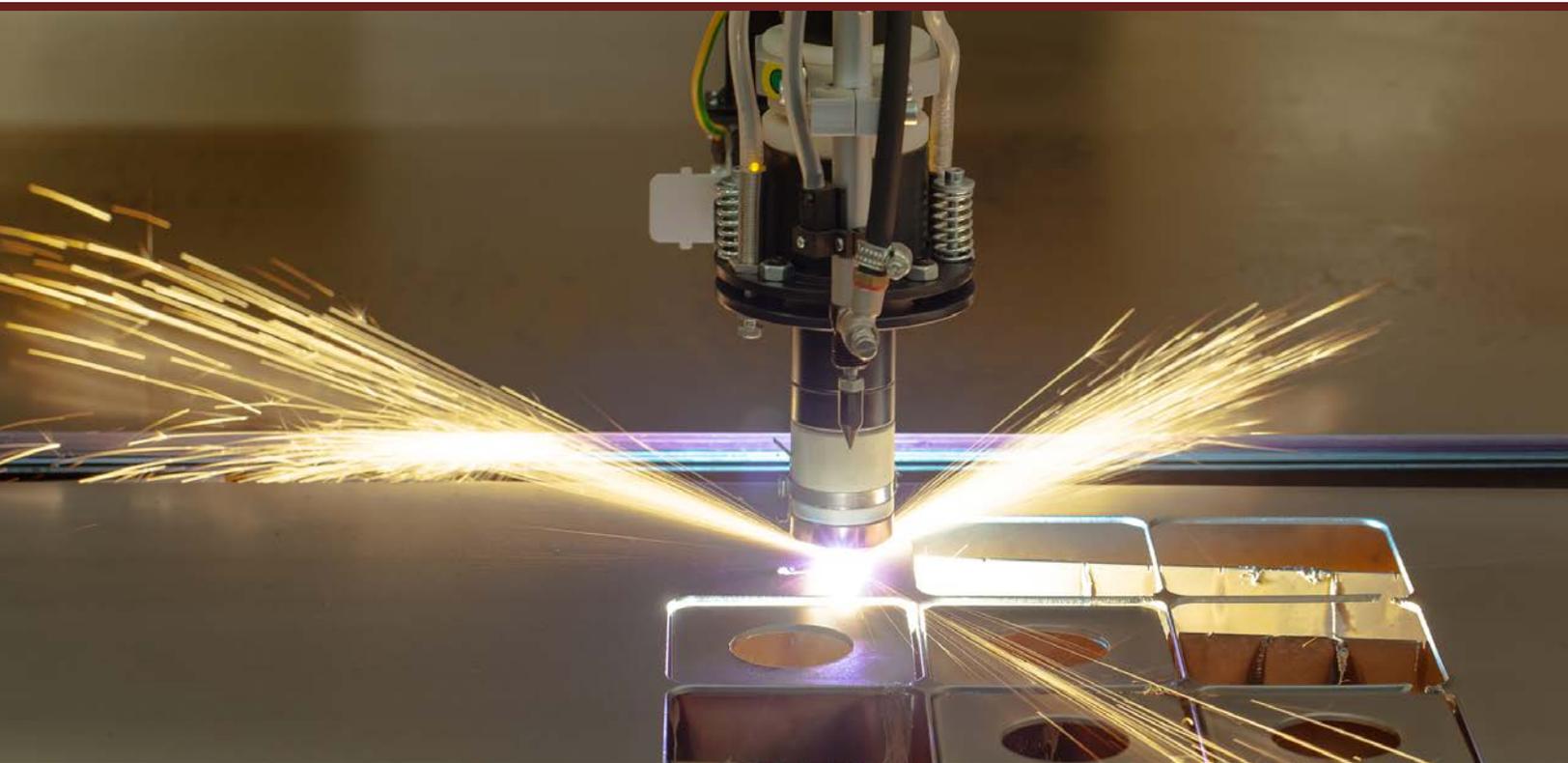


IOWA ADVANCED MANUFACTURING WORK-BASED LEARNING TOOLKIT

Employer and Educator Resource Guide



Iowa Advanced Manufacturing Work-Based Learning Toolkit

An employer and educator resource guide for establishing high-quality advanced manufacturing work-based learning opportunities for high school students

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**COMMUNITY COLLEGES &
WORKFORCE PREPARATION**
PROSPERITY THROUGH EDUCATION

With support from the following organizations:



Download this toolkit and additional resources at WorkBasedLearning.EducateIowa.gov and SectorPartnerships.EducateIowa.gov

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Introduction: A Growing Need

Project Overview

In February 2018, the Iowa Department of Education (Department) partnered with the Iowa Association of Business and Industry (ABI), Elevate Advanced Manufacturing, and various manufacturers, educators, and community partners to build the engaging and informative [Opportunities in Advanced Manufacturing](#) career pathways that highlight the wide range of high-paying, in-demand careers in Iowa's growing and innovative advanced manufacturing industry. Raising awareness of high-demand jobs is in line with the [Future Ready Iowa](#) initiative, which is about growing a skilled workforce statewide by connecting Iowans to the education and training needed for rewarding careers.

Work on the statewide project identified the need to increase the number of high-quality, work-based learning opportunities for high school students who may be interested in pursuing a career in advanced manufacturing. While some communities have the resources and relationships already developed to do so, many do not. Without additional efforts to promote hands-on learning opportunities, many students will be less likely to take the necessary steps towards pursuing these careers.

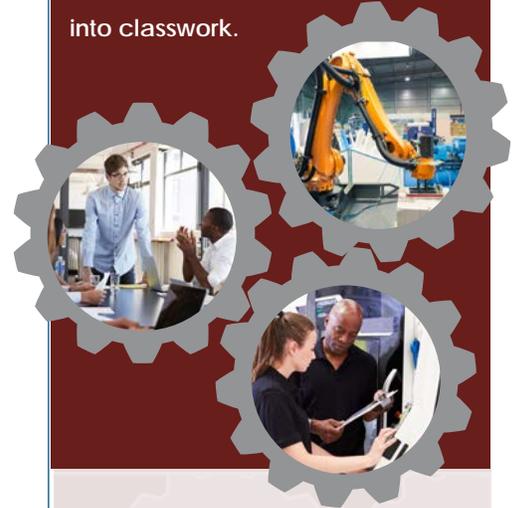
Advanced manufacturing accounts for almost 90 percent of Iowa's exports and contributes \$29 billion to the state's economy, with over 30 percent of Iowa's counties classified as "manufacturing dependent." Iowa's 6,000-plus manufacturing companies employ over 215,000 people, representing more than 14 percent of the state's total employment and placing manufacturers in the top third of employers statewide¹. Careers in advanced manufacturing are expected to continue to grow in Iowa, largely due to amazing and innovative advances in technologies with robotics, augmented and virtual reality, and 3D or additive manufacturing techniques. To meet this growing need, a variety of strategies must be employed to attract, develop, and retain a skilled workforce.

Work-based learning is one strategy that can increase this supply by successfully integrating academics with real-world, hands-on learning. Students can more easily see the connection between academics and careers when they are engaged in learning with curriculum that is personally and occupationally relevant.

¹ Economic impact statistics retrieved from www.iowamfg.com

WORK-BASED LEARNING

Work-based learning helps students see the connection between classroom content and potential careers through real-life work experiences that are embedded into classwork.



FUTURE READY IOWA GOAL

Future Ready Iowa's goal is for 70 percent of Iowans in the workplace to have education or training beyond high school by 2025 to ensure Iowa's workforce is equipped with the skills and education employers need.

INDUSTRY IMPACT

Advanced manufacturing accounts for almost 90 percent of Iowa's exports and contributes \$29 billion to the state's economy, with over 30 percent of Iowa's counties classified as "manufacturing dependent."¹

Iowa's 6,000-plus manufacturing companies employ over 215,000 people, representing more than 14 percent of the state's total employment and ranking in the top third of employers nationwide.¹



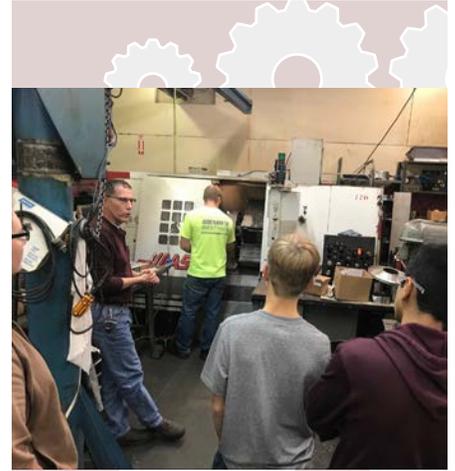
Project Goals and Methodology

In March 2019, the Department reconvened the career pathways project partners to begin exploring options for expanding the quantity, quality, and ease of access to work-based learning opportunities within the advanced manufacturing industry for high school students in Iowa. Specific project goals were defined as the following:

- ◆ Develop a web-based toolkit for educators and advanced manufacturing employers to promote manufacturing careers and provide students with local opportunities to experience manufacturing-related careers within their communities.
- ◆ Pilot toolkit with school districts and advanced manufacturing employers and gather feedback for further refinement and improvement.
- ◆ Survey schools to determine technical assistance needs related to building and maintaining advanced manufacturing career promotion programs for students.

These project goals align very closely with those of another initiative put forth by Iowa's 15 community college regions, and spearheaded by staff from Northeast Iowa Community College, to develop materials aimed at increasing work-based learning opportunities for employers, regardless of industry, size, and geographic location. Their direct connection to community needs and local employers were leveraged when planning, developing, and piloting these materials to employers and educators across the state. This direct consultation and review was critical to ensure that the finished product was timely, relevant, and valuable in meeting mutual project goals.

This toolkit serves as the culmination of the thorough process to identify solutions addressing the growing need for a skilled workforce in advanced manufacturing, improved coordination across partnerships and regions, and the need for employers and educators to understand the value of these investments. This toolkit provides guidance, tools, and recommendations to address barriers to increasing opportunities for high school students, while also providing a wide range of real-world examples from across the state that can be modeled and replicated within local communities.



