

Thomas Harling

Skilled and Technical Sciences Educator

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Thomas Harling



November 20th, 2022

Principal John Smith

ABC High School

123 Apple Street

City, State Zip Code

Dear Mr./Mrs. Principal

As a recent graduate of the Skilled and Technical Sciences 2+2 program through the University of Nebraska Lincoln, I read your recent posting for a new STS teacher with great interest. My education and experiences align well with the qualifications you are seeking at ABC High School.

I found my passion of skilled and technical science education during my time as a Nebraska SkillsUSA state officer. Through the many years of being a member, SkillsUSA has taught me the value and need for skilled and technical trades. I have devoted my entire life to teaching this very fact. Through a wide variety of classes and experiences, I am eager and confident to get into the classroom and teach my passion to students at ABC High School.

Please review the attached material for additional details regarding my experiences and expertise. I would greatly appreciate the opportunity to meet with you personally, to discuss my qualifications and credentials in further detail. I am confident I will make a valuable addition to your academic team.

In Anticipation,

Thomas Harling

Biography

My name is Thomas Harling and I am an aspiring STS educator. I grew up in Hastings, Nebraska, and graduated from Hastings High School. Growing up I would help out around the farm as well as manage the NTA Homegrounds in Doniphan. I am an active member of SkillsUSA and have served as a Nebraska State Officer, National Student Influencer, National Voting Delegate, and College Chapter President in 2022 and 2023. In 2022, I placed 8th at the SkillsUSA National Leadership and Skills Conference in the cabinetmaking competition. I found my passion for skilled and technical science education during my time as a Nebraska SkillsUSA state officer. Through the many years of being a member, SkillsUSA has taught me the value and need for skilled and technical trades. I plan to complete the STS 2+2 Program at UNL, pursuing a BS in Agricultural Education and a Skilled and Technical Science Education endorsement. I hope to one day teach students the importance of skilled work and train them to be prepared for their future careers.

THOMAS HARLING



I plan to complete the Skilled and Technical Science 2+2 Program through the University of Nebraska at Lincoln, pursuing a Bachelor of Science degree in Agricultural Education and a Skilled and Technical Sciences endorsement. I hope to one day teach kids the importance of skilled work and train them to be prepared for their future careers.

EDUCATION

BS	University of Nebraska Lincoln Agriculture Education ▪ Skilled and Technical Science Endorsement	Expected Graduation: May 2024
	Central Community College – Hastings, NE Skilled and Technical Science Courses ALEC 2+2 Program	May 2022
	Hastings Senior High School – Hastings, NE High School Diploma	May 2020

HONORS AND AWARDS

SkillsUSA Chapter President	2021-2023
Current President for the University of Nebraska Lincoln's SkillsUSA chapter for the 2022-2023 school year. CCC Chapter President (21-22)	
SkillsUSA National Competitor (Cabinetmaking)	2022
Competed at the SkillsUSA national conference in the cabinetmaking competition, in Atlanta. Placed 8 th place competing against the top cabinetmakers in the country.	
SkillsUSA Nebraska State Officer	2019-2020
Served as State Parliamentarian during the 2019-2020 school year. Helped plan and host conferences and competitions throughout the year.	
SkillsUSA National Student Influencer	2019-2020
Modeled and advertised national SkillsUSA products to my followers through social media.	
DECA International Conference Qualifier	2019
Qualified for the 2019 DECA International Career Development Conference in Orlando, Florida	

SKILLED AND TECHNICAL SCIENCE EXPERIENCE/ QUALIFICATIONS/CERTIFICATIONS

1,000 Hour Work Experience

Verified through the University of Nebraska Lincoln in the following fields:

- Architecture & Construction
- Energy & Engineering
- Manufacturing
- Transportation, Distribution & Logistics

Architecture & Construction

- 8th Place at SkillsUSA National Competition (Cabinetmaking)
- OSHA 10-Hour Construction
- CNST 1500- Residential Framing
- CNST 1600- Residential Exteriors
- CNST 1700 Residential Interiors
- CNST 1900- Residential Interior Finish Carpentry

Manufacturing

- Advanced Manufacturing and Design Certificate- Central Community College - Hastings

Transportation

- Schrader TPMS e-Training Course
- WD-40: Cleaning, Storage, and Maintenance of Tools and Equipment Certification
- S/P2 Ethics and You in the Automotive Industry
- S/P2 Land that Job: Interview Skills for Automotive Students
- S/P2 Automotive Service Safety
- S/P2 Automotive Service Pollution Prevention
- S/P2 Land That Job? Building a Resume
- Automotive Lift Institute- Lifting it Right: School Edition
- NC3, Snap-On, Starrett Certified in Caliper Measurement
- NC3, Snap-On, Starrett Certified in Tape and Rule Measurements
- NC3, Snap-On, Starrett Certified in Caliper Measurement
- NC3, Snap-On, Starrett 8 Hour Certification in Tire Pressure Monitoring Systems

PRESENTATIONS AND INVITED LECTURES

Guest Speaker

SkillsUSA Nebraska State Leadership & Skills Conference, April 13, 2023

Discussed the growing demand for Skilled and Technical Science Educators in Nebraska to 2,000+ students/SkillsUSA stakeholders at the opening ceremony of the State Conference.

