



GOVERNOR'S STEM ADVISORY COUNCIL

dedicated to building a strong STEM education foundation for all Iowans

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

(Updated July 2021)

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.

2021

STEM BEST® Program Partners

Ames Community School District in the North Central STEM Region

Science in the City (SitC) is a community event and Ames Middle School (AMS) afterschool program hosted at the Ames Public Library. SitC features three to five-person middle school student teams advised by an Ames High Mentor. The teams partner with a local business to investigate how STEM is an integral part of its trade.

Contact: Anthony Jones at anthony.jones@ames.k12.ia.us

CAM Community School District in the Southwest STEM Region

Explore entrepreneurship by planning and opening a student-run storefront collaboratively with community partners. With the intent to sell student-made projects which are created within several CTE classes at CAM, industrial arts, plasma cutter class, and small-business class.

Contact: Shelly Miller at smiller@cam.k12.ia.us

Cedar Rapids Community School District (Metro H.S.) in the Southeast STEM Region

METRO STEAM academy model consists of design and construction phases of a greenhouse. The greenhouse will serve as a cross-curricular learning space, a farm to table nutrition/health program, an entrepreneurship outlet, and a culinary arts workforce development.

Contact: Chuck Tonelli at mtonelli@crschools.us

Cedar Rapids Community School District (Thomas Jefferson H.S.) in the Southeast STEM Region

Kindergarten through sixth grade model to expand Makerspace program, pairing students with community and business volunteers to address and solve problems using 21st century skills and knowledge.

Contact: Charlie Goetzinger at cgoetzinger@crschools.us

Central Community School District in the Northeast STEM Region

Expanding to include an elementary STEM BEST Program to enhance the skills that future students bring to the secondary Clayton County BEST program. Through the expanded Makerspace program, students will be paired with community and business volunteers to address problems using 21st century skills and knowledge.

Contact: Jarod Bormann at jbormann@central.k12.ia.us

Clinton Community School District in the Southeast STEM Region

Student driven program partnering with Keep Iowa Beautiful and Downtown Clinton Alliance to rebuild mural program as well as provide professional development for staff to be trained in STEM Innovator increasing efforts to build in project-based learning experiences

Contact: Matthew Tobin at matt.tobin@csdkq.org

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Creston Comm School District - Middle School in the Southwest STEM Region

Provide STEM to middle school students where career exploration begins. Proposal cites projects to include Future Fest/STEM Fair, Digital Student Portfolio and Lunch and Learn opportunities.

Contact: Kimberly Fourez at kfourez@crestonschools.org

Creston Comm School District - Elementary School in the Southwest STEM Region

The Creston ECC program will connect STEM-focused instruction with thematic activities and curriculum. An Innovation Zone will include retail centers, medical play centers, the problem stop where critical thinking will be used, and sensory activities including art, music and design.

Contact: Kimberly Fourez at kfourez@crestonschools.org

Bosco Catholic School System in the Northeast STEM Region

Program for all 11th and 12th-grade students to participate in a minimum of one semester of work-based learning experience. Students will explore different career paths, network with businesses, and translate what they have learned in the classroom to real-life applications.

Contact: Casey Redmond at credmond@boscocatholic.org

Earlham Community School District in the Southwest STEM Region

Build and align a systemic K-12 STEM experience by affording educational leaders in district resources and time to accomplish curriculum redesign and professional development. Initial opportunities for students include STEM-focused clubs for grades 3-5 during and after school, a walking field trips to understand their STEM connection, and a K-8 STEM Family Night.

Contact: Kristin Sheffield at ksheffield@ecsdcards.com

Eastern Allamakee Community School District in the Northeast STEM Region

The community partnership program at Eastern Allamakee Community Schools (EACS) will strive to connect local business and industry partners with students in grades 9-12 of all ability levels and academic status. Goals of the program initially are focused on building a program to encourage students to use passion driven projects, both student created and business/industry driven.

Contact: Sarah Updegraff at supdegraff@kee.k12.ia.us

Howard-Winneshiek Community School District in the Northeast STEM Region

The "Cadet Zone" project will enhance job readiness skills for students by partnering with area businesses to promote creativity and 21st century skills. "Cadet Zone Cafe", "Cadet Zone Merchandise Store", and "Cadet Zone Media Productions" are the three branches that will offer students opportunities to work alongside businesses, obtaining a unique set of skills for the work force.

Contact: Alicia Denner at adenner@howard-winn.k12.ia.us

Keokuk Community School District in the Southeast STEM Region

Keokuk and Fort Madison high schools would like to partner with business and industry in addition to the economic development groups to create a regional career exploration center. The goal for creating this center is to provide Lee County students expanded opportunities in different career strands to build on the CTE courses currently offered at the high schools.