Section 1: What is Work-Based Learning?

Students of all ages often find themselves wondering “When will I ever actually use this information?” One of the best ways to answer this question and begin applying context to a student’s learning process is through an interactive work-based learning experience. This section explores various options and examples available to students, often regardless of their geographic location or career interest.

Types of Work-Based Learning Opportunities

When considering work-based learning programs for students, it helps to reflect on the full range of work-based learning types, which can differ largely based on various aspects, such as desired outcomes, student age, and level of employer commitment. Figure 1 provides a basic illustration of this continuum of experiences across the four general levels of complexity and student engagement: career awareness, career exploration, career preparation, and career training. Section 3 will provide more detailed examples of successful programs currently in practice across the state.



FIGURE 1: WORK-BASED LEARNING CONTINUUM

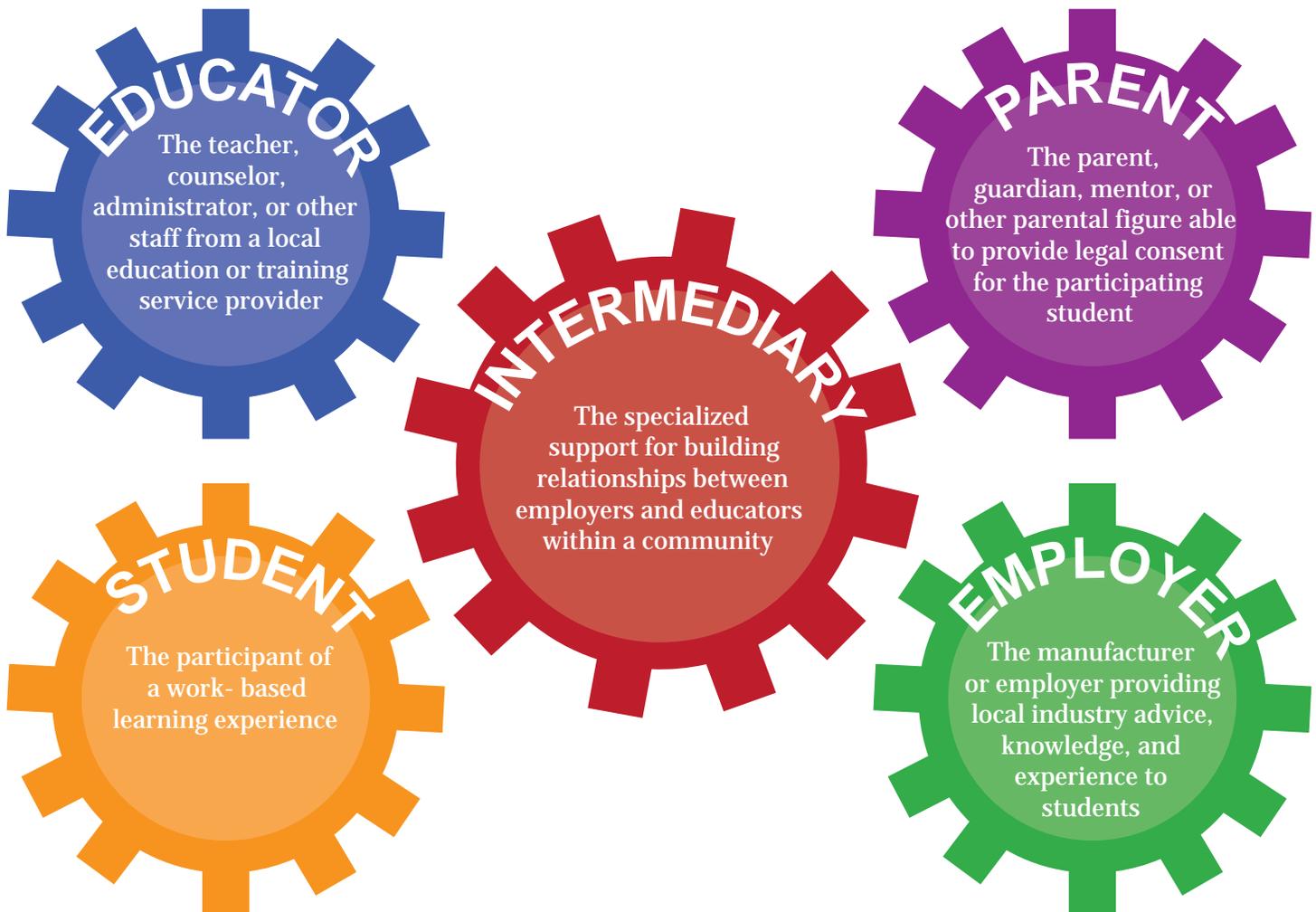


Who is Involved? — A Community Effort

A successful work-based learning experience is not created by one person or entity, but rather through a series of interactions between many different people, representing a wide range of public and private partners within a community all working together smarter, not harder. Similar to a machine with various parts and pieces, a work-based learning program can likely operate in a limited capacity with a missing or broken piece, but not as efficiently and is likely to encounter problems in the long run.

A project doesn't need to begin with any specific point of contact either, although as outlined in the next section, a local intermediary is the best choice to act as a connector between all of the other parties, leveraging invaluable local relationships, prior experience, and statewide resources. The critical component is that all parties are involved and kept updated to help ensure continued success and long-term sustainability.

FIGURE 2: WORK-BASED LEARNING PLAYERS



Intermediaries — A Critical Connecting Role

One of the primary reasons for a lack of work-based learning opportunities in many communities is a breakdown of communication between employers and educators. Factors such as conflicting schedules, complex workloads, and misunderstanding of roles make it difficult to organize, develop, and implement successful learning experiences for students.

To address this need, the Iowa Department of Education, in collaboration with Iowa’s 15 community colleges, created the [Iowa Work-Based Learning Intermediary Network](#). Dedicated and trained professionals are available throughout the state to assist employers, educators, and other community support partners interested in building new relationships and improving or expanding current work-based learning programs. Rather than attempting to build these complex initiatives from scratch, an Intermediary can be a great starting point to provide a range of services and experience outlined in the graphic below. Refer to Appendix A for additional details and contact information for these valuable community resources.

Additional public and private community partners, such as [Iowa’s Area Education Agencies](#), the [Iowa Governor’s STEM Advisory Council](#), a local chamber of commerce, or a regional industry [sector partnership](#) can also assist in building connections. A basic relationship management checklist is provided in Appendix B to ensure that these different types of organizations and partners are being considered and resources are leveraged towards a successful and beneficial experience for everyone involved.

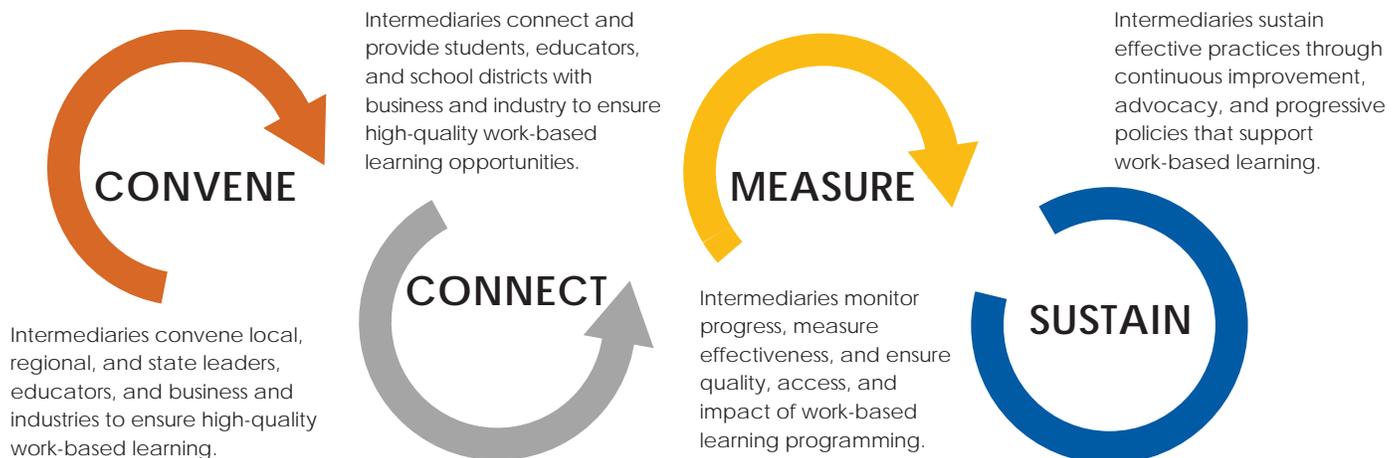


In 2018, over 4,200 Iowa students benefited from work-based learning opportunities in advanced manufacturing provided through the Iowa Intermediary Network.

Internships	4
Job Shadows	274
Site Tours	3,995



FIGURE 3: ROLE OF WORK-BASED LEARNING INTERMEDIARY NETWORKS



* Graphic adapted from New Ways to Work (2008). Retrieved September 25, 2019, from http://www.newwaystowork.org/mastertools/Frameworks and Charts/INet/INet_Functions_Chart_April_2008.pdf

Section 2: Setting Up a Successful Program

Setting up a successful work-based learning program is often easier and less time consuming than employers may realize, especially when leveraging established and experienced community partners and resources, such as the [Iowa Intermediary Network](#). Even with these local experts, however, there are still considerations and steps to be taken to ensure the safety, privacy, educational, and professional needs of everyone involved. This section provides a general flowchart of that process and brief overview of these areas to consider within the advanced manufacturing industry in Iowa. Additional resources and information can also be found in the [Iowa Work-Based Learning Guide](#).

Process Flowchart

The graphic below outlines the flow of communication and collaboration between the community partners that is necessary for a successful work-based learning program. Each experience, partner, and the community in which it resides is unique, so careful consideration, open communication, and group consensus should be gained at each stage before moving forward. It is also important to celebrate milestones, successes, and partner benefits or value earned throughout the process to ensure long-term success and sustainability.