Conference Panelist

INEDA Workforce Conference, May 26, 2022

Discussed strategies for recruitment and developing a workplace culture of hiring women, minorities, immigrants, and first-generation US citizens, with an emphasis of finding service and repair technicians to 25-20 business owners.

PROFESSIONAL TRAINING

SkillsUSA- National Leadership & Skills Conference (NLSC)

Leadership Training- Louisville KY, June 19-23, 2019

Developed the following SkillsUSA Framework skills in preparation of my year of service as a state officer: Leadership, Teamwork, Communication, and Job-Specific Skills.

DECA International Career Development Conference

Emerging Leader Series- Orlando FL, April 27-30, 2019

Attained 21st Century Skills in the areas of collaboration, communication, critical thinking, and creativity with thousands of students from around the globe.

DECA- Central Region Leadership Conference

Minneapolis MN, December 6-8, 2019

Experienced incredible speakers, powerful workshops, cutting-edge exhibits, career-based competitions, and engagement with industry leaders and experts.

DECA- Central Region Leadership Conference

Detroit MI, November 16-18, 2018

Experienced incredible speakers, powerful workshops, cutting-edge exhibits, career-based competitions, and engagement with industry leaders and experts.

WORK EXPERIENCE

Manager- Nebraska Trapshooting Association Homegrounds 2016-Current

Doniphan, NE

- Trap Mechanic: Ensure that trap machines are working properly
- Shoot Manager: Hire/Manage 50+ Employees during shooting events
- Groundskeeper: Keep the grounds looking nice

Farmhand- L&O Farms

Winter Months 2020-Current

Hildreth, NE

- Heavy Equipment Operator: Clearing land, cutting trees
- Maintain Equipment: clean and maintain farm equipment
- Fix Fence

VOLUNTARY SERVICE

Calvary Community Church- Awana Club

Lincoln NE, Fall 2022

Communicating vision, shepherding leaders, managing administrative duties, and communicating to church leadership, parents, children and leaders

SkillsUSA

Nebraska, Fall 2020-Current

Assisting with conferences and competitions by setting up, taking down, and judging competitions

REFERENCES

Greg Stahr, Education Specialist
SkillsUSA Nebraska State Advisor
Nebraska Department of Education
Phone: (531) 510-7370
Email: greg.stahr@nebraska.gov

Joy Trim, Secretary/Treasurer
Nebraska Trapshooting Association
P.O. Box 380
Lewellen, NE 69147
Phone: 308-464-0564
Email: jtrim@vcn.com

Matthew Hurt
Skilled & Technical Sciences Department
1100 West 14th Street
Hastings, NE 68901
Phone: (402) 461-7550
Email: mhurt@hhstigers.com

Brad Moncrief
1239 N Burlington Ave # 200
Hastings, NE 68901
Phone: (402) 462-5353
Email: moncrieflaw@gmail.com

Mr. Harling's Program Philosophy

I will approach challenges by staying informed and up to date on the latest advancements and technologies in STS. This ensures that I am providing students with current and relevant information. I will aim to create an interactive and engaging classroom environment that encourages student involvement. To accommodate the diverse learning styles and abilities of students, I will implement a variety of teaching methods and strategies. Technology would also play a significant role in my teaching, as I would use simulations and virtual labs to enhance student learning and help them better understand complex concepts. Finally, building positive relationships with students is crucial, as it creates a supportive and inclusive learning environment.

I will create strong relationships by always maintaining professionalism. This involves treating students, colleagues, and parents with respect and courtesy. Building positive relationships is a priority, as I believe that creating a supportive and inclusive learning environment and getting to know each student, as an individual, is crucial for success. Effective communication is also essential, so I will strive to communicate clearly and concisely with all parties involved while actively listening to their concerns and questions. By utilizing these steps, I aim to foster positive relationships and create a productive and supportive learning environment for all.

I will provide consistency in my teaching practices. Ensuring the curriculum is consistent and relevant, using consistent methods to evaluate student learning, and maintaining a consistent approach to classroom management, will create a clear, organized, and structured learning environment for my students. This in turn will lead to better student outcomes and a more successful educational experience for all involved.