Contact: Doreen Underwood doreen.underwood@keokukschools.org

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Linn-Mar Community School District in the Southeast STEM Region

Venture Academics will focus on extending learning to real world applications, problems, and solutions. Areas of study include Graphic Arts, Life Science, Business Foundations, Advanced Business, Behavioral Science, Writing, Health Science, Earth Science, Environmental Science, and Government and Law.

Contact: Mark Hutcheson at mhutcheson@linnmar.k12.ia.us

MFL MarMac Community School District in the Northeast STEM Region

Community projects provide authentic problems for students to solve. Businesses present projects to students that will impact their business and provide real world experience for students. Also a means for students to initiate authentic problems for which they feel a passion and then seek partners to carry out their vision.

Contact: Melissa Haberichter at melissa.haberichter@mflmm.k12.ia.us

MOC-Floyd Valley Community School District in the Northwest STEM Region

Developing trifold program offering Advanced Manufacturing Connection Program, launch a Business & Entrepreneurship Pathway as well as a Registered Apprenticeship Program in welding.

Contact: Michael Mulder at mmulder@mocfv.org

North Tama County Community School District in the Northeast STEM Region

An integrative STEM and literacy environment for K-2 classrooms through engaging local partners in STEM learning, equipping innovative classrooms, professional learning for faculty to be leaders in integrative STEM and literacy.

Contact: Susan Johnson at susan.johnson@ntredhawks.org

Pella Community School District in the South Central STEM Region

Known as WorkSMART Connector, the model will guide students from career awareness through career experiences from 2nd through 12th grade, and into local careers. Modules will be developed around information technology, hospitality, patient care and early childhood education (identified as in-demand careers in Marion County).

Contact: Lowell Ernst at lowell.ernst@pellaschools.org

Riverside Community School District in the Southwest STEM Region

The Riverside Sports Television Network Club (RSTN) with members from Riverside Middle-Senior High School, is working toward the development of organizational, communicational, and operational skills, live broadcasts of extracurricular events, concerts, and other community-based events are produced.

Contact: Jamie Meek at jmeek@riverside.k12.ia.us

Sioux Center Community School District in the Northwest STEM Region

Career Explorations class for ninth and tenth grade students bringing local businesses and industries into school to teach students about their business and the various career opportunities that are available. Also funds will be used is to offer junior and senior students describe what the students would do

Contact: Jill Harskamp at jill.harskamp@scwarriors.org

Wapsie Valley Community School District in the Northeast STEM Region

Wapsie Valley School District model to take students out of the traditional classroom setting and immerse them in a business environment and encourage innovation while developing professional skills, problem solving and expanded career exploration opportunities.

Contact: TJ Murphy at tmurphy@wapsievalleyschools.org

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Woodbine Community School District in the Southwest STEM Region

Establish a three-prong blueprint where students will be engaged in learning trade skills, developing a business plan, and participating in character education centered on leadership skills. 9th and 10th grade students will take part in the Occupational Exploration Program Field Trips where they visit community colleges and businesses that focus on the trades industry.

Contact: Tracy Kelley at tkelley@woodbine.k12.ia.us

2020

STEM BEST® Program Partners

Ames Community School District in the North Central STEM Region

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.

Contact: Anthony Jones at anthony.jones@ames.k12.ia.us

Cedar Falls Community School District in the Northeast STEM Region

Cedar Falls Community School District will expand the Cedar Falls STEM BEST model ("CAPS") to add Certified Nursing Assistant (CNA) strand and Industries strand. New strands represent community demand for talent pipeline into critical industries.

Contact: Ethan Wiechman at Ethan.Wiechmann@cfschools.org

Cedar Valley Catholic Schools in the Northeast STEM Region

Cedar Valley Catholic will create project-based and work-based learning experiences for students in alliance with Cedar Falls "CAPS" that align with Iowa Core Curricular Standards and college and career readiness standards.

Contact: Tom Novotney at tnovotney@cvcatholic.org

Clear Lake Community School District in the North Central STEM Region

Clear Lake Community School District will expand curriculum and projects for elementary through secondary students in partnership with local businesses and an advisory board of employers to prepare students for high-demand careers in the community.

Contact: Emily Hill at ehill@clearlakeschools.org

Emmetsburg Community School District in the Northwest STEM Region

Emmetsburg Community School District is planning to expand student career exploration opportunities in partnership with employers in the Emmetsburg region.

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

Lewis Central Community School District in the Southwest STEM Region

Lewis Central Community School District will focus on recycling/re-purposing plastics into other usable products by using their small-scale plastic manufacturing processes and create a Plastic Manufacturing business using the model of Rocket Manufacturing.

Contact: Nathan VanZante at Nathan.vanzante@lewiscentral.org

Marshalltown Community School District in the North Central STEM Region

Marshalltown Community School District is planning to expand their Career Pathways and Career Trees for additional STEM-focused future ready opportunities for Marshalltown students grades 8-12 conducting authentic experiences in video broadcasting alongside partners.