FIGURE 4: WORK-BASED LEARNING PROCESS FLOWCHART



Considerations and Tips for Success

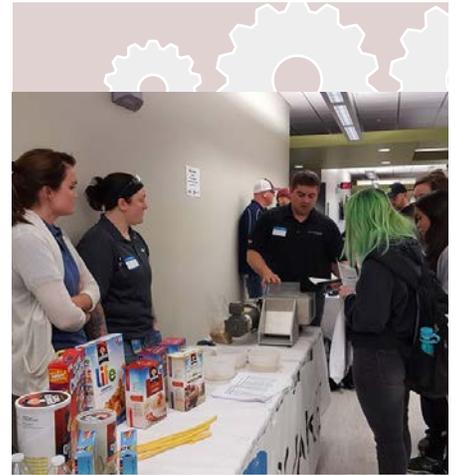
This toolkit is not meant to serve as an exhaustive legal or regulatory guide for every type of situation that may occur within a modern advanced manufacturing facility, but rather as a broad overview of some considerations that may be unique to this industry when working with various types of students. Local community partners and subject matter experts should always be leveraged to prevent any costly mistakes or program set-backs. It is also strongly recommended that qualified insurance providers, legal advisors, and human resource professionals are involved throughout the entire process.

This section provides general considerations across five primary areas of: privacy, safety, labor standards and rights, liability/insurance, and transportation/logistics needs. Specific examples are discussed in later sections and additional information and general areas of consideration can be found in the [Iowa Work-Based Learning Guide](#) and in referenced sample forms, materials, or resources in Section 4.

a. Privacy — Student and Employer

Students may have access to varying levels of customer information, employer business practices, or innovative technology either directly or indirectly during their learning experience. Careful consideration should be taken to ensure students are fully aware of all associated company policies, rules, and guidelines to help prevent any issues with the appropriate handling and storage of financial information, intellectual property, and other confidential information, data, or resources. Communication of student progress, grades, and other academic information associated with an experience may also be covered by the [Family Educational Rights and Privacy Act of 1974 \(FERPA\)](#).

The use of phones, tablets, cameras, and other mobile devices while on the premises should also be addressed directly with all parties involved. We live in a highly-connected digital world, but much of what happens within a business setting is meant to be personal and confidential. The posting or sharing of pictures, videos, and other information regarding a manufacturing facility, staff, customers, or other students is generally not allowed without appropriate training and legal consent. (Refer to the Sample Confidentiality Agreement in Section 4)



b. Safety — Student and Employer

A modern advanced manufacturing environment may present a wide range of safety concerns to consider, such as automated machinery, heavy or sharp objects, and hazardous waste, chemicals, paint, or substances. Students should have updated immunizations, such as tetanus, and be trained in how to operate with and around this type of environment in a safe manner with curriculum and training offered by organizations such as the [Occupational Safety and Health Administration](#) (OSHA), including the importance and appropriate use of safety personal protective equipment (PPE), such as specialized clothing, goggles, or other equipment to protect from injury or contamination. Food safety, foodborne illness, and food or environmental allergies should also be considered if working in or around food processing or value-added agriculture manufacturing and associated processes, ingredients, and end products.

The types of staff, business partners, and customers a student will be in contact with must also be considered and limited when necessary. The student or one of these other parties may be classified as a member of a protected or vulnerable population. While the legal definition may vary, this generally means that the person's freedom and capability to protect themselves from intended or inherent risks is limited, such as an inability to make informed choices or misunderstanding the consequences of their actions. Ensure students understand they are able to say “no” if uncomfortable or unsure if able to safely complete a task or use a piece of machinery or equipment.

c. Labor Standards and Rights

There are various standards, rules, and regulations in place in regards to the types of work that can be conducted by youth of varying age levels through both national and statewide governing bodies, such as the [Fair Labor Standards Act](#) (FLSA), [Iowa Division of Labor](#), and [Iowa Code Chapter 92](#). One area that needs to be explored further for this industry is the United States Department of Labor's guidance on the classification and potential exemptions for “[Hazardous Occupations](#)”. These are applicable to sixteen- and seventeen-year olds and generally apply to the types of power-driven machinery or equipment that may be used and limiting the operation of motor vehicles while on the job. Some hazardous occupations contain exemptions for apprentices and student learners employed under certain conditions. Note that there is no blanket prohibition specific to work activities and equipment for sixteen and seventeen year-old workers in advanced manufacturing.

Students should be aware of hazardous occupations and duties/equipment they are not allowed to perform/operate. Adult workers or mentors should provide appropriate guidance to students and be accessible for students when questions arise. Consider posting signs on any prohibited machinery or equipment and empower students to refuse to perform duties or operate machinery that is prohibited or that they are uncomfortable using safely. Prior to hiring a sixteen and seventeen year-old student worker or intern, ensure job duty guidelines and expectations are clearly communicated to all parties involved so that situations do not arise where students are asked to perform duties or operate machinery not permitted under child labor law hazardous occupations. (Refer to the Sample Training Agreement and Sample Training plan in Section 4)

d. Liability and Insurance

Concerns for liability and insurance arise whenever a business entity has individuals on its worksite. The type of liability will not only depend on how the student is classified by the employer (visitor, student learner, volunteer, consultant, or other type of part- or full-time employee) but also on the type of work, how it is being performed, and when. There is generally no difference in liability than what can be expected for current employees and other public visitors of the manufacturing facility.

Students often do not require special insurance for participation in site visits or observational learning activities, since they are already covered in the liability policy of the school or school district. When students participate in hands-on learning experiences, such as paid work experiences or on-the-job training for academic credit, the relationship becomes transactional and liability generally transfers to the employer. In these cases they are treated very similarly to current employees of the business and generally do not require additional coverage with any associated increases in premiums or other costs.

e. Transportation and Logistics

If an experience is being conducted within a manufacturing facility or other location outside of the school grounds, safe and reliable transportation must be secured to, from, and during work experience hours. Students are generally prohibited from driving work vehicles on public roads as part of a work-based learning experience but are allowed to drive themselves to work with an approved Iowa driver's license. Additional logistical issues may include scheduling aspects for the student, such as days and hours scheduled for work and ensuring an appropriately trained adult mentor or supervisor is also available during any associated job duties within this schedule.

An additional consideration is to ensure that students are provided an appropriate orientation or on-boarding procedure similar to new part- or full-time employees. In addition to providing a welcoming environment, this will also ensure they better understand corporate culture, rules, policies, and procedures while representing themselves, their school, and the business appropriately during the learning experience.



Section 3: Promising Practices in Iowa

This section provides a deeper dive into short-, mid-, and long-term examples of successful work-based learning experiences in Iowa to provide context, guidance, and lessons learned from the field. These examples follow a natural progression for employers wanting to ease into a longer-term student engagement strategy because of uncertainty around available capacity, level of commitment, and potential return on investment. Examples are also provided for virtual/project learning, non-traditional students, and educators/community partners that can benefit from a work-based learning opportunity within their community. Due to spacing limitations, a brief overview of additional examples are provided for promising work-based learning practices in Iowa for each stage.

FIGURE 5: PROGRESSION OF WORK-BASED LEARNING TRADITIONAL EXPERIENCES (TOP) AND EMERGING EXPERIENCES, INCLUDING THOSE AIMED AT TARGETED POPULATIONS (BOTTOM)



A series of form examples and links to additional resources are also provided in Section 4 to supplement these examples. As previously mentioned, these examples and recommendations are not exhaustive and additional research and conversation with local community partners is necessary to ensure compliance with all rules, regulations, and laws. These examples are meant to further dispel any myths, uncertainty, or concerns about implementing a work-based learning program as a viable strategy to address the growing skilled workforce shortage in advanced manufacturing in Iowa.

1. Short-Term Example: Classroom Speakers

A great way to begin introducing students to the advanced manufacturing industry with minimal time and resource commitment is to allow them direct access to current manufacturing professionals through a classroom visit and speaking opportunity. Students are able to ask questions directly from these members of their community in a safe and comfortable learning environment. Depending on current grade level, curriculum, or area of study, students may find a direct connection to what they are learning in the classroom with the career opportunities discussed.

Tips and Considerations Checklist

-  Work with teachers, educators, and other support staff to understand the process for any pre-visit screening, background checks, or other security protocols to ensure a quick and easy check-in process on the day of the visit.
-  Identify hazardous materials, sharp objects, or expensive manufacturing equipment which are generally not allowed or advised within classrooms.
-  Ask for permission from students and faculty before posting pictures and other visit information through social media and other means. Depending on age of students, written consent may be necessary.
-  Avoid talking “at” students about the industry, wages, and fringe benefits. Instead focus on talking “with” them about the experience and how it will make students feel. Consider answering questions like “What do I like about my job?” or “What difference do I make each day?”
-  Include as many visual aids and hands-on activities as possible to help paint the picture of a “typical day in the life” of a modern advanced manufacturing professional.
-  If using a Power Point or other presentation tool, consider multiple storage options in case one fails, such as a USB/flash drive, emailing to yourself, and storing online with a tool like Google Drive or DropBox.
-  Provide flyers, hand-outs, and other print information, but limit reading directly from it with students. Provide visually-appealing resources, avoiding anything that is too data- or content-heavy, and request they share them with their friends, parents, and other family members.
-  Ensure company representatives have been trained to speak to different age groups and how to appropriately represent your company and/or industry. Consider providing a basic training or guidelines for how to effectively interact with members of different generations, such as the [Elevate Advanced Manufacturing Ambassador Program](#).



Iowa Example — Bobalee Hydraulics and GOMACO Classroom Speakers (Laurens/Ida Grove)



Iowa Central Career Connections and Pocahontas County Economic Development Commission is creating classroom speaking opportunities in partnership with local manufacturers. These opportunities allow manufacturers to speak directly with different ages and grades of students about future career opportunities. A site tour of the manufacturing facilities can be scheduled later so students can see first-hand the innovative technologies, practices, and careers available within their communities.

Experience Title: Hydraulics Manufacturing Experience Session

General Experience/Job Duties: Manufacturing professionals speak to groups of students about the manufacturing process, innovative technology, and careers available in their community. Students are able to see, touch, and test products or machinery (when possible), including a cutaway of a smart hydraulic cylinder to better understand the inner mechanics. Additional pictures, videos, and other visual aides are used often and students are able to ask questions to clarify or expand on different topics.

