaching mhutcheson@linnmar.k12.ia.us and learning methods will be employed at Venture, a Venture

experience will primarily focus on extending learning to real world applications, problems, and solutions. As students

apply what they are learning to real world applications they develop strong 21st century skills; critical thinking, creativity, time management, and the ability to work collaboratively. We work closely with local businesses/organizations and professionals for the purpose of students working on projects for businesses, being mentored, and gaining exposure to individuals and careers in this area.

Venture Academics is available to Linn-Mar students in a variety of content areas. Strand learning includes Graphic Arts, Life Science, Marketing Essentials, Advanced Business, Behavioral Science, Civics, Writing, Biomedical Science, Earth Science, and Environmental Science.

There are three major goals of the Venture Academics program. First, the program will provide opportunity to all 9-12th grade students, including and especially under-represented and underserved populations, through direct access to challenging academic, project-based, work-based learning. Second, students will gain expected subject-area proficiency through authentic, project based experience(s). And third, students will gain both knowledge of and experience with potential STEM- and business-related careers.

Mount Vernon Community School District

Award in 2022

Contact: Susannah Maddock at smaddock@mvcsd.org

Students in manufacturing, advanced materials processing and construction technologies courses will, under the direction of their teachers, design and renovate a discontinued school bus into a state-of-the-art enrichment classroom.

Muscatine Community School District

Award in 2023, 2022, 2020, 2017, 2016

Contact: Brandon Welsch at brandon.welsch@mcsdonline.org

and Pamela Joslyn

pamela.joslyn@mcsdonline.org

High school and junior high students can explore career paths through site visits, job shadows and internships/apprenticeships.

New London Community School District

Awarded in 2023 Contact: Allison Lair at allison.lair@nlcsd.org Industry relevant welding curriculum, technical training and college and career pathways for students.

Northeast Community School District

Awarded 2014

Contact: Jennifer Huling, Principal, at Jennifer.huling@northeastcsd.org

An innovative, problem solving and discovery-based environment for students, created in partnership with Lyondell Bassell, that focuses on authentic, real-world problems through the infusion of technology and curriculum.

Pleasant Valley Community School District Awarded 2022 Contact: Bernadette Brustkern at brustkernbernie@pleasval.org	Pleasant Valley Community School District will update existing classroom and coursework to provide an introductory course in CNC Machining. Students successfully completing the introductory courses can take advanced course work on the SCC campus where they can complete an industry recognized CNC Machine Operator Certificate.
Clear Creek Amana, Iowa City, Regina, Solon, Tipton and West Branch Community School Districts Awarded in 2014 Contact: Leslie Flynn at leslie-flynn@uiowa.edu	The STEM Innovator course offered at the Kirkwood Regional Center at the University of Iowa research park is open to students from seven school districts. Students engage with industry partners to develop solutions for problems of community interest. Students earn high school, Kirkwood Community College and University of Iowa credit.
Van Buren Community School District Awarded in 2023 Contact: Jessie Greiner at jessie.greiner@van-burencsd.org	The purchase of a commercial printer will allow students to gain industry-relevant skills while exploring career opportunities and gain authentic learning opportunities from local businesses.
West Liberty Community School District Awarded in 2017 Contact: Jackie Henderson at jhenderson@wl.k12.ia.us	Shaking Earth Digital, LLC (SED) provides an opportunity for students to create their own virtual reality (VR) game or experience in an after-school program.

Southwest STEM Region:

Atlantic Community School District Awarded in 2017 Contact: Heather McKay at hmckay@atlanticsiachools.org	A pre-apprentice approach to the construction trades. Business partners provide support and expertise (Master Licensed contractors) as they create and implement a robust construction trades program.
Boyer Valley Community School District Awarded in 2022 Contact: RebekahGross at Rebekah.gross@boyervalley.org	The Boyer Valley Community School District will create an elementary maker space that provides for STEM projects and activities that allows students to get hands-on experience in all HD fields, including field trips to major business partners that focus on manufacturing, computer science and health.
CAM Community School District Awarded in 2021 and 2018 Contact: Barry Bower bbower@cam.k12.ia.us	Students explore entrepreneurship by planning and opening a student-run storefront collaboratively with community partners. They sell student-made projects which are created in CTE, industrial arts, plasma cutter and small-business classes.
Clarinda Community School District Awarded in 2019 Contact: Linda Vanden Bosch at Ivandenbosch@clarindacsd.org	The district provides hands-on learning opportunities and experiences focused on mental health and related professions. Students gain a stronger understanding of possible careers that contribute to positive personal mental health strategies and supportive responses to the mental health of others.