I will create a structured and organized learning environment through proper procedures. I will prioritize clarity, consistency, and relevance in my classroom. Making sure that procedures are clear and easy to understand, consistently applied, and directly relevant to the subject being taught will help students to stay focused on the content of the course while participating effectively. Utilizing proper procedures will lead to better outcomes and more successful educational experiences for my students.

I will prepare my students for their future through proper teaching and learning. I will utilize SkillsUSA and everything it has to offer. I will push for student engagement in SkillsUSA as it will allow my students to have the opportunity to test their skills and get a better sense of what a career in a specific trade or industry would be like. Being able to connect and work with every student, no matter their career interests or abilities will provide for an engaged classroom environment, allowing proper teaching and learning to take place

Professional Growth Plan**Student Name | Thomas Harling**

Write your program vision statement. Remember, a vision statement is future oriented in present tense. It gives an image or picture of an outcome summarized in a powerful phrase.

Ag Ed Program Vision:**Educator Development Goals:**

Use the space below to write three goals for the term. Include specific skills (characteristic of effective teachers or principle of teaching and learning) you hope to attain and your goal toward acquiring that skill. Identify specific mechanisms (experiences, assignments, interviews, etc.) that will help you reach your goals.

Personal Development Goal	Key Steps	Reflection
Skill: Time Management Goal: Utilize Time Better	1. Set Clear Goals & Prioritize 2. Eliminate Distractions 3. Use calendars and reminders to stay organized 4. Review and adjust schedule regularly ensuring effectiveness 5. Plan and schedule my days the night before	

Professional Development Goal	Key Steps	Reflection
Skill: Communication Skills Goal: Strengthen Skills	1. Develop professional communication skills with teachers and staff. 2. Develop teacher communication skills by manipulating the lessons so they can be to the student's level of knowledge. This will allow for a common language between myself and the students, resulting in peak education. 3. Become a better listener- a huge part of being a good communicator is being a good listener. Active listening will allow me to be a better communicator in the classroom and out. 4. Develop student-teacher relationships by getting to know the students. This will be shown by students being comfortable with me. 5. Develop the language of a teacher. I hope to be more professional in the way I present myself. 6. Practice teacher communication by giving numerous lessons.	

Community Development Goal	Key Steps	Reflection
Skill: Demonstration Goal: Improve skills	<ol style="list-style-type: none">1. Give numerous demonstrations/lessons over different topics.2. Demonstrate lessons to all four grade levels.3. Find the best way to relate the lesson with the students.4. Familiarize myself with the equipment so I my lessons will as clear as possible.5. Find confidence in my teaching.	

Mr. Harling's Program Rationale:

Goal: Prepare students for their future careers in trades by providing them with hands-on learning opportunities, utilizing various teaching styles to cater to different learning needs, and exposing them to different trades and career paths through SkillsUSA. The program helps students make informed decisions about their future careers by providing them with comprehensive information about the courses and career paths available and emphasizing language development and collaboration with learners.

My model is designed to align with the program's goals and vision of preparing students for their future careers in trades. Students who are interested in pursuing a career in trades can participate in this program. My model focuses on hands-on learning, which provides students with opportunities to develop practical skills that they can apply in the workforce. By using various teaching styles that cater to different learning needs and styles, my model ensures that all students have access to the skills and knowledge they need to succeed. Work-based learning experiences, such as internships and job shadowing, are also utilized to expose students to different trades and career opportunities. Through these hands-on experiences, students gain a better understanding of what is expected of them in the workforce and can develop the necessary skills to be successful.

My model is designed to support students across the program by providing them with the necessary skills and knowledge to succeed in their future careers in trades. The program caters to students with different learning styles by utilizing various teaching styles such as hands-on learning, lectures, and discussions. The goal is to ensure that every student has access to the learning style that suits them best. Additionally, through SkillsUSA, students can participate in competitions, conferences, and other events that expose them to different trades and career paths. This approach helps to engage students and provide them with valuable experiences that support their career goals. To promote respect and collaboration with learners, my model emphasizes a student-centered approach to learning. By getting to know each student individually and understanding their learning needs, I can tailor my teaching methods to their unique requirements. This ensures that each student feels valued and supported throughout the program.

My model helps students make sense of the available CTE opportunities by providing them with comprehensive information about the courses and career paths available. Students who are interested in pursuing a trade career can participate in this program. I work closely with my students to help them identify their interests and career goals. SkillsUSA is also used to expose students to different trades and career paths. Through SkillsUSA, students can participate in competitions, conferences, and other events that provide them with valuable experiences that help them make informed decisions about their future careers. My model emphasizes language development to ensure that students are equipped with the communication skills necessary to succeed in the workforce. Collaboration with learners is a key aspect of my model, and there is clear back-and-forth feedback between the instructor and the students. This helps to ensure that students are engaged and that their learning needs are being met. By promoting an open and collaborative learning environment, students feel empowered to ask questions and seek support as needed, leading to a more enriching and effective learning experience.