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Contact: Pam Brewer-Michael at pbrewer@marshalltown.k12.ia.us

MOC-Floyd Valley Community School District in the Northwest STEM Region

MOC-Floyd Valley plans to design and development of a multi tier work-based learning program for manufacturing and entrepreneurship extended career experiences through project-based learning and on-site workplace experience alongside tradesmen.

Contact: Michael Mulder at mmulder@mocfv.org

Muscatine Community School District in the Southeast STEM Region

Muscatine Community School District will offer progressive work-based learning experiences from 8th to 11th grade with increasing career and college exposures for Muscatine middle and high school students.

Contact: Karey Hawkins at karey.hawkins@mcsdonline.org

North Fayette Valley Community School District in the Northeast STEM Region

North Fayette Valley Community School District plans to offer grades 10-12 authentic learning opportunities connected to community workplace experiences focused on community needs and career and college readiness. Students will investigate community needs and partner with community entities to tackle real-life issues.

Contact: Rachael Strong at rstrong@nfv.k12.ia.us

Pella Community School District in the South Central STEM Region

Pella Community School District plans to expand the PEERS (Partnership for Excellent Educational Resources for STEM) model to create a continuum of business and student engagement in-demand careers in Iowa. This innovative continuum of learning will guide students from career exposure through career experiences from 2nd through 12th grade.

Contact: Lowell Ernst at Lowell.ernst@pellaschools.org or Teri Vos at vost@central.edu

Woodbine Community School District in the Southwest STEM Region

Woodbine Community School District will create specialty instruction modules in Woodbine's new STEM workshop and classrooms within a new Community Wellness Center which support and expand the Construction Trades Program.

Contact: Eric Moores at emoores@woodbine.k12.ia.us

2019

STEM BEST® Program Partners

BCLUW Community School District in the North Central STEM Region

BCLUW Community School District is planning to provide service-learning through hands-on academic projects throughout the community as a way to prepare 11 and 12 grade students for future careers. Students will identify and creatively solve a problem that has value beyond themselves. They will reach beyond the regular classroom experience through building community, business and higher education partnerships to assist the transition from school to careers.

Contact: Roberta Vanderah at rvanderah@bcluw.org

Bondurant-Farrar Community School District in the South Central STEM Region

Bondurant-Farrar Community School District will provide students with work-based learning experiences by partnering with local businesses. Students will share projects with business representatives, participate in mock interviews, learn about local career fields and receive mentoring for specific extra curricular groups.

Contact: Donovan Hill at hilld@bfschools.org

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Cedar Rapids Community School District in the Southeast STEM Region

Cedar Rapids Community School District plans to start a Computer Integrated Manufacturing course and bolster the Advanced Manufacturing/Entrepreneurship course through industry recommended equipment purchases, student certifications and curriculum alignment with the needs of local industry.

Contact: Joshua Eaton at jeaton@crschools.us

Clarinda Community School District in the Southwest STEM Region

Clarinda Community School District will provide hands-on learning opportunities and experiences focused on mental health and related professions. This will afford all students a stronger understanding of possible careers that contribute to positive personal mental health strategies and supportive responses to the mental health of others.

Contact: Chris Bergman at cbergman@clarindacsd.org

Clear Lake Community School District in the North Central STEM Region

Clear Lake Community School District will expand work-based learning opportunities and expose students to STEM careers with local employers by bringing in business partners to interact with elementary students and offering students internships and apprenticeships with business partners for secondary students.

Contact: Emily Hill at ehill@clearlakeschools.org

Griswold Community School District in the Southwest STEM Region

Griswold Community School District will provide students with work based learning opportunities, develop future job skills and further prepare students for college by partnering with real world businesses on authentic projects. As students collaborate with business partners to solve real world problems, they will practice both soft skills and technical skills. By giving them state-of-the art resources, students will gain experience with a variety of technical skills in demand by many businesses, including social media design and management, programming, video production and editing, broadcasting, creation of content for electronic information monitors and development of advertising.

Contact: Katie Elwood at kelwood@griswoldschools.org

Jesup Community School District in the Northeast STEM Region

Jesup Community School District will expand work-based learning through partnership and collaboration with Cedar Falls' STEM BEST Program (called CAPS). Students will be provided opportunities for their knowledge and skills to intersect in real-world learning opportunities. They will be 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.

Contact: Paul Rea at prea@jesup.k12.ia.us

MMCRU Community School District in the Northwest STEM Region

In partnership with local business, MMCRU Community School District will be purchasing commercial grade manufacturing equipment such as CNC machining, advanced millwork processing technologies and welding robotic cells to provide industry grade materials and projects to 9-12 grade students. The goal is to prepare students for local careers with the tools, equipment and technology they will see in the hands of local tradesmen in an effort to prepare them for post-secondary training and open doors for incredible careers right after high school.