Creston Community School District - Elementary School Awarded in 2021 Contact: Callie Anderson at canderson@crestonschools.org	The Creston ECC program connects STEM-focused instruction with thematic activities and curriculum. An Innovation Zone includes retail centers, medical play centers, the problem stop where critical thinking is used and sensory activities including art, music and design.
Creston Community School District - Middle School Award in 2021 Contact: Kimberly Fourez at kfourez@crestonschools.org	STEM learning opportunities for middle school students beginning career exploration. Projects include Future Fest/STEM Fair, Digital Student Portfolio and Lunch and Learn opportunities.
Creston Community School District Awarded in 2023 Contact: Callie Anderson at canderson@crestonschools.org	Secondary students who receive special education services will gain employability skills, have the opportunity to explore future career pathways and receive support to be successful in the workplace. A Job Olympics will be developed where industry leaders are invited to observe the students demonstrating their current level of proficiency towards the identified employability skills.
Coon Rapids-Bayard Community School District Awarded in 2023 Contact: Kelly Sigler at kelly.sigler@crbcrusaders.org Anne Pudenz at anne.pudenz@crbcrusaders.org	A school-based enterprise will be launched where students will design, create and market their products to school, students and the community. Local small businesses will mentor the students and provide classroom speakers, job shadowing and facilities access.
Earlham Community School District Awarded in 2023 and 2021 Contact: Kristin Sheffield at ksheffield@ecsdcards.com	Building a systemic K-12 STEM experience through intentional curriculum redesign. Current opportunities for students include STEM-focused clubs for grades 3-5 during and after school, a K-8 STEM Family Night, a year-long STEM elective for 6th grade students and collaboration with local and national STEM professionals to provide career-connected learning opportunities for students and families.
East Mills Community School District Awarded in 2023 Contact: Katie Lewis at klewis@emschools.org	The district will collaborate with community partners on the planning process to establish a regional career and technical education center and develop a regional Farm to Table program with school gardens, greenhouses and compost programs.
East Union Community School District Awarded in 2023 Contact: Marcus Patten at mpatten@eastunionschools.org	The district will develop a fully equipped, functioning maker space that will include the use of maker projects, coding products and a 3-D printer. This will support upper grade level partners by offering students hands-on work with the equipment at an earlier age.

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Griswold Community School District

Awarded in 2023 and 2019 Contact: Sandy Nelson at snelson@griswoldschools.org Work-based learning opportunities for students to develop future job skills by partnering with businesses on authentic projects. With state-of-the art resources, students gain high demand technical skills, including social media design and management, programming, video production and editing, broadcasting, creation of content for electronic information monitors, advertising and a drone program.

Harlan Community School District

Awarded in 2023

Contact: Steve Sauvain at steve.sauvain@hcsdcyclones.com

STEM teachers will explore successful STEM schools in lowa and collaborate with local community partners to establish a STEM program. The program will provide learning spaces that expose students to careers and help with the transition out of high school.

IKM-Manning Community School District

Awarded in 2016 & 2017 Middle School Contact: Jenny Linde at <u>jlinde@ikm-manning.k12.ia.us</u>

High School Contact: LuAnn Langel at langel@ikm-manning.k12.ia.us

Make it with Spark is our middle school student-run business that operates during our exploratory block. We rotate exploratories every 6 weeks so each 7th & 8th grade student has the opportunity to take Spark each year. Spark specializes in poster printing, lamination, and specialty projects by request. Each Hex group is responsible for completing the class project board & one main holiday-themed project in which they have a pop up sale to sell items they have designed & made. In Spark we: Foster entrepreneurship and teach career ready skills, Provide hands on learning utilizing a teamwork approach, and Identify & practice the key parts of running a small business by learning the important components of a business plan: big idea (product & service), marketing (customers & promotion), finances (prices, expenses, profit).

Lewis Central Community School District

Awarded in 2022 and 2020 Contact: Nathan VanZante at Nathan.vanzante@lewiscentral.org An after-school club where students learn how to recycle/repurpose plastics into other usable products by using their small-scale plastic manufacturing processes.

Orient-Macksburg Community School District

Awarded in 2023 Contact: Connie Terry at connie.terry@o-mschools.org A Geometry in Construction course that meshes required core concepts with authentic construction experience. Community partners will provide projects for students to apply geometry knowledge and practice construction skills for real world projects for the public good.

Riverside Community School District

Awarded in 2021 Contact: Jamie Meek at jmeek@riverside.k12.ia.us Riverside Middle-Senior High School is collaborating with the Riverside Sports Television Network Club (RSTN) to provide students opportunity to develop organization, communication and operational skills through the production of live broadcasts of extracurricular events, concerts, and other community-based events.

Saint Albert Catholic Schools

Awarded in 2019

Contact: Jeremy Hulshizer at hulshizerj@saintalbertschools.org

A mobile STEM Lab where teachers will be able to check out materials to implement the building of robots, coding and computational thinking into their curriculum.

Southwest Valley Middle School of Villisca Awarded in 2017 Contact: Erin Wetzel at ewetzel@southwestvalley.org Stanton Community School District Awarded in 2019	Career Stop will offer a learning space where area businesses can come in to teach students skills they use on the job. Teachers and businesses will work together to create curriculum units that integrate entrepreneur and apprenticeship skills and hands-on learning for students. Students gain work-based learning experiences by working on authentic projects with a business partner. Using state-of-the art equipment and software, students
Contact: Jeff Grebin at jgrebin@stantonschools.com	identify a solution that adds value to the business and.
Tri-Center Community School District Awarded in 2022 Contact: Angela Huseman at ahuseman@tctrojans.org	Tri-Center Community School District will introduce students to career opportunities available in the medical field and provide hands-on experiences for those students who are interested in pursuing a career in the medical field through strong partnerships with local medical agencies.
Woodbine Community School District – IGNITE Pathways Awarded in 2023, 2022, 2021, 2020 Contact: Zach Ridder at zridder@woodbine.k12.ia.us	IGNITE Pathways is designed for students to "learn by doing." IGNITE provides hands-on experiences that will easily transition into post-graduation life and high-demand jobs. Exploration includes instruction modules for an automotive program, applied sciences, health sciences, human services, robotics and automation and exercise science courses. Introductory healthcare courses are also available for 7-12 grade students.
Woodbine Community School District – Elementary Awarded in 2022, 2021 Contact: Tracy Kelley at tkelley@woodbine.k12.ia.us	Interest-based STEM activities available for students in grades K-4. Students participate in two, 45-minute classes on a daily basis with 20 career-oriented options.