Unit Topic/Framing Question	Standards Met	Student Activities	Activities, Assessments & Accommodations
Course Title: Construction Trades 1 - Mr. Harling Program: Architecture/Construction Description: This intermediate course provides an overview of construction materials, tools, and processes needed for a basic construction project. This course will lay the groundwork for higher-level construction projects and for careers in the construction industry.			
Course Goals: Understand basic construction concepts and techniques, including safety practices, measuring, cutting, and joining materials. Interpret and create simple construction blueprints and diagrams. Demonstrate the use of hand and power tools commonly used in construction. Identify common construction materials and their uses. Apply mathematical concepts to calculate measurements, angles, and areas needed for construction. Work effectively in a team environment, demonstrating communication, problem-solving, and conflict resolution skills. Understand the importance of following ethical and legal guidelines in the construction industry. Develop an understanding of career opportunities in the construction industry and related fields. Explore the importance of sustainability in construction and its impact on the environment. Demonstrate knowledge of workplace safety and occupational hazards in the construction industry.			
Career Readiness Standards Met: Critical thinking and problem-solving skills, Communication skills, Technology skills, and Career planning and management skills.			
Unit 1: STS.HS.10.1 Safety Guiding Question: How do we apply safety principles to the work environment? Course Learning Outcome: Apply safety principles, practices, philosophy, and guidelines to the work environment.			
<p>STS.HS.10.1.a Complete applicable safety assessment with 100% accuracy.</p> <p>STS.HS.10.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.</p> <p>STS.HS.10.1.c Employ eye protection in compliance with Neb. Rev. Statute 79-715.</p> <p>STS.HS.10.1.d Employ the safe application of tools and machines.</p> <p>STS.HS.10.1.e Explain the main hazards that are possible in the lab setting.</p> <p>STS.HS.10.1.f Demonstrate proper handling and storing of materials.</p> <p>STS.HS.10.1.g Demonstrate proper use of a ladder.</p>	<p>Student Activities</p> <p>Assessment Tools</p> <p>Accommodations</p> <p>Career Development Opportunities</p> <p>Work-Based Learning Opportunities</p>	<p>Test</p> <p>PPE</p> <p>Complete a safety assessment checklist for a given lab setting Demonstrate the proper use of different PPE in the lab setting Research and present on the hazards that may be present in a specific lab setting Demonstrate the safe application of tools and machines in the lab setting Role-play different scenarios that involve lab safety and identify potential hazards and appropriate actions Develop and present a plan for storing and handling different materials in the lab setting Practice using a ladder safely in the lab setting</p> <p>Safety assessment checklist with rubric Observation of student use of PPE and safe handling of tools and materials Written or oral explanations of lab hazards and safety procedures Written or oral assessments of proper use of tools and machines Role-play performance and discussion Written or oral plan for material handling and storage Observation of ladder use in the lab setting</p> <p>Providing written or verbal instructions in addition to demonstrations Providing a lab assistant to provide additional support and guidance Allowing extra time for completing safety assessments or lab tasks Providing alternative methods for demonstrating knowledge (e.g. verbal presentation instead of a written report) Including diagrams or videos to support technical concepts and procedures, and providing additional language support as needed</p> <p>Inviting guest speakers from relevant industries to talk about lab safety and career opportunities Participating in a CTSO (Career and Technical Student Organization) that focuses on safety and health Participating in job shadowing or internships in a lab setting Researching and presenting on careers that require lab safety knowledge and skills Visiting local companies or organizations that have a focus on lab safety and health</p> <p>Identifying and analyzing potential hazards in a workplace or community setting Collaborating with local businesses or organizations to develop safety plans and procedures Participating in a job shadow or internship in a lab or industrial setting Volunteering with community organizations to assist with lab safety initiatives Conducting a lab safety audit and making recommendations for improvements</p>	
<p>STS.HS.10.2.a Describe work behaviors needed to be employable.</p> <p>STS.HS.10.2.b Identify employment trends in various construction sectors (e.g., residential, commercial, industrial, energy, green technologies, etc.).</p> <p>STS.HS.10.2.c Identify the responsibilities and characteristics of professionals in the construction industry.</p> <p>STS.HS.10.2.d Identify the training, education, certification, and licensing requirements for various careers in the construction industry</p>	<p>Student Activities</p> <p>Assessment Tools</p> <p>Accommodations</p> <p>Career Development Opportunities</p>	<p>Research and create a list of work behaviors that are essential for employability in the construction industry Analyze current employment trends in various construction sectors and create a report or presentation on the findings Identify and describe the responsibilities and characteristics of professionals in different construction industry sectors (ex. architects, engineers, construction managers, etc.) Research and present on the training, education, certification, and licensing requirements for various careers in the construction industry</p> <p>Written or oral descriptions of work behaviors needed for employability Presentation or report on employment trends in construction sectors Written or oral descriptions of professionals and their roles in the construction industry Written or oral report on the training, education, certification, and licensing requirements for different construction careers</p> <p>Providing written or verbal instructions in addition to demonstrations Providing a lab assistant to provide additional support and guidance Allowing extra time for completing safety assessments or lab tasks Providing alternative methods for demonstrating knowledge (e.g. verbal presentation instead of a written report) Including diagrams or videos to support technical concepts and procedures, and providing additional language support as needed</p> <p>Inviting guest speakers from the construction industry to talk about employability and career opportunities Participating in a CTSO (Career and Technical Student Organization) that focuses on construction and career development Participating in job shadowing or internships in the construction industry Researching and presenting on careers that require skills in the construction industry Visiting local companies or organizations that have a focus on construction and career development</p>	