Contact: Matthew Hansen at matt.hansen@mmcruroyals.org

New Hampton Community School District in the Northeast STEM Region

New Hampton Community School District plans to provide 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.

Contact: Jim Russ at j_russ@new-hampton.k12.ia.us



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Saint Albert Catholic Schools in the Southwest STEM Region

The primary goal of the Saint Albert STEM BEST Program is to have every student graduate with the ability to code and use computational thinking to design computer programs. This project will create a mobile STEM Lab that teachers will be able to check out to implement the building of robots, coding and computational thinking into their curriculum and well as create a school media club.

Contact: Devin Yeoman at yeomand@saintalbertschools.org

Stanton Community School District in the Southwest STEM Region

Stanton Community School District will prepare students for work-based learning experiences by allowing them the opportunity to work through an authentic project with a business partner and create a solution that is relevant and adds value for the business. The students and teacher facilitators will have the opportunity and resources to work with business professionals, and state-of-the-art equipment and software that will engage the learner and open up a world of opportunity to these students.

Contact: Jeff Grebin at jgrebin@stantonschools.com

Waterloo Community School District in the Northeast STEM Region

Waterloo Community School District's goal is to support the development of a Biomedical Lab Technician program as a part of the Health Sciences pathways in their career center. The partnership will promote real life health career experiences utilizing skills learned through classroom instruction to navigate real life scenarios in health professions.

Contact: Jeff Frost at frostj@waterlooschools.org

West Des Moines Community School District in the South Central STEM Region

West Des Moines Community School District plans to increase the skills required for students to fill the local, well paying jobs in advanced manufacturing. Expansion of their manufacturing lab will provide opportunities for students to build industry-specific skills and the purchase of a Haas Mini Mill-EDU will expand the skill capacity of students in the areas of building mechanical systems and machining.

Contact: Jim Martin at martinja@wdmcs.org

2018

STEM BEST® Program Partners

Allamakee Community School District in the Northeast STEM Region: Waukon High School (WHS) will be implementing an Allamakee Regional Welding Academy to serve the Allamakee County and surrounding area beginning fall 2019. This will be a partnership with Northeast Iowa Community College (NICC), WHS and Allamakee County Economic Development (ACED) with a goal of creating a pipeline of talent to fill current and future welding vacancies within the region.

Contact: Caleb Ferring at cferring@allamakee.k12.ia.us

Belle Plaine Community School District in the Southeast STEM Region: The Belle Plaine Community School District will utilize a comprehensive (non-profit) manufacturing/production or "makerspace" facility within their new STEM Lab where all students will have the opportunity to create tangible projects and artifacts via the technology. The formation of "BP - R.O.C.K.S." (Recognizing Opportunity from Commercial Knowledge and Skills) program will provide an enhanced and more in-depth after-school activity focused primarily upon district and local business and industry needs within the regional community. There will be direct contact, training and education with local businesses, community partners and supporting post-secondary institutions.

Contact: Frank Jowitt at fjowitt@belle-plaine.k12.ia.us

CAM Community School District in the Southwest STEM Region: The "curriculum" will include learning experiences based on 21st Century skills and mastery of Core Standards. Teachers will guide project completion, provide meaningful

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feedback and help students use their strengths to find success. Students will have several worked-based courses for students to choose from, both in core areas and in CTE pathways. There will be an emphasis in teaching and practicing some of the “soft skills” that employers so often say that students are lacking.

Contact: Shelly Miller at smiller@cam.k12.ia.us

Cedar Falls Community School District in the Northeast STEM Region: The key strategy for the Cedar Falls CAPS Program is to take students out of the traditional classroom setting and provide real world work experiences. Students select a strand related to a career field they are interested in and are then immersed in a professional setting. They meet at a location off regular school grounds and work on projects connected to their field of interest. Students are provided training in professional skills to help them acclimate to the world of work. As needed, students are connected with mentors from local businesses who provide training in skills needed to complete the projects.

Contact: Kenton Swartley at Kenton.swartley@cfschools.org

Central Community School District in the Northeast STEM Region: 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.

Contact: Ann Gritzner at agritzner@central.k12.ia.us

Des Moines Independent Community School District in the South Central STEM Region: The goal of the program is to develop a strategic approach to increasing the number of underrepresented minorities in the neurosciences by providing research and internship opportunities and improving college and career readiness of students. Through a partnership with Des Moines University (DMU) and Kemin Industries, students will collaboratively build a business model aimed at enhancing anatomy instruction through the development and sale of 3D printed models of the mammalian brain.