Employer: BOBALEE Hydraulics Inc., GOMACO Corporation

Educators: Various high schools

Support Partners: Iowa Central Community College, Iowa Central Career Connections, Pocahontas County Economic Development Commission

Project Timeline: Single interactive sessions during the school year.

Paid or Unpaid: Unpaid

Academic Credit Earned/Type: No

Background Check Required: No

Type of Work Environment: Local community schools

Required Safety/Privacy/Other Training: None

Required Volunteer/Employment Forms: None

Lessons Learned: We worked with our support partners at Iowa Central and Pocahontas County Economic Development to put us in contact with the appropriate officials at different schools. They helped us develop leads into their school systems with students of all ages.

Advice to Others: Careers in local manufacturing offer amazing opportunities and it's important to get that message out to students, teachers and parents. We've found that taking some time to speak to students helps build awareness and interest for the manufacturing industry so its considered as a possible future career.



2. Mid-Term Example: Site Tour

A great follow-up to a classroom visit is to invite students for a site tour to see and feel what it's like to work in a modern advanced manufacturing facility, lab, distribution center, or other related work site. Many students have likely never been in these types of environments or are even relying on the media or entertainment industry to guide their impressions. The ability to view this environment first-hand with direct interaction with advanced manufacturing professionals can be very impactful.

Tips and Considerations Checklist

-  Schedule times and days that work best for your company, taking into consideration any holidays, budgets/fiscal year, class schedules, and other events that may disrupt plans.
-  Determine a manageable number of students who can safely and easily participate in a tour.
-  Determine information that students should receive in advance, such as dress policy, privacy policy, permission slips, and photo consent forms.
-  Parental consent and basic liability forms may be necessary, depending on type of work environment visited and any hands-on activities planned. Create a process to distribute and collect signed forms.
-  Plan a tour route to limit exposure to hazardous, expensive, or sterile equipment, waste, chemicals, and other physical or intellectual property and resources.
-  Participant exposure to sensitive financial records, personnel information, and other confidential data should be avoided. If visiting areas of a facility that includes proprietary information, business practices, or innovative technology, a non-disclosure agreement should be explained and signed.
-  Ensure appropriate safety personal protective equipment (PPE) is provided whenever necessary, such as specialized clothing, goggles, or other equipment to protect from injury or contamination.
-  Make sure tour groups are not too large so all students can hear and learn from the experience. Consider a tour headset system if noise or confidentiality are concerns.
-  Identify who will provide transportation to/during/from the learning experience for students.
-  If lunch will be included for students, consider food allergies, sensitivities, and other dietary restrictions.
-  Include visual aids, hands-on activities, and experiences that can only be done by students in-person to give students an idea of a "typical day in the life" of a manufacturing professional or support staff.
-  Develop a printed survey to gather student feedback and program impact at the end of the program for good response rates, and share that feedback with presenters along with any pictures that may have been taken during the visit.
-  Share the program goals as well as the short- and long-term outcomes that will come of the program to help recruit future presenters or program volunteers.



Iowa Example — Kirkwood Advancing the Future Manufacturing Tours (Cedar Rapids)



MSI



Mold Builders



PMX
INDUSTRIES, INC.

Kirkwood
WORKPLACE LEARNING
CONNECTION

Kirkwood Community College and Workplace Learning Connection team up with 20+ local manufacturers to offer an annual series of manufacturing site tours for local middle and high school students to correspond with the national Manufacturing Day in October. Each year, over 1,000 student experiences are realized through these high quality worksite visits and first hand experiences with manufacturing careers.

Experience Title: [Advancing the Future](#) Manufacturing Tours

General Experience/Job Duties: Students are able to sign up for tours of a wide range of local manufacturing companies to learn more about this exciting industry, potential careers, and context to classroom curriculum. Time is spent ahead of time with students exploring their career interest types and the interactive online portal at <https://explore-manufacturing.org>.

Employer: Over 20 local manufacturers participate annually

Educators: Various local middle and high schools

Support Partners: Kirkwood Community College, Workplace Learning Connection

Project Timeline: 2-4 hours per session

Paid or Unpaid: Unpaid

Academic Credit Earned/Type: No

Background Check Required: No

Type of Work Environment: Manufacturing facilities, labs, office space

Who Provides Transportation To/From Experience Site: Educators

Required Safety/Privacy/Other Training: None

Required Volunteer/Employment Forms: Student Behavior Guidelines, Authorization for Release of Information and/or Public Use of Image

Lessons Learned: The best part about giving site tours is seeing visitor reactions. Most of them drive by our companies every day yet have no idea what we actually do. They get to see how clean, modern, and technical it really is and ask us questions directly. This is our best opportunity to break misconceptions and stereotypes that exist for our industry.

Advice to Others: It can seem overwhelming at first to set up these types of activities, but community partners can make it much easier. Leverage your local resources as much as possible to build relationships and learn along the way!



3. Mid-Term Example: Job Shadows

Job shadowing allows students to directly observe the daily activities of advanced manufacturing professionals for a short period of time, generally days or weeks, as a “shadow” without actually completing any work themselves. This direct observation, ability to question the employee in real-time, and associated learning can be extremely valuable for students when determining if the career and/or industry fits their interests, personality, and long-term career aspirations.

Tips and Considerations Checklist

-  Schedule times/days that work best for your company to engage in work-based learning. Consider holidays, budgets/fiscal year, class schedules, and other events that may disrupt plans.
-  Determine a manageable number of students who can safely and easily participate in a job shadow opportunity. Groups may be more efficient, but sometimes lack engagement and impact on students.
-  Determine information that students should receive in advance, such as dress policy, privacy policy, permission slips, and photo consent forms. Consider providing an orientation or on-boarding process to review together and ensure awareness of all appropriate rules, regulations, and corporate culture.
-  Parental consent and basic liability forms may be necessary, depending on type of work environment visited and any hands-on activities planned. Create a process to distribute and collect any necessary signed forms from students or intermediary.
-  Limit exposure to hazardous, expensive, and/or confidential waste, chemicals, equipment, technology, materials, and other physical or intellectual property and resources during shadowing.
-  Ensure appropriate safety personal protective equipment (PPE) is provided whenever necessary, such as specialized clothing, helmets, goggles, or other equipment designed to protect from injury or contamination.
-  Identify who will provide transportation to/during/from the learning experience for students.
-  Determine if lunch will be included for students (if applicable) or if they are responsible for their own meals and communicate this to intermediary/student. Consider food allergies, sensitivities, and other dietary restrictions.
-  Include as many visual aids and hands-on activities as possible to help paint the picture of a “typical day in the life” of an advanced manufacturing professional or support staff. Consider adding features or activities that can only be experienced or accomplished by students in-person.
-  Ensure company representatives have been trained to speak to different age groups and how to appropriately represent your company and/or industry. Consider providing a basic training or guidelines for how to effectively interact with members of different generations, such as the [Elevate Advanced Manufacturing Ambassador Program](#).



Iowa Example — Conductix-Wampfler Customized Job Shadow Experiences (Harlan)



Iowa Western Community College and Southwest Iowa Workplace Connection partner with Conductix-Wampfler to offer customizable job shadow opportunities for local area high school students who may be interested in exploring various opportunities in advanced manufacturing.

Experience Title: Advanced Manufacturing Job Shadows

General Experience/Job Duties: Students are able to shadow employees from different departments, depending on their area of interest and also gain some perspective on advanced manufacturing in general.

Employer: Conductix-Wampfler

Educators: Various schools in both Iowa and Nebraska

Support Partners: Iowa Western Community College, Southwest Iowa Workplace Connection

Project Timeline: Individual sessions, generally 4-6 hours each week

Paid or Unpaid: Unpaid

Academic Credit Earned/Type: No

Background Check Required: No

Type of Work Environment: Manufacturing facility

Who Provides Transportation To/From Experience Site: Educator/Students

Required Safety/Privacy/Other Training: OSHA, Conductix-Wampfler company & dress code policies

Required Volunteer/Employment Forms: Student Behavior Guidelines, Authorization for Release of Information and/or Public Use of Image, and Liability Waiver and Release

Lessons Learned: Many students don't know the wide range of careers available in a modern manufacturing facility. Conductix-Wampfler job shadows often include various departments, such as Operations (Tool and Die, Welding, Fabrication), Engineering, Research and Development, so students get a bigger picture of great jobs available right here in their hometown. The shadow creates the interest that could lead to a career with us!

Advice to Others: Create a robust experience by including various departments and personnel in the job shadow experience. Be sure to plan at least 2-3 weeks before the activity date since a good tour or shadow takes time to plan well. It is also important and beneficial to make checklists of the things we want to cover with every experience so everyone's on the same page and nothing gets missed.



4. Long-Term Example: Internships and Apprenticeships

There comes a point during the career exploration process where students wish to receive more focused, hands-on experience to better understand the physical and mental requirements of a given occupation or industry. An internship or apprenticeship offers this opportunity for students to work in a similar capacity to full-time manufacturing professionals, but often with less risk, responsibility, and time commitment. These opportunities can be paid or unpaid, part-time or full-time, and can vary greatly in length, although many are between 1-3 months and offered during the summer break from school.