		<p>Work-Based Learning Opportunities</p> <p>Participating in an apprenticeship or training program in the construction industry Collaborating with local businesses or organizations to develop job readiness skills and work behaviors Participating in a job shadow or internship in a construction setting Volunteering with community organizations to assist with construction projects Conducting a study of the local construction industry and job market</p>
<p>Unit 3: STS.HS.10.3 Construction communications. Guiding Question: What is the 'language' of construction? Course Learning Outcome: Interpret and use construction communication.</p>	<p>STS.HS.10.2.a Describe work behaviors needed to be employable. STS.HS.10.2.b Identify employment trends in various construction sectors (e.g., residential, commercial, industrial, energy, green technologies, etc.). STS.HS.10.2.c Identify the responsibilities and characteristics of professionals in the construction industry. STS.HS.10.2.d Identify the training, education, certification, and licensing requirements for various careers in the construction industry</p>	<p>Student Activities</p> <p>Create a list of work behaviors that are necessary for being employable in the construction industry, and develop a plan for how to improve in these areas Research and analyze employment trends in various construction sectors, and create a report or presentation on the findings Identify the responsibilities and characteristics of professionals in different areas of the construction industry, and create a presentation or report on the findings Research and present on the different training, education, certification, and licensing requirements for various careers in the construction industry</p> <p>Assessment Tools</p> <p>Written or oral descriptions of work behaviors needed for employability Presentation or report on employment trends in construction sectors Written or oral descriptions of professionals and their roles in the construction industry Written or oral report on the training, education, certification, and licensing requirements for different construction careers</p> <p>Accommodations</p> <p>Providing visual aids or graphic organizers to help students organize information Providing written or verbal instructions in addition to demonstrations Providing a lab assistant to provide additional support and guidance Allowing extra time for completing research or presentations Providing alternative methods for demonstrating knowledge (e.g. verbal presentation instead of a written report)</p> <p>Career Development Opportunities</p> <p>Inviting guest speakers from the construction industry to talk about employability and career opportunities Participating in a CTSO (Career and Technical Student Organization) that focuses on construction and career development Participating in job shadowing or internships in the construction industry Researching and presenting on careers that require skills in the construction industry Visiting local companies or organizations that have a focus on construction and career development</p> <p>Work-Based Learning Opportunities</p> <p>Participating in an apprenticeship or training program in the construction industry Collaborating with local businesses or organizations to develop job readiness skills and work behaviors Participating in a job shadow or internship in a construction setting Volunteering with community organizations to assist with construction projects Conducting a study of the local construction industry and job market.</p>
<p>Unit 4: STS.HS.10.4 Summarize building systems and components. Guiding Question: Course Learning Outcome:</p>	<p>STS.HS.10.4.a Identify construction materials needed to complete a project (i.e., dimensional, engineered, and steel. STS.HS.10.4.b Identify different types of fasteners, adhesives, and finishes needed to complete a project.</p>	<p>Student Activities</p> <p>Research and create a list of construction materials needed to complete a specific project, such as building a small shed or bookshelf Identify and categorize different types of fasteners, adhesives, and finishes needed for a particular construction project Participate in hands-on activities to practice using different fasteners and adhesives to assemble a project Analyze the strengths and weaknesses of different construction materials and finishes for various types of projects Create a presentation or report on the properties and appropriate uses of different types of construction materials, fasteners, adhesives, and finishes</p> <p>Assessment Tools</p> <p>Written or oral list of construction materials needed for a specific project Hands-on demonstration of using fasteners and adhesives to assemble a project Presentation or report on the properties and appropriate uses of different types of construction materials, fasteners, adhesives, and finishes</p> <p>Accommodations</p> <p>Providing visual aids or graphic organizers to help students organize information Providing written or verbal instructions in addition to demonstrations Providing a lab assistant to provide additional support and guidance Allowing extra time for completing research or presentations Providing alternative methods for demonstrating knowledge (e.g. verbal presentation instead of a written report)</p> <p>Career Development Opportunities</p> <p>Inviting guest speakers from the construction industry to talk about the importance of selecting appropriate construction materials and finishes for various projects Participating in a CTSO (Career and Technical Student Organization) that focuses on construction and building skills Participating in job shadowing or internships in construction companies or hardware stores Visiting local hardware stores to learn about different types of construction materials, fasteners, adhesives, and finishes Conducting a study of the local construction industry to identify trends in the use of different materials and finishes</p> <p>Work-Based Learning Opportunities</p> <p>Participating in hands-on construction projects that require the use of different materials, fasteners, adhesives, and finishes Volunteering with community organizations that focus on building or construction projects Participating in job shadowing or internships with construction companies or hardware stores Conducting research on the properties and appropriate uses of different types of construction materials, fasteners, adhesives, and finishes</p>
<p>Unit 5: STS.HS.10.5 Demonstrate the building process Guiding Question: Course Learning Outcome:</p>	<p>STS.HS.10.5.a Identify, receive, and inspect materials. STS.HS.10.5.b Apply math functions and formulas to complete tasks. STS.HS.10.5.c Correctly and accurately use tools and equipment to perform material takeoff (MTO) from the drawings and meeting specifications.</p>	<p>Student Activities</p> <p>Practice identifying and inspecting different types of materials used in construction projects Use math functions and formulas to calculate dimensions, quantities, and costs of materials needed for a project Participate in hands-on activities to practice using tools and equipment to perform material takeoff (MTO) from drawings and meeting specifications Build a project using dimensional, engineered, or steel components, following specifications and blueprints Analyze construction drawings and blueprints to determine the appropriate materials and quantities needed for a project</p> <p>Assessment Tools</p>