Contact: Kacia Cain at kacia.cain@dmschools.org

Keokuk Community School District in the Southeast STEM Region: The Keokuk Community School District will create an active learning center to include learning hubs, flexible seating and technology. This will provide a sophisticated space for students to interact with professionals to develop soft skills, job awareness and community partnerships.

Contact: Heidi Harness at Heidi.harness@keokukschools.org

No Boundaries and Iowa Middles in the Northwest STEM Region: A consortium of schools, including the Okoboji, Graettinger-Terril, and Ruthven-Ayrshire Community School Districts, are embarking on a shared program called the No Boundaries Project. In addition, a middle school pilot of the No Boundaries Project, called Iowa Middles, will start in January with 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.

Contact: Ryan Cunningham at rcunningham@okobojischools.org

Ottumwa Community School District in the South Central STEM Region: Ottumwa Community School District will expand their SparkTank program, which provides an off-campus, hands-on learning to link instruction with authentic work experiences through partnerships with local employers. The district will add two additional strands, STEM summer camp experiences for middle and high school students and professional development for teachers to incorporate more career exploration opportunities.

Contact: Kim Hellige at kim.hellige@ottumwaschools.com

Sioux City Community School District in the Northwest STEM Region: Sioux City Community School District will expand the GeoPhysics (Geometry + Physics) STEM curriculum implemented during the 2017-2018 school year to establish authentic partnerships with three new business partners. Community partnerships will integrate real-world questions for

students to practice problem-solving utilizing 21st century skills of collaboration, creativity, communication and critical thinking.

Contact: Shelly Nash at nashs@live.siouxcityschools.com

St. Mary School (Humboldt) in the North Central STEM Region: This project's aim is to 1) prepare students in grades 1-6 with the foundational interests, skills, and competencies for matriculation to middle school STEM coursework; 2) develop a STEM Learning Intermediary Network that will facilitate students and teachers networking with local industrial scientists skilled technicians in various learning environments; and, 3) coordinate technician-in-residency opportunities for educators to learn about local STEM careers and jobs to better guide students in their STEM studies.

Contact: Diane Dix at ddix@stmaryhumboldt.org

St. Theresa School (Des Moines) in the South Central STEM Region: Students will be paired with businesses to bring the real world of STEM into students' hands. By partnering with local businesses, students will learn from industry professionals, implement that learning in projects and present that learning in meaningful and professional ways to our partners. With the help of business partners, students will have the experience and confidence to explore STEM courses in high school and eventually become STEM professionals.

Contact: Ronda McCarthy at rmccarthy@sainttheresaiowa.org

Woodbine Community School District in the Southwest STEM Region: Woodbine Community School District will expand upon their current award-winning Construction Trades Program to create MakerSpace learning links for grades 3-8, create a robust series of business engagement experiences and launch a digital activities calendar to keep businesses and the local community connected.

Contact: Shawna Harris at sharris@woodbine.k12.ia.us

2017

STEM BEST® Program Partners

Albia Community Schools: The Albia Community Schools will commence a collaborative learning model between business, community and education in the fall of 2018. This model will bring relevant, rigorous and authentic learning experiences to life for students while working with business partners and Indian Hills Community College. Students will be immersed in community projects with a STEM focus that will solve real problems in the Albia area, thus improving the living and working conditions for our citizens.

Contact: Kevin Crall, Albia Community School District Superintendent, at kevin.crall@albia.k12.ia.us

Alburnett Schools: The Alburnett Community School District developed and implemented a program called the Pirate Collaborative in 2016-2017 to bridge the needs and issues of businesses with increased applicability and relevance in learning for students. The Pirate Collaborative aims to aid students in the work they do for businesses in their school projects, and these businesses provide career awareness, preparation and exploration to their students.

Contact: Brian Moretz, Principal, at bmoretz@alburnettcsd.org

Ankeny Schools: Ankeny created a college and career readiness program called Orbis that exemplifies the STEM BEST model, with a need for a full-time Director of College and Career Readiness to implement this program. The district also needs to begin pilot projects for Orbis which include meeting with local businesses, nonprofit organizations and students to engage in collaborative project planning and design, along with a collaboration space for all of this to occur.

Contact: Dr. Jill Urich, Director of College and Career Readiness, at jill.urich@ankenyschools.org

Atlantic Community Schools: Atlantic Community Schools' STEM BEST® model is 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. The Atlantic School Board purchased a facility to accommodate the program allowing room to develop more in years to come. Incorporating a comprehensive exploratory program at the middle school is another part of this project. The curriculum will include hands-on modeling and construction applications and 21st Century Skills, which will focus on employability skills, technology and financial literacy.

Contact: Heather McKay at hmckay@atlanticschools.org

Cedar Falls Community Schools: Cedar Falls is further developing a CAPS program in Engineering Technology, Communication and Design and Education. The community partnerships will involve students working on projects that fulfill needs for businesses, job shadowing opportunities, access to resources and equipment for students and fresh, creative minds for businesses.