Tips and Considerations Checklist

-  Similar to regular part- or full-time employees, interns should be provided an orientation and on-boarding process to ensure awareness of all appropriate rules, regulations, and corporate culture.
-  Determine information that students should receive in advance, such as dress policy, privacy policy, permission slips, and photo consent forms. Create a process to distribute and collect any necessary signed forms from students or intermediary.
-  Recruit and train a current employee to act as a mentor and/or supervisor for interns within an identified department or division. Consider special training or focus on working with different ages or generations and associated learning styles, communication methods, and personality types.
-  Determine if interns will be paid based on guidance from the [USDOL Fair Labor Standards Act](#). In general terms, if the interns provide more value to the employer than they are receiving themselves, they should be appropriately compensated, either by the employer or sponsoring support partner. Ensure appropriate time keeping procedures are implemented ahead of time.
-  Work with Human Resources to ensure interns are set up within payroll and granted all appropriate access to facilities, parking, break rooms, and other areas necessary to accomplish their duties. Ensure interns are aware of any fingerprinting, drug testing, or other related needs ahead of time.
-  Carefully review the types of environments in which interns will be allowed to work. Refer back to the USDOL "[Hazardous Occupations](#)" guidelines for types of machinery or equipment interns can use with and/or without adult supervision. Develop a plan to supplement that work with other part- or full-time employees to ensure an intern is able to complete their tasks (i.e. adult worker lifts heavy material onto machine and intern pushes buttons to operate the bending or cutting CNC machine).
-  Intern exposure to sensitive financial records, personnel information, and other confidential data should be avoided. If visiting areas of a facility that includes proprietary information, business practices, or innovative technology, a non-disclosure agreement should be explained and signed beforehand.
-  Ensure appropriate safety personal protective equipment (PPE) is provided, such as specialized clothing, helmets, goggles, or other equipment designed to protect from injury or contamination.
-  If interns are being paid, employers generally assume the liability for injuries or damages caused by students, otherwise school districts assume the liability and are covered under current workers' compensation or related policies. Consider adding a "volunteer workers" endorsement to current insurance policy/coverage, or obtain a stand-alone policy.



Iowa Example — Emerson Automation Solutions School-to-Work Internship Program



Emerson Automation Solutions offers various internship opportunities to local high school students entering their Junior year in both direct and indirect areas of an international advanced manufacturing business. Students have the opportunity to learn direct manufacturing processes and procedures or explore other departments like Marketing, Accounting, and Finance.

Experience Title: School to Work (STW) Program

General Experience/Job Duties: Students entering their Junior year who have expressed interest in seeking a work experience and career post-graduation in relation to an STW area, such as office services and drafting, work and learn alongside full-time professionals in these areas. Students learn crucial technical skills while also developing professionally.

Employer: Emerson Automation Solutions

Educators: Various high schools - Marshalltown Community School District

Support Partners: Iowa Valley Community College District, Iowa Valley Intermediary Program

Project Timeline: 40 hours/week (summers) or 10 hours/week (school year)

Paid or Unpaid: Paid

Academic Credit Earned/Type: No, but plan to in the future

Background Check Required: No

Type of Work Environment: Office and lab facilities

Who Provides Transportation To/From Experience Site: Participants

Required Safety/Privacy/Other Training: OSHA, Emerson policies and training

Required Volunteer/Employment Forms: Student Behavior Guidelines, Authorization for Release of Information and/or Public Use of Image, and Liability Waiver and Release

Lessons Learned: High school students are extremely busy and involved academically, with sports, and in the work world. It's challenging to find ones available to work part-time during the school year so leverage your local educators and support partners to make the process easier.

Advice to Others: It's been a learning experience adjusting the program year to year to continually meet the needs of the business as well as the students seeking the opportunity. At times you have to get creative in your recruitment tactics, but employers have to remain strong in expectations of the roles during the recruitment process. However once you get the "right" students in the right roles, the contribution, ideas, and thought processes they bring to the table is invaluable.



5. Virtual/Project-Based Learning Example: Clearinghouse for Work-Based Learning

The [Iowa Clearinghouse for Work-Based Learning](#) was launched in July 2019 to act as a virtual tool to expand access to work-based learning opportunities for all Iowa students, especially those traditionally underrepresented and regardless of geographic location. Similar to in-person work-based learning programs outlined throughout this document, employers are able to work with educators and community partners to develop in-class project-based learning opportunities. This is often a great opportunity for both employers and students to “test the waters” for work-based learning with minimal time and resource commitment. Although some schools have already implemented their own project-based learning programs, this new site provides an expanded reach to a larger audience and a searchable database of employers who have expressed interest that can be filtered by location, industry, and other variables.

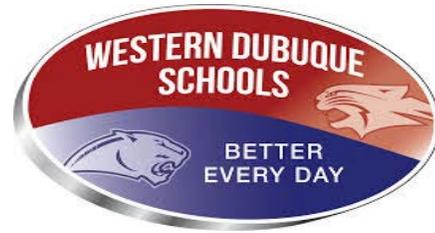
Employers are now able to quickly and easily post projects for students to apply for and take advantage of to gain valuable industry experience that would not have otherwise been possible. Participating employers are able to gain insight and value from these groups of student consultants, some of whom may even be members of their target consumer base. Typical projects include assistance with marketing, efficiency, and customer relations aspects of an organization, but can be customized and may vary depending on project goals, timeline, and level of desired contact with students. Visit [Clearinghouse.FutureReadyIowa.gov](#) to learn more and begin exploring opportunities to develop and post projects today.

Tips and Considerations Checklist

-  Set clear expectations for timeline, participant hours, and goals. Provide plenty of visual aids to help paint the picture of the desired results and any other aspects that may impact the project, such as design plans, site pictures, or proposed layouts.
-  Although direct contact with students is often limited and students may not be on-site, some basic liability or consent forms may be necessary, depending on type of work performed and hours worked.
-  Ask for permission from students and faculty before posting pictures and other project information through social media and other means. Depending on age of students, written consent may be necessary.
-  Determine type of technology to be used for interacting with students by phone or virtually through tools like GoToMeeting, WebEx, Zoom, or Facebook Live. Ensure all technology and internet access is available and working appropriately before any scheduled meetings.
-  Ensure company representatives have been trained to speak to different age groups and how to appropriately represent your company and/or industry. Consider providing a basic training or guidelines for how to effectively interact with members of different generations, such as the [Elevate Advanced Manufacturing Ambassador Program](#).
-  Organize a way to measure performance and solicit participant feedback for continuous improvement purposes. Consider providing a gift or award to the team upon completion of a project, but check with school or intermediary beforehand for any rules, regulations, or other considerations.



Iowa Example — East Iowa Machine Company (EIMCo) Manufacturing Competitions (Farley)



East Iowa Machine Company (EIMCo) partners with Western Dubuque Community Schools to offer an annual manufacturing competition for teams of local high school students to design, build, and compete with different types of machinery or equipment to achieve a designated goal or task.

Experience Title: EIMCo Annual Engineering Competition

General Experience/Job Duties: Students are provided instructions for a task-based competition and the time, supplies, and money necessary to build a project to compete against other teams/schools, such as foam football/t-shirt launchers, tricycles, and motorized carts. On the day of the event, EIMCo employees judge the students' projects based on performance, creativity of design, and presentation. Awards are given to the top performing projects.

Employer: East Iowa Machine Company (EIMCo, LLC.)

Educators: Various - Beckman Catholic High School, Cascade High School, & Western Dubuque High School

Project Timeline: Annually, one-day event

Paid or Unpaid: Unpaid

Academic Credit Earned/Type: Yes, part of high school courses

Background Check Required: No

Type of Work Environment: Classroom and manufacturing facility

Who Provides Transportation To/From Experience Site: Educators/Students

Required Safety/Privacy/Other Training: Students are provided basic safety guidelines for use throughout the competition, but no required training.

Required Volunteer/Employment Forms: None

Lessons Learned: We gather feedback from the schools to evaluate the event and project every year in order to make any changes or improvements. Many times this just involves minor changes to the project requirements or rules. It's important to keep things fresh and new for our students and teachers so they continue to have fun while learning about our company and industry.

Advice to Others: This has been a great opportunity for students to get positive hands-on engineering and manufacturing experience while also allowing them to have fun competing with other local schools/teams. They arrive at EIMCo and are given an informational presentation on careers in manufacturing, a facility tour, and receive a complimentary lunch before the competition begins.



6. Support Partner Example: Educator and Partner Externships

A fresh twist on internship programs is to hire educators and supporting staff to take part in a similar short-term training opportunity. These are referred to as “externships,” since there is not an intention to hire the participant upon completion of the program. Participating employers experience similar workforce benefits to internships, but also gain from educating teachers, counselors, and support staff about their company, industry, and local career opportunities. A goal of externships is to combat misconceptions about careers in industries like advanced manufacturing, health science, and information technology with education personnel who then provide career guidance to their students.

Tips and Considerations Checklist

-  Similar to regular part- or full-time employees, externs should be provided an orientation and on-boarding process to ensure awareness of all appropriate rules, regulations, and corporate culture.
-  Determine information that externs should receive in advance, such as dress policy, privacy policy, permission slips, and photo consent forms. Create a process to distribute and collect any necessary signed forms from externs or intermediary.
-  Locate and train a current employee to act as a mentor and/or supervisor for the externs within an identified department or division. This person will help them acclimate and stay on track to achieve their goals.
-  Determine if participant will be paid based on guidelines from the USDOL [Fair Labor Standards Act](#). In general terms, if the participant is providing more value to the employer than they are receiving themselves, they should be appropriately compensated as an employee, either by the employer or corresponding support partner.
-  Work with Human Resources to ensure externs are granted all appropriate access to facilities, parking, breakrooms, and other areas necessary to accomplish their duties. Ensure externs are aware of any fingerprinting, drug testing, or other related needs ahead of time.
-  Determine a schedule that fits within the allowed number of hours for work for both the extern and a supervisor or mentor. If extern is being paid, ensure hourly or salary timekeeping procedures are implemented ahead of time.
-  Carefully review the types of environments in which externs will be allowed to work. Access to financial data, hazardous materials, and proprietary information should be limited and monitored at all times.
-  Extern exposure to sensitive financial records, personnel information, and other confidential data should be avoided. If visiting areas of a facility that includes proprietary information, business practices, or innovative technology, a non-disclosure agreement should be explained and signed beforehand.
-  Ensure appropriate safety personal protective equipment (PPE) is provided whenever necessary, such as specialized clothing, helmets, goggles, or other equipment designed to protect from injury or contamination.



Iowa Example — Iowa STEM Teacher Externship Program at Rosenboom Machine & Tool (Spirit Lake)



GOVERNOR'S STEM ADVISORY COUNCIL

dedicated to building a strong STEM education foundation for all Iowans

The Iowa Governor's STEM Advisory Council has offered a robust teacher externship program since 2009, geared toward 7th through 12th grade science, mathematics, and technology (industrial arts and computer science) teachers. With nearly 600 successful externships completed to date, the program offers invaluable hands-on experience, a stipend, and professional development credit.