<p>STS.HS.10.5.d Construct a project using dimensional, engineered, or steel components</p>		<p>Written or oral exams on math functions and formulas related to construction projects Hands-on demonstrations of using tools and equipment to perform material takeoff (MTO) from drawings Performance assessments of building a project using dimensional, engineered, or steel components Analysis of construction drawings and blueprints to determine the appropriate materials and quantities needed for a project</p>
	Accommodations	<p>Providing visual aids or graphic organizers to help students organize information Providing written or verbal instructions in addition to demonstrations Providing a lab assistant to provide additional support and guidance Allowing extra time for hands-on activities or calculations Including diagrams or videos to support technical concepts and procedures, and providing additional language support as needed</p>
	Career Development Opportunities	<p>Participating in a CTSO (Career and Technical Student Organization) that focuses on construction and building skills (SkillsUSA) Participating in job shadowing or internships in construction companies or hardware stores Visiting local hardware stores or construction sites to observe material inspections and takeoff procedures Learning about the different career paths available in construction, such as project management, architecture, or engineering</p>
	Work-Based Learning Opportunities	<p>Participating in hands-on construction projects that require the use of dimensional, engineered, or steel components Volunteering with community organizations that focus on building or construction projects Participating in job shadowing or internships with construction companies or hardware stores Conducting research on the properties and appropriate uses of different types of construction materials, and how to calculate quantities and costs for a project.</p>

Architecture and Construction Cluster

Program Graphic

Mr. Harling

Introduction Course: The student will take an introductory course in either Skilled and Technical Sciences or Housing and Interior Design.

Architectural Design 1: The student will take Architectural Design 1 to gain foundational knowledge and skills in architectural design principles, drafting, and modeling.

Thomas Harling

Construction Trades 1: The student will take Construction Trades 1 to learn the basics of construction techniques, materials, and safety.

Thomas Harling

SkillsUSA: Throughout the program, students can participate in SkillsUSA to better their knowledge and skills in the architecture/construction career cluster. SkillsUSA provides students with opportunities to compete in skill-based competitions, attend leadership conferences, and connect with professionals in the industry. This can help students develop important skills and gain exposure to potential career opportunities.

Thomas Harling

Architectural Design 2: Students will continue their architectural design education by taking Architectural Design 2, where they will learn more advanced design principles and techniques.

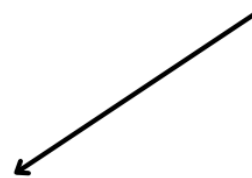
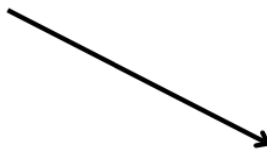
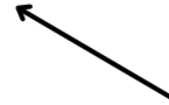
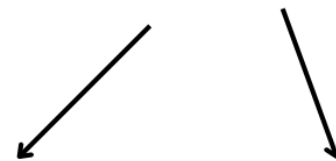
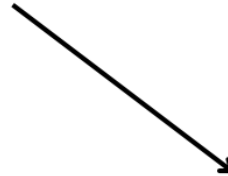
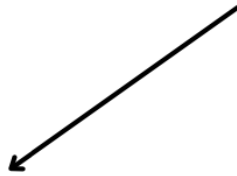
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Construction Trades 2: Students will continue their construction education by taking Construction Trades 2 to further their understanding of construction techniques, materials, and safety.