Contact: Kenton Swartley at Kenton.swartley@cfschools.org

Chariton Community Schools: Chariton Community Schools in partnership with the Lucas County Development Corporation will implement the REAL (Relevant – Engaged – Applied – Learning) program in the 2018-2019 school year. The program will engage high school students in on-site, work-based, career-specific projects providing experience in STEM careers. Students will be exposed to high-demand fields such as design/engineering, diesel mechanics, IT, nursing, coding, finance and supply chain. Initially, nine businesses, including Hy-Vee, Johnson's Machine Works and the Lucas County Health Center, have partnered to provide career awareness, exploration and preparation & training opportunities for students through tours, speakers, career course development committees and hosting students in the workplace.

Contact: Tracy Hall, Chariton High School Principal, at tracy.hall@chariton.k12.ia.us

Davenport West High School: Davenport West High School purchased a Haas CNC Mill under the STEM BEST® Program in 2015 and is expanding its Advanced Manufacturing program with the purchase of a Haas CNC lathe. Working with business partnerships and focusing on Advanced Manufacturing, Davenport West HS plans to revitalize manufacturing in the Quad Cities by creating a high tech area of students learning CNC programming and operating. Davenport West HS will work to expand student internships with M.A. Ford for students wanting to pursue careers as engineering technologists and engineers.

Contact: Greg Smith at smithgr@davenportschools.org

Des Moines Hoover High School: Hoover's STEM Academy implemented in 2012 is a school-within-a-school model that focuses on providing robust experiences for all students who connect the Hoover learning community with businesses and institutes of high education in authentic, collaborative and challenging ways. This award expands upon a previous STEM BEST® award and focuses on two goals: (1) providing students with opportunities to conduct research at a university or internship with local businesses and (2) providing teachers with ongoing, in-depth professional development.

Contact: Maureen Griffin, STEM Administrator, at Maureen.griffin@dmschools.org

Kathie Danielson, Hoover High School Interim Principal, at Kathie.danielson@dmschools.org

IKM-Manning Community School District: IKM-Manning wants to develop their Middle School SPARK program and repurpose a classroom into a Makerspace environment. This would help engage more students in project-based learning and with community business partners. The IKM-Manning Foundation GALA brings together many invested partners and has shown to be a sustainable source of funding in years past.

Contact: Luann Langel at llangel@ikm-manning.k12.ia.us

Iowa BIG North: This is the second full year of operations for the Iowa BIG North consortium, which has been a catalyst for strengthening their business and school district partnerships. The expansion of Iowa BIG North includes the addition of Turkey Valley and Riceville community school districts. Within these districts, many local businesses have plans for incorporating student learning and relevance to their programs.

Contact: Mike Kuennen at m_kuennen@new-hampton.k12.ia.us
Donna Forsyth at dforsyt@charles-city.k12.ia.us

Iowa City Community School Schools: Iowa City community school district wants to scale all of their current STEM-driven programs to provide the experience to all students that connects each individual program. Many businesses have been involved with the individual programs for years and continue to support the school district.

Contact: Matt Degner, Assistant Superintendent, at degner.matt@iowacityschools.org

Marshalltown Learning Academy: The Marshalltown Learning Academy was created to provide a personalized learning environment for students several years ago. Due to great success, they want to scale up the program and include apprenticeship programs with area businesses that are often already in partnership with the school district.

Contact: Eric Goslinga at egoslinga@marshalltown.k12.ia.us

Muscatine Community Schools with West Liberty Elementary and Muscatine Community College: STEAM into MCC was a recipient of a 2017 Iowa STEM Best grant. In the spring of 2017, all six elementary schools in the Muscatine Community School District (MCSD) and teachers from MCSD and Muscatine Community College (MCC) partnered to offer a unique after-school program for 4th and 5th graders. 28 kids participated in the inaugural program: 15 girls, 13 boys and 16 minorities. While much was accomplished the first year, work remains to meet all of the outcomes. In 2018, double the number of students will be served and the model will expand into a new elementary school with 54% Latino students.

Contact: Jerald Riibe, Superintendent, at jerry.riibe@muscatine.k12.ia.us

Newton High School: Newton High School's program is called Fledge Innovator, a partnership between the high school, businesses and the community. Area business partners will provide authentic projects for students to work collaboratively on their assigned projects 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. The class will be open for juniors and seniors and will meet for 1.5 hours for nine weeks.