Experience Title: Iowa STEM Teacher Externships

General Experience/Job Duties: Two math teachers had the opportunity to spend six weeks with Rosenboom Machine & Tool to gain experience outside of the classroom to better prepare their students for advanced manufacturing careers. They conducted studies and developed standard work plans to help workers maximize their production level while minimizing the waste of time and resources for the plant.

Employer: Rosenboom Machine & Tool Inc.

Educators: Spirit Lake High School, Spencer High School

Support Partners: Iowa Governor's STEM Advisory Council

Project Timeline: Flexible 6-week guided program, generally during the summer

Paid or Unpaid: Paid – Up to \$4,800 stipend (cost shared between employer and STEM Council)

Academic Credit Earned/Type: Yes, three hours of graduate credit from the University of Northern Iowa

Background Check Required: Yes

Type of Work Environment: Manufacturing facility and office space

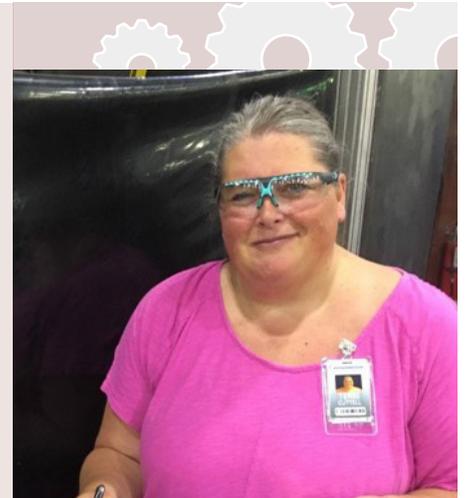
Who Provides Transportation To/From Experience Site: Externs

Required Safety/Privacy/Other Training: OSHA, business policies

Required Volunteer/Employment Forms: Volunteer Behavior Guidelines, Authorization for Release of Information and/or Public Use of Image, and Liability Waiver and Release.

Lessons Learned: Many of our teachers may not understand all of the great careers available that don't require a 4-year degree to be successful and make a great wage, especially in this industry where hard work and a drive to learn are extremely important.

Advice to Others: The STEM Council is great to work with and they really streamline the process to provide us qualified candidates and handle the paperwork. Not only do we gain direct value from the insight of our externs, but they also help better educate and promote our industry to their students.



7. Nontraditional Student Example: Adult Students and Job Seekers

A growing number of students are beginning their education journey later in life or are heading back to school as adults for the necessary education and training for a more fulfilling career within their communities. Adult students often bring with them additional life skills, experience, and backgrounds that may allow them to more quickly and easily get up to speed within a manufacturing environment. Many of the labor, safety, and privacy concerns for youth are also not applicable to adults.

Tips and Considerations Checklist

-  Similar to regular part- or full-time employees, participants should be provided an orientation and on-boarding process to ensure awareness of all appropriate rules, regulations, and corporate culture.
-  Determine information that participants should receive in advance, such as dress policy, privacy policy, permission slips, and photo consent forms. Create a process to distribute and collect any necessary signed forms from participants or intermediary.
-  Locate and train a current employee to act as a mentor and/or supervisor for participants within an identified department or division. This person will help them acclimate and stay on track to achieve their goals.
-  Determine if participant will be paid based on guidance from the USDOL [Fair Labor Standards Act](#). In general terms, if the participant is providing more value to the employer than they are receiving themselves, they should be appropriately compensated as an employee, either by the employer or corresponding support partner.
-  Work with Human Resources to ensure participants are granted all appropriate access to facilities, parking, breakrooms, and other areas necessary to accomplish their duties. Ensure participants are aware of any fingerprinting, drug testing, or other related needs ahead of time.
-  Determine a schedule that fits within the allowed number of hours for work for both the participants and a supervisor or mentor. If participant is being paid, ensure hourly or salary timekeeping procedures are implemented ahead of time.
-  Carefully review the types of environments in which participants will be allowed to work. Access to financial data, hazardous materials, and proprietary information should be limited and monitored at all times.
-  Participant exposure to sensitive financial records, personnel information, and other confidential data should be avoided. If visiting areas of a facility that includes proprietary information, business practices, or innovative technology, a non-disclosure agreement should be explained and signed beforehand.
-  Ensure appropriate safety personal protective equipment (PPE) is provided whenever necessary, such as specialized clothing, helmets, goggles, or other equipment designed to protect from injury or contamination.



Iowa Example — Integrated Education & Training (IET) Adult Education Programs (Garner)



Community colleges and support partners like IowaWORKS are able to help set-up and place job seekers in experiential learning programs to learn more about a company, career, or industry while also pursuing their education, receiving unemployment benefits, or utilizing other social services to improve their long-term employability.

Experience Title: Women in Welding Program

General Experience/Job Duties: Job seekers are able to leverage state and federal funds to explore local in-demand career opportunities. Participants were taught job readiness skills, contextualized math and reading, and proper welding techniques for entry level manufacturing welding with the gas metal arc welding (MIG) process, including practicing with flat, horizontal, and vertical positions. Employers are able to review participant work ethic and other factors before deciding to offer full-time employment upon completion.

Employer: Iowa Mold Tooling Co., Inc. (An Oshkosh Corporation Company)

Educators: North Iowa Area Community College (NIACC)

Support Partners: IowaWORKS Center – Mason City

Project Timeline: Four weeks (72 hours)

Paid or Unpaid: Unpaid (tuition covered by IET grant from NIACC)

Academic Credit Earned/Type: No (certificate of completion awarded)

Background Check Required: Classwork - No, Employment - Yes

Type of Work Environment: Classroom and welding lab

Who Provides Transportation To/From Experience Site: Participant

Required Safety/Privacy/Other Training: Welding basics and soft skills

Required Volunteer/Employment Forms: Basic employment application

Lessons Learned: Many people never consider welding as a career since it seems so difficult, but just like any other skill, with time and practice, anyone can become a great welder. More people need to take a chance and try new things to find something they would enjoy doing as a career. These types of programs help make that happen.

Advice to Others: With unemployment at such low levels, employers need to think outside the box to find good workers. Women only account for around 5% of the welding workforce, and that needs to change. Partners like NIACC and IowaWORKS can be a great resource to find these people who are in our communities and ready to work that we might not have considered otherwise.



8. Additional Promising Practices Examples

1. Classroom Speaker

- a. [Workplace Learning Network](#) partners with manufacturers on mobile simulation experiences for local high school students to test their welding skills in a virtual environment without leaving school grounds.
- b. [Connect @Iowa Lakes Community College](#) teamed up with the [Northwest Iowa STEM Region](#) to host *Middle School Manufacturing Festival* for students to attend educational sessions led by ILCC and ISU manufacturing instructors and participate in several interactive experience booths led by area manufacturers.
- c. [Iowa Central Career Connections](#) and the [Greater Fort Dodge Growth Alliance](#) partnered with over 30 local employers to offer a reverse job fair where students display and present their talents to employers able to circulate among booths and introduce themselves with those whose skills and abilities meet their needs.
- d. Waukon High School partners with the Allamakee Business and Community Board to utilize the Governor's STEM Council [STEM BEST](#) funding to launch an innovative model that brings industry standards and expectations to the classroom first-hand through local industry co-teaching and interactions.

2. Facility or Site Visit

- a. The [Talent Link](#) at Eastern Iowa Community Colleges partners with manufacturers from Iowa and Illinois to offer a series of tours for both parents and students to explore career opportunities in modern manufacturing.
- b. [WIN at Western Iowa Tech Community College](#) partners with local manufacturers and food processors to offer tours to see drafting, engineering, and other advanced manufacturing technology and processes first-hand.
- c. The Des Moines Area Community College [Career Discovery Network](#) offers *Discover Engineering Technology Days* to explore education options before touring local manufacturers to discover local career opportunities.
- d. [The Link](#) at Southeastern Community College partnered with ABB to provide a site tour and competition based on basic engineering principles for teams of students to apply what they had observed and learned on the tour.
- e. [NIACC Career Connection](#) partners with Sukup Manufacturing Co. to offer a variety of interactions and worksite tour opportunities, including a special worksite tour for NIACC's *Minds On! Hands On! Camp* focusing on women in manufacturing.

3. Job Shadow or Observation

- a. [Cedar Valley Career Connections](#) at Hawkeye Community College offers *Manufacturing Night* events for students and parents to observe and interact with different types of local manufacturing companies together.
- b. [Northwest Iowa Community College](#) hosts hands-on learning workshops through NCC's instructors and ends the event by partnering with [Northwest Iowa Manufacturing Sector Partners](#) to provide real-life industry observations.
- c. Kirkwood Community College [Workplace Learning Connection](#) offers group job shadow opportunities for students interested in engineering, machining, food, agriculture, and other advanced manufacturing fields.
- d. [Workplace Learning Network](#) partners with local agriculture product producers, like United Farmers Cooperative, for job shadow opportunities to observe and explore diverse careers that help feed the world.



4. Internship/Apprenticeship

- a. Rock Valley High School offers students the opportunity to work for a school-owned, student-run [Rocket Manufacturing](#) to manufacture parts and assist local business with projects to meet their manufacturing needs.
- b. The [Career Academy of Pella](#) partnered with Des Moines Area Community College and Vermeer to develop a Registered Apprenticeship program in welding and a robust step-by-step [playbook](#) for others to replicate.
- c. [Iowa Western Community College](#) partnered with PVS Structures (affiliate of Owen Industries) to create and offer the first competency-based Registered Apprenticeship program for Welding in Iowa.
- d. The [Accumold Scholars](#) scholarship and on-the-job training program was developed through a partnership between Des Moines Area Community College and Accumold to develop a long-term talent pipeline solution.