Thomas Harling

Work-Based Learning: In their final year, students will have the opportunity to participate in work-based learning experiences such as internships, apprenticeships, or other programs to gain real-world experience in the architecture/construction field. This will provide them with valuable experience and help them prepare for a career in the field.

Thomas Harling



Thomas Harling
Skilled and Technical Science
Extended Contract Table

Activity	# of Days	Purpose/Goal
Work-Based Learning (WBL)	5	To provide students with opportunities to gain practical experience in their chosen career field and develop the skills necessary for success in their future careers. Through WBL, students can explore different trades and career paths, while also receiving hands-on training and mentorship from industry professionals.
After-School Tutoring	5	To support students in achieving academic success and developing the language skills necessary for success in their future careers. After-school tutoring provides additional time and support for students to practice and reinforce concepts taught in class, while also receiving guidance and feedback on their language development.
Professional Development	3	To stay current with advances in technology and teaching methods in the STS field, and to continuously improve teaching practices to better serve the needs of diverse learners. Professional development opportunities also provide teachers with strategies for supporting language development and fostering collaboration among learners.
Classroom Preparation	2	To provide a safe and organized learning environment that supports student learning and engagement. Classroom preparation ensures that students have access to the tools and resources necessary for success in their coursework.
Curriculum Development	2	To ensure that the curriculum is relevant, comprehensive, and aligned with current industry standards and best practices. Curriculum development also supports language development by providing opportunities for students to engage in authentic language use and collaborate with their peers.
CTSO Competitions and Events	16	To provide students with opportunities to showcase their skills, network with professionals in their field, and gain exposure to different career paths. CTSO competitions and events support language development by providing opportunities for students to practice and refine their communication skills.
Grant Writing and Fundraising	2	To secure additional funding for the program and provide students with additional resources and opportunities. Grant writing and fundraising efforts also help to foster community partnerships and support for the program, which in turn supports the goal of preparing students for their future careers in trades.
Total	35	

Needs Assessment

Labor Market Data: This includes information on job openings, job vacancies, employment rates, and salaries. This data can be used to identify in-demand jobs and the skills required to fill them.

Education and Training Data: This includes data on the number of individuals enrolled in specific educational and training programs, graduation rates, and the types of degrees or certifications earned. This information can be used to identify areas where there is a shortage of skilled workers and to assess the effectiveness of training programs.

Employer Data: This includes data on the skills and qualifications required for specific job positions, as well as data on the skills and qualifications of current employees. This information can be used to identify skills gaps within specific industries and to develop targeted training programs.

Workforce Development Data: This includes data on the effectiveness of workforce development programs and initiatives, such as job training and apprenticeships. This information can be used to identify successful strategies for closing skills gaps and developing the best workforce development practices.

Demographic Data: This includes data on the age, gender, race, and ethnicity of the workforce. This information can be used to identify disparities in access to education and training programs and to develop strategies for addressing these disparities.

Economic Data: This includes data on the economy's overall health, such as GDP and unemployment rates. This information can be used to assess the impact of skills gaps on the economy and to develop policies to address these gaps.

Available instruments to collect data:

Survey on Skill Requirements: Ask local trade businesses what skills they require in new hires, what skills are in high demand, and what skills are lacking in the current workforce.

Equipment and Technology Needs: Ask local trade businesses what equipment and technology they currently use and what equipment and technology they would like to upgrade or purchase.

Workforce Development: Ask local trade businesses about their current workforce development programs and if they have any gaps that could be filled through partnerships with high schools or technical colleges.

A survey on skill requirements will be an excellent instrument for conducting a needs assessment of local businesses because it allows for the collection of quantitative data on the skills and competencies that are in demand in the local market. A well-designed survey can help businesses

identify the gaps in their workforce and determine the specific skills that they need to develop or hire to remain competitive in their industry. After reviewing the gaps and specific skills that workers lack, I will evaluate my skilled and technical science program and try to focus on teaching the skills which new employees typically lack.

Daily Plan	Instructor: Mr. Harling
Course: Intro to Welding – Ms. Dodson	
Unit Title: Welding Processes	
Lesson Plan Title: Welding Processes & Their Uses - Inquiry	

Contextual/Set	Where have you been?	Where are you going?
	Welding Stations	Processes Intro
Essential Question: (Law 2)	What are the four welding processes?	
Objective: (Law 1, 4)	Identify the four welding processes.	