Contact: Bill Peters, High School Principal, at petersb@newtoncsd.org

North Iowa Community School District: Partnering with a primary local partner, NGT (Next Generation Technology), North Iowa CSD plans to develop Next Generation Kits (NGK's), providing hands-on student-led learning opportunities that engage students while aligning to NGSS and other CORE standards, to be used in their Solution Center. NGK's will foster creativity, innovation and problem solving skills. Initial kit topics will include build a PC, Drones, Networking, Web Development, Robot Vacuums, Smart Homes, Security Cameras, 3D Printing, Astronomy and App Design.

Contact: Joe Erickson, Superintendent, at erickson@northiowa.org

Oelwein Community Schools: PROJECT ONE was created by the Oelwein Community School District in conjunction with the Oelwein Economic and Area Development to create opportunities for students to flourish in robust Project and Work Based Learning Environments. With support of 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. Pedagogical professional learning will be provided to teachers as Oelwein prepares for this Project and Work Based approach to education. Oelwein Community School District believes EveryONE will have an opportunity to engage in: PROJECT ONE: ONE PROJECT, ONE BUSINESS, ONE STUDENT AT A TIME.

Contact: Deb Kaepfel at dkaepfel@oelwein.k12.ia.us

Southwest Valley Middle School of Villisca: Before the station closed, Villisca's local train station used to be a collaboration space for all community members. With the STEM BEST Grant, Villisca will regain that intellectual common place and it will be known as the Career Stop. Collaboration between community members and students will problem-solve real world situations. 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.

Contact: Lora Top at ltop@villiscaschools.org

Spirit Lake Middle School: The goal at Spirit Lake Middle School is to create a multipurpose educational makerspace that connects school with community. The makerspace concept provides hands-on, creative ways that allow students to innovate while engaging them in deep learning in all academic disciplines. Connecting with local businesses and nonprofits to raise STEM career awareness and job skills are also a priority. The end goal is to establish a public asset Makerspace that will deliver STEM opportunities not only to Spirit Lake students but also to the community.

Contact: Rick Reinking, Director of Strategic Partners and K-12 STEM, at rreinking@spirit-lake.k12.ia.us

West Liberty Community Schools: The goal of the project is to bring an innovative technology experience involving virtual reality to the students. Shaking Earth Digital, LLC (SED) will design a program for students to create their own virtual reality (VR) game or experience. Students will create a project in an after school program. "I'm beyond excited. We have a unique opportunity to not just expose students to future technology, but to shape future itself," said Jens Zalzala, owner of Shaking Earth Digital. "We wanted students to be creators behind VR. We are thrilled to bring this experience to our students and grateful for partnering with Shaking Earth Digital!" said Jackie Henderson, West Liberty Community Schools teacher.

Contact: Jackie Henderson at jhenderson@wl.k12.ia.us

2016

Assumption High School in Davenport: 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.

Contact: Andrew Craig, President, at andy.craig@assumptionhigh.org

Boone EDGE: Boone EDGE is implementing a grades 3-12, work-based learning continuum of awareness (early years), exploration (middle years) and training (high school) in partnership with a variety of employers and higher education institutions. *Boone EDGE is one of four schools piloting a Quality Pre-Apprenticeship, building on grades 10-12 work-based learning experiences. They offer semester-length, project-based opportunities through the School Career Connections and vocational rehabilitation programs initially in plumbing and electrical fields in partnership with Kruck Plumbing & Heating Co. (a Registered Apprenticeship Program) and ABC of Iowa Apprenticeship & Training Trust. A goal is to expand these options with the growth of community apprenticeship partners over time.*

Contact: Kris Byam, Boone High School Principal, at kbyam@boone.k12.ia.us

Fort Madison Community High School: Students experience co-taught STEM courses of educators alongside industry partners in innovative learning spaces that introduce them to careers in their community, leading to job shadows and internships.

Contact: Greg Smith, Principal, at greg.smith@fmcsd.org

IKM-Manning Community School District: A learning environment focused on two important employability skills – communication and problem solving – where students, teachers and community leaders come together to brainstorm business project ideas and pursue them on teams.

Contact: Luann Langel at llangel@ikm-manning.k12.ia.us

Muscatine Community School District (STEAM Into MCC): Fourth and fifth grade students in all of Muscatine's elementary schools take part in a five-month-long, afterschool program of hands-on projects led by community experts, held at MCC. *Muscatine CSD with MCC is one of four schools piloting a Quality Pre-Apprenticeship. Their program in the Manufacturing and Culinary Arts Academies is in partnership with MCC and aligned to the Iowa Core, leading to certificates in electronics and up to 38 credits toward an Engineering Technology Electromechanical Diploma (manufacturing pathway); or certificates in culinary arts and up to 32 credits toward a Culinary Arts Diploma. Partners are Chef Brad Scott for the culinary pathway, and companies HNI and Allsteel for the manufacturing pathway. All three are engaged in Registered Apprenticeship Programs.*

Contact: Dr. Jerald Riibe, Superintendent, at jerry.riibe@muscatine.k12.ia.us

North Cedar Elementary School in Cedar Falls: 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.