5. Virtual or Project Learning

- a. Ottumwa High School's [SparkTank](#) is a project-based experience that connects students with local manufacturers and businesses to solve real-world problems through authentic learning opportunities.
- b. [WIN at Western Iowa Tech Community College](#) and the [Iowa Valley Intermediary Program](#) offer local schools access to [www.VirtualJobShadow.com](#) to explore careers in advanced manufacturing.
- c. The Iowa chapter of [SkillsUSA](#) offers many service projects, competitions, and other activities for students interested in advanced manufacturing, engineering, and other skilled trades.
- d. [Northwest Iowa Community College](#) hosts an annual *Engineering Expo* where teams of students from local high schools build catapults to compete based on set parameters and price range. Local manufacturers judge and honor winners based on accuracy, distance, problem solving, and presentation skills.

6. Non-Traditional Students

- a. [Iowa Vocational Rehabilitation Services](#) offers many innovative ways to introduce manufacturers to potential workers through a range of free services across the state.
- b. [Iowa Jobs for America's Graduates \(iJAG\)](#) works as a pre-apprenticing organization that connects manufacturers to their future workforce, with a specific focus on dropout prevention and school to career solutions in Iowa.
- c. Organizations like [EMBARC](#) and [Lutheran Services of Iowa](#) can provide a connection to a community's underutilized immigrant, refugee, and non-English speaker population.
- d. [Elevate Advanced Manufacturing](#) partners with various educators and employers to offer parent nights to help them understand manufacturing career opportunities available not only to their children, but them as well.

7. Educator & Partner Experiences

- a. [Iowa Central Career Connections](#) partners with Prairie Lakes Area Education Agency to offer externships for educators to gain hands-on experience with local employers.
- b. Indian Hills Community College [Get Connected!](#) partners with the economic development group [Opportunity2](#) to offer a four-day [Educators in the Workplace](#) experience full of tours, presentations, and hands-on experiences.
- c. [Northeast Iowa Community College](#) partners with local employers through Business and Community Boards to present career information at educator professional development days, board meetings, and other community events.
- d. Manufacturers meet on a local or regional basis to collectively address their workforce concerns through industry [sector partnerships](#) that are supported by the Iowa Department of Education.



Section 4: Templates, Checklists, and Other Resources

Sample Liability Waiver Form



Non-Employee Waiver of Liability Manufacturing Observation and Education Programs

As a signatory to this document, I understand and agree to the following:

- 1.** I am a willing participant and understand that my participation and/or involvement in any of the Manufacturing Specialists XYZ (MSXYZ) observation or education programs carries with it the potential for certain risks, some of which may not be reasonably foreseeable.
- 2.** I further acknowledge that these risks could cause me, or others around me, harm, including, but not limited to, bodily injury, damage to property, or emotional distress.
- 3.** I understand that the appropriate accident and liability insurance is the responsibility of the participant.
- 4.** I agree to release, indemnify, and hold harmless MSXYZ, as well as all its employees, agents, representatives, successors, etc. from all losses, claims, theft, demands, liabilities, causes of action, or expenses, known or unknown, arising out of my participation in any of the MSXYZ manufacturing observation or education programs.
- 5.** It is understood that during my participating in this event I will meet many exceptional MSXYZ employees. I agree that I will not actively solicit or recruit those employees for the purpose of leaving MSXYZ for the employ of my current or future employer.

Participant Signature

Date

Printed Name





Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Preferred Phone: _____ Date of Birth: _____

E-mail Address: _____

Name of School: _____ Year in School: _____

If you are under 18, please list name and contact information for parent / legal guardian:

Name: _____

Relationship: _____ Phone: _____

Parent / Guardian Signature: _____

Job shadows are generally scheduled on Tuesday, Wednesday or Thursday mornings from 8:30-11:30 a.m.

Please list three available dates available to job shadow. NOTE: Staffing and work schedules dictate when a job shadow is scheduled. Do NOT expect the job shadow to be scheduled as soon as the application/ forms are returned. Typically, it takes one to two weeks to find a date that works in both your and the unit/department staff schedule.

List available dates: Date: _____ Date: _____ Date: _____

Occupation or Department you want to shadow: _____

If known: Name of person you would like to shadow with: _____

Briefly describe your reason for wanting to job shadow: _____

Do you have any limitations or special needs which need accommodation? Explain: _____

Have you ever volunteered or been employed at MSXYZ or any affiliate/partner companies? _____

Yes / When: _____

Do you have family member employed at MSXYZ or any affiliate/partner companies? _____

Yes / Name: _____

Emergency Contact Name (1): _____

Relationship: _____ Phone: _____

Emergency Contact Name (2): _____

Relationship: _____ Phone: _____

The information provided on this application is true and complete to the best of my knowledge.

My typed name below shall have the same force and effect as my written signature

Date: _____ Signature: _____





Letter of Nondisclosure and Confidentiality Agreement

By signing this letter of nondisclosure and confidentiality, I am acknowledging my obligation to maintain strict personal and professional privacy and confidentiality measures as defined in Manufacturing Specialists XYZ (MSXYZ) policies. I shall use my access to information, business practices, and advanced technology in accordance with MSXYZ policy, legal, and regulatory requirements. Any person distributing confidential information (visual in nature or otherwise) about MSXYZ business practices, personnel, or technology is in violation of MSXYZ policies and is subject to potential procedural and legal action.

I agree that I shall not, directly or indirectly, disclose or furnish to any person, school, corporation, or governmental agency any customer, personnel, supplier, or business partner information or MSXYZ's business information (visual in nature or otherwise) except as it pertains to a requirement of my position.

Specific guidance for the use of data or information include, but are not limited to the following:

- I shall not post pictures, videos, or other visual data or information on my, my school's, or another person's personal or professional social media account, website, or other digital tool (i.e. Facebook, Instagram, Snapchat, twitter, etc...) without expressed written consent and approval by MSXYZ.
- I shall not tag, quote, or otherwise label myself, my school, or MSXYZ on my, my school's, or another person's personal or professional social media account, website, or other digital tool (i.e. Facebook, Instagram, Snapchat, twitter, etc...) without expressed written consent and approval by MSXYZ.
- I shall not reproduce any printed or electric data or information for use in any manner other than is pertaining to the administration and operation of MSXYZ.
- I shall not leave equipment, machinery, computers, and other terminals or stations unattended with my log-on active. I understand that I must log-off by setting the machine, equipment, or system to a point where the applications that are confidential cannot be accessed without the next person signing onto the system with their unique credentials.
- I shall not disclose nor share my personal access codes, passwords, and other user identifiers with anyone else. Users should not write passwords down and are encouraged to not use personal passwords for business use.

If, for any reason, I believe confidential information, MSXYZ business practices, or my access codes, badge, or other credentials are known by or being utilized by anyone other than myself, I shall report the situation to my teacher, intermediary, MSXYZ Security, (555) 555-1234 and MSXYZ Human Resources, (555) 555-9876 immediately.

I understand that these policies will be enforced. Failure to comply shall result in my termination of my learning experience, contractual agreements, and/or physical access to the MSXYZ business and facilities.

Participant Signature

Date

Printed Name





Work Experience Training Agreement

Manufacturing Specialists XYZ (MSXYZ) will permit _____ to enter their establishment for the purpose of gaining practical knowledge and experience in the occupation of _____ from _____ to _____.

The training will take place in a vocational setting and must be in accordance with the following conditions:

(Refer to the Participant Roles and Training Plan documentation for additional guidance and expectations)

- 1. _____ while in training, shall be deemed a "student-learner" and shall progress through competencies in order to gain in various phases of work and corresponding academic credit.
2. _____ will show a desire to learn and cooperate with all persons responsible for his/her training and work with a work-site mentor - _____. (name/title)
3. The business will provide _____ hours per week of training. The student-learner's schedule is as follows: Monday _____ Tuesday _____ Wednesday _____ Thursday _____ Friday _____
4. The School-to-Work (STW) Coordinator will make regular visits to the cooperating business for monitoring purposes. At a minimum, there will be a mid-term and a final evaluation. If problems arise with the student, the employer will contact the STW Coordinator before terminating the training. If for any reason MSXYZ no longer desires to continue the training, arrangements will be made to remove the student.
5. COMPENSATION: If applicable, wages paid to the student shall be those, which the employer would pay to a new employee doing the same type of work. This rate is to be the minimum required legal wage with possibilities of advancement. Required wages are due on the regular payday for each pay period. The agreed upon wage will be _____ per hour. The earnings of a student employed under a cooperative training agreement are exempt from both state and federal unemployment during the period of the training agreement. Earnings do not have to be reported and unemployment compensation cannot be claimed by the student.
6. ATTENDANCE: The expectations of a student will be the same as any regular employee. _____ will find appropriate transportation to and from MSXYZ in accordance with all state laws in order to report to the work site daily while school is in session and arrive slightly before the expected time. If an illness or emergency arises, _____ must notify the business and the high school office immediately. If for any reason the student is not needed in the work site, the student will report to school. It is also the student's responsibility to communicate any days that school is not in session due to holidays, breaks, late-starts, or early dismissals. The student is encouraged (though not required) to take advantage of every opportunity available during the placement, which may include extra hours outside of the contracted time. The student must NOT go to work if he/she is absent from school that day.
7. _____ will dress appropriately for the business including safety or health-related clothing if required.

By signing this agreement, I understand that any violation of the contract will count as a "strike" against me. Three strikes are grounds for immediate removal from the program.