Contact: Katie Johnston, Principal, at katherine.johnston@cfschools.org

Spencer High School: Students travel to workplace sites for training and experiences that align with the community's industry demand in construction, health care, manufacturing and entrepreneurship. *Spencer High School is one of four schools piloting a Quality Pre-Apprenticeship. Their program expands on the Construction Extended Career Experiences whereby students are at the job site receiving on-the-job training for an average of 12.5 hours a week. They also achieve their 10-hour OSHA certification in concert with the Quality Pre-Apprenticeship. Established Registered Apprenticeship Program partners include Milford Electric and Midwestern Mechanical.*

Contact: Elli Wiemers, Principal, at ewiemers@spencerschools.org

Story County Consortium: Eight school districts in the consortium, including Ames, Boone, Ballard, Collins-Maxwell, Colo-NESCO, Gilbert, Nevada and Roland Story, join forces to create a shared STEM BEST model that provides students with work-based learning opportunities with businesses in their communities.

Contact: John Kinley, Director, at jfkinley@dmacc.edu

Waukee APEX: Through a collaboration between education, business and the community, 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 real-world experience to high-schoolers. Through passion-based learning, authentic projects and experiences, students add value to business partners while exploring career possibilities identified by economic trends within their metro area and state. *Waukee APEX is one of four schools piloting Quality Pre-Apprenticeships. Their program guides high school seniors in learning past the initial APEX course in the manufacturing, construction and technology fields. Students will gain valuable experience, earn credentials and college credits and connect to business partners in the community.*

Contact: Michelle Hill, Director, at mhill@waukeeschools.org

West Delaware County Community School District: Students work directly with business leaders in the community to design and implement authentic projects for that business that also satisfy and align with state standards and teach students the professional skills necessary in the industry.

Contact: Tim Felderman, West Delaware High School Principal, at timfelderman@w-delaware.k12.ia.us

2015

STEM BEST® Program Partners

Davenport Community School District, Davenport: Davenport Community School District's "INSPIRE" program partners with local businesses MA Ford, Alcoa, Phoenix Closures and more, to immerse high school students in the business environment and explore manufacturing curriculum and pathways in their community.

Contact: Jennifer Boyd at boydje@davenportschools.org;

Hoover High School, Des Moines: Hoover High School's STEM BEST program pairs students with higher education partners Grand View University, ISU's Center for Biorenewables in Chemistry (CBiRC) and local businesses Accumold, DuPont Pioneer, EFCO, Storey Kenworthy and United Way of Central Iowa, to provide students with opportunities to conduct research at a university or a business.

Contact: Eric Hall, School Improvement Leader, at eric.hall@dmschools.org

Iowa BIG North: A four-district consortium of Charles City, New Hampton, Osage and Rudd-Rockford-Marble Rock opted to brand as Iowa BIG North. Partners include Zoetis, Cambrex Corporation, Valent BioSciences Corporation and more, to immerse high school students in a half-day professional-based learning model.

Contact: Mike Kuennen at m_kuennen@new-hampton.k12.ia.us
Donna Forsyth at dforsyt@charles-city.k12.ia.us

2014

STEM BEST® Program Partners

Bettendorf/Pleasant Valley: Bettendorf and Pleasant Valley School districts are developing an internship Academy structure with local business on authentic computer science problems and solutions.

Contact: Tammy Chelf at tchelf@bettendorf.k12.ia.us

Iowa BIG (Cedar Rapids/College Community): Iowa BIG is an option for earning core academic credit through project-based learning in real-time with 100+ partners from business, nonprofit and government agencies.

Contact: Shawn Cornally at headmasteriowabig@gmail.com

Northeast Community School District in Goose Lake: The Northeast STEM program provides students with an innovative, problem solving and discovery-based environment created in partnership with Lyondell Bassell that focuses on authentic, real-world problems through the infusion of technology and curriculum.

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

Rocket Manufacturing (Rock Valley): Rocket Manufacturing is a fully-functioning, student-run manufacturer that works with local businesses by crafting metal machined parts and tools that businesses or individuals request. Students do the marketing, accounting, design, production and customer communications as well.

Contact: Chad Janzen at cjanzen@rvcsd.org

STEM Innovator (Kirkwood CC/Univ. of Iowa/Clear Creek Amana/Iowa City/Regina/Solon/Tipton/West Branch/College Community): STEM Innovator course offered at the Kirkwood Regional Center at the University of Iowa research park is open to students from seven partner school districts to engage with STEM industry partners to develop solutions to problems of student and community interest. Students earn high school, Kirkwood Community College and University of Iowa credit.

Contact: Leslie Flynn at leslie-flynn@uiowa.edu