Insurance coverage _____ D.O.B. _____
Student-Learner _____ Phone _____ Date _____
Parent/Guardian _____ Phone _____ Date _____
STW Coordinator _____ Phone _____ Date _____
MSXYZ Representative _____ Phone _____ Date _____



Work Experience Training Plan Job Competencies

STUDENT: _____

DATE: _____

JOB TITLE: _____

Rating Scale: 5 - Excellent 4 - Above Average 3 - Average 2 - Below Average 1 - Poor

BASIC JOB SKILLS

1. Arrives on time to work site ready and willing to work	5	4	3	2	1
2. Knows location of the time clock, and clocks in/out correctly with the time card or system daily (if available)	5	4	3	2	1
3. Knows emergency procedures, in general, regarding the business (including the 911 address and telephone number)	5	4	3	2	1
4. Is willing to learn basic knowledge of areas worked in	5	4	3	2	1
5. Greets customers courteously and handles their situation in an appropriate manner	5	4	3	2	1

SPECIFIC JOB SKILLS:

1. Experiences different work options available in the business.	5	4	3	2	1
2. Maintain equipment and facilities	5	4	3	2	1
3. Efficient use of work time (self-starter)	5	4	3	2	1
4. Follows directions and completes tasks with positive attitude	5	4	3	2	1
5. Ability to work with others to complete tasks	5	4	3	2	1

TASKS:

ADDITIONAL COMMENTS (if necessary):

Evaluator signature

Student Signature

Date



Work-Based Learning Employer Planning Checklist

WHY are we doing this? **What are the short- and long-term goals of providing work-based learning?**

- Consider specific goals before doing anything else! (Talent attraction, development, retention, etc.)
- What do you wish more people knew about your company, industry, community, etc.?
- Are there specific metrics to define “success”? (# application increase, % employee satisfaction growth, etc.)
- Consider viewing students as “consultants” who can benefit your company by offering a unique and valuable perspective, who may also represent your target audience. What projects could they help you start or complete?

WHAT will everyone be doing? **How do we keep everyone engaged?**

- Plan engaging, hands-on activities for students that help them ‘experience’ the careers you offer and that may break misconceptions/stereotypes of the industry. Consider things they can’t do or see online or on their own!
- Determine types of work-based learning opportunities you are able/willing provide:
 - Classroom/Guest speakers
 - Career fairs and career experience days
 - “Visit Parents at Work” days
 - Facility/Site tours
 - Informational interviews with students
 - Job shadows/Work observations
 - In-classroom projects/Team challenges
 - On-site student projects/Team challenges
 - Mock interviews/Resume assistance
 - Volunteer experiences
 - Paid or Unpaid internships
 - Summer/Part-Time employment
 - Pre-apprenticeships/Partner with high school or other training provider
 - Apprenticeships (any type)
 - Clinical or Lab experiences
 - On-the-Job training program
 - Mentorship/Sponsorship of a current or prospective student
 - Sponsor career pathway certificates or degree programs at community colleges

WHO will be involved? **Work smarter, not harder, by leveraging other partners’ resources.**

- Determine desired number, grade level, and ages of students for each work-based learning opportunity.
- Connect and secure partners from your local Iowa Intermediary Network contact, community college, Iowa Area Education Agency (AEA), economic/workforce/community development, and/or K-12 school districts.
- Find champions at your company who connect well with youth and are willing to be speakers, tour guides, job shadow hosts, mentors, etc. (Consider employees interested in advancement or who show leadership potential)
- Attend local meetings for sector boards, advisory boards, Intermediary advisory committees, high school and college career and technical program advisory committees, etc. to connect with others and support existing work-based learning initiatives. (Your local community college can assist you in joining with these groups)



WHERE will these experiences take place? What is the best environment or this type of experience?

-  Is travel necessary for participants? Who will provide transportation to/during/from a learning experience?
-  Consider ways to engage educators and parents in the opportunities you offer such as evening/night open houses, STEM externships, educator tours, speaking engagements with educators for professional development, etc.
-  Establish necessary training for participants for each type of work-based learning opportunity you plan to offer on-site (confidentiality, safety, standard operating procedures, etc.).

WHEN will these experiences take place? When is the best time for both you and the students?

-  Schedule times/days that work best for your company to engage in work-based learning. Consider holidays, budgets/fiscal year, class schedules, shift schedules, sports events, etc.
-  Determine information that students should receive in advance such as dress policy, privacy policy, confidentiality, permission slips, etc. (Create a process to distribute and collect signed forms from student/intermediary if needed)
-  Determine if lunch will be included for students (if applicable) or if they are responsible for their own meals and communicate this to intermediary/student. Consider food allergies, sensitivities, and other dietary restrictions.

HOW will we achieve our goals? How do we ensure participants have a positive and lasting experience?

-  Develop policies and procedures for work-based learning at your company/organization. (Intermediaries can help with examples and lessons-learned)
-  Make sure tour groups are not too large! All students should be able to hear, participate, and learn from the experience. (Consider a tour headset system if noise or confidentiality are concerns)
-  Share personal stories about your career path, why you chose this company/career, promotion pathways, actual work-based learning examples and outcomes, etc. Bring real examples of work and products if possible. Students appreciate genuine, authentic interactions.
-  Encourage student questions and be prepared for anything to come out of their mouths!
-  Ensure internal Human Resources is familiar with state and federal codes regarding student learners, including liability and other considerations based on your specific type of organization, products, etc.
-  Train employees working with student learners so they are familiar with "hazardous occupations" orders:
<https://www.youthrules.gov/documents/for-employers/YouthRulesBrochure.pdf>
<https://www.youthrules.gov/support/toolkit/index.htm>
<https://www.youthrules.gov/documents/news/EmployerGuides/EmployerGuideEnglish.pdf>
-  Determine if internship opportunities can be paid or unpaid using Department of Labor standards:
<https://www.dol.gov/whd/regs/compliance/whdfs71.htm>
-  Communicate with educator/intermediary placing student interns to ensure that all required documentation is in place for a student to receive high school/college credit for the experience.
-  Address student learner issues directly with student and involve educator/intermediary when necessary – remember this is a learning experience for the student on how to perform in a professional work environment!



Additional Resources

Iowa Department of Education

<https://www.educateiowa.gov/>

The Iowa Department of Education helps educate, connect, and empower employers and educators to build high-quality work-based learning opportunities by offering a wide range of resources, guidance, advice, and additional information.

Work-Based Learning Guide: <https://educateiowa.gov/sites/files/ed/documents/Iowa%20Work-based%20learning%20guide%20final.pdf>

Iowa School-to-Work Legislation: <https://www.educateiowa.gov/sites/files/ed/documents/Iowa%20School-to-Work%20Legislation.pdf>

Liability and Insurance Report: <https://www.educateiowa.gov/sites/files/ed/documents/Liability%20and%20Insurance.pdf>

Industry-Based Sector Partnerships: SectorPartnerships.EducateIowa.gov

SkillsUSA

<https://www.skillsusa.org/>

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has as skilled workforce. SkillsUSA helps each student excel by providing educational programs, events, and competitions that support career and technical (CTE) in the nation's classrooms

U.S. Department of Labor – Wage and Hour Division

<https://www.dol.gov/whd/>

The Wage and Hour Division was created with the enactment of the Fair Labor Standards Act (FLSA) of 1938 to administer and enforce a wide range of laws which collectively cover virtually all types of employment. The WHD offers an extensive library of forms, fact sheets, presentations, checklists, and other resources to help employers, educators, workers, and other community partners better understand employment laws and their rites.

Hazardous Occupations:

<https://www.dol.gov/general/topic/youthlabor/hazardousjobs>

Fact Sheet #9 – Manufacturing Establishments Under the Fair Labor Standards Act (FLSA) (July 2008):

<https://www.dol.gov/whd/regs/compliance/whdfs9.pdf>

YouthRules! – Preparing the 21st Century Workforce

<https://www.youthrules.gov/>

YouthRules! is an initiative to promote positive and safe work experiences for teens by distributing information about young workers to youth, parents, employers and educators. Components of the initiative include a website, printed materials, outreach events, training seminars and partnering activities.

Occupational Safety and Health Administration (OSHA)

<https://www.osha.gov/youngworkers/index.html>

The Occupational Safety and Health Administration also has a separate section for young workers that focuses on the rights and responsibilities associated with youth employment from the perspective of the young worker, the employer, and the parent or educator. The emphasis on the OSHA website is on the prevention of worksite injuries.



Appendix A: Iowa Work-Based Learning Intermediary Network



www.iowaIN.org



fb.me/IowaIntermediaryNetwork



[IowaIntermediaryNetwork](https://www.instagram.com/IowaIntermediaryNetwork)



[IowaIntermediaryNetwork](https://www.linkedin.com/company/IowaIntermediaryNetwork)



Region	Community College	Intermediary Program
1	Northeast Iowa Community College	Northeast Iowa Career Learning Link
2	North Iowa Area Community College	NIACC Career Connections
3	Iowa Lakes Community College	Connect @Iowa Lakes
4	Northwest Iowa Community College	NCC Workplace Learning Connection
5	Iowa Central Community College	IC Career Connections
6	Iowa Valley Community College District	Iowa Valley Intermediary Program
7	Hawkeye Community College	Cedar Valley Career Connections
9	Eastern Iowa Community Colleges	The Talent Link
10	Kirkwood Community College	Workplace Learning Connection
11	Des Moines Area Community College	Career Discovery Network
12	Western Iowa Tech Community College	WIN
13	Iowa Western Community College	Southwest Iowa Workplace Connection
14	Southwestern Community College	Southwestern's Workplace Learning Network
15	Indian Hills Community College	Get Connected!
16	Southeastern Community College	The Link

* Additional information, program outcomes, and updated contact information can be found at www.IowaIN.org and WorkBasedLearning.EducateIowa.gov.



Appendix B: Community Partner and Resource Matrix

Partner Group	Roles/Participants	Researched (Date/Time)	Contacted (Date/Time)	Engaged (Date/Time)	Committed/ Participating (Date/Time)	Notes
Student	<p>Student (s)</p> <ul style="list-style-type: none"> Student Groups/Clubs Student Organizations - SkillsUSA - Technology Students Association (TSA) 					
Educator	<ul style="list-style-type: none"> Teacher Counselor Administrator School Board 					
Intermediary/ Support	<ul style="list-style-type: none"> Iowa Intermediary Network Workforce Development - Iowa Workforce Development Economic Development - Chamber of Commerce - Regional Economic Development Higher Education - Community College - Public University - Private College 					
Business/Industry	<ul style="list-style-type: none"> Employers Manufacturing Companies Industry/Trade Organizations - Iowa Association of Business & Industry (ABI) - Elevate Advanced Manufacturing 					
Parent/Guardian	<ul style="list-style-type: none"> Parent Legal Guardian Mentor Parent/Teacher Association 					





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*Iowa Association of
Business and Industry*



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