Learning Activity 1 (Laws 3,4,5)	Estimated Time:	10 Min
Instructor Directions	What will the teacher do?	What will the student do?
Hand out “Welding Processes” Packet	Give Instructions Watch over students	Read all four welding processes & fill out the provided chart

Summary (Law 6,7)	Transition
Essential points to summarize	Essential connections to the next Objective. (Scaffold)
- What are the four welding processes?	- Certain scenarios use different welding processes.

Contextual/Set	Where have you been?	Where are you going?
	Processes Intro	Welding Processes Applications
Essential Question: (Law 2)	How can a welder determine which welding process is most suitable for a particular project?	
Objective: (Law 1, 4)	Students will be able to analyze different welding processes and choose the appropriate technique for specific projects.	

Learning Activity 2 (Laws 3, 4, 5)	Estimated Time:	15 Minutes
Instructor Directions	What will the teacher do?	What will the student do?
Instruct students to pair up and discuss their charts. When completed, move onto the “Welding Pictures” slides.	Explain to students that they will be playing the role of a welder who has to determine which process to use based on the environment. Present “Welding Pictures” slides to the class. Ask plenty of questions “Why”	1. Discuss charts with a partner 2. With a partner, analyze the posted pictures and determine the most appropriate welding method.

Summary (Reflection) (Law 6, 7) (End of the class)
Ask the class as a whole: What are the four welding processes? (Tell students to turn papers over)

How can a welder determine which welding process is most suitable for a particular project? - Discuss

Materials, Supplies, Equipment, References, and Other Resources: (Law 1)

Powerpoint, Pencil/Paper

Name _____

Welding Process	Advantages	Disadvantages	Materials	Joints	Position(s)
MIG Welding					
TIG Welding					
Stick Welding					
Flux-Cored Welding					

Welding Process	Advantages	Disadvantages	Materials	Joints	Position
MIG Welding	High speed, good for thin materials, clean welds	Requires gas shielding, limited to certain materials, difficult for vertical and overhead welds	Steel, stainless steel, aluminum, copper alloys	Butt, fillet, lap, T-joints	Flat, horizontal
TIG Welding	Precise and clean welds, versatile for various materials	Slow welding speed, requires high skill level and experience, requires both hands	Steel, stainless steel, aluminum, titanium, magnesium	Butt, fillet, lap, T-joints	All positions
Stick Welding	Suitable for outdoor use, versatile for various materials	Slow welding speed, low precision, high spatter, slag removal required	Steel, stainless steel, cast iron, nickel alloys	Butt, fillet, lap, T-joints	All positions
Flux-Cored Welding	Versatile for various materials, suitable for outdoor use	Produces a lot of smoke and fumes, slag removal required, limited to certain materials	Steel, stainless steel, aluminum, nickel alloys	Butt, fillet, lap, T-joints	Flat, horizontal, overhead

Evaluation of Classroom Instruction

Student Teacher Observed: ^{Thomas} ~~Scott~~ H.
 UNL Evaluator: Kiley Dodson
 Lesson(s): Welding Processes

Cooperating School: Hastings High School
 Date: 3/24/23

Competency	YES/No	Comments
Connecting with Students		
Was the teacher ready for instruction? Did the teacher: <ul style="list-style-type: none"> • know their content? • use familiar analogies? • practice what they asked students to do? • prepare varied instruction at an appropriate level? 	Yes	Everything was really well put together. From beginning to end it all connected + flowed great.
Were students ready for instruction? Did the teacher: <ul style="list-style-type: none"> • gain student interest and attention before beginning? • pause when attention was interrupted? • exhaust students' attention? 	Yes	Did a good job of welcoming the class + letting everyone know who he was + what they were going to be doing.
Processing Content		
Essential Question Did the teacher use an essential question or bell ringer to establish the focus of the lesson? Did they: <ul style="list-style-type: none"> • know the language of the learners? • <u>USE the question through the lesson to gain feedback from students?</u> • use clear and concise language? 	Yes	"What are the four welding processes?" ~how can a welder determine which one is more suitable?"
Objectives presented Did the teacher state/present the lesson objectives? Did they: <ul style="list-style-type: none"> • communicate a clear objective, using verbs, for what students should be able to do at the end of the lesson? • assess/summarize with students based on the objective? 	Yes	Short sweet + to the point, no questions needed to be asked. - "Identify the four welding processes" ~ "analyze + choose the appropriate process"
Student Engagement in Learning Did the teacher clearly define the activity and excite the learner to engage in the learning process? <ul style="list-style-type: none"> • <u>could students connect to the learning?</u> • did the teacher activate students' thinking and encourage students to do the work of learning? 	Yes	It was a really good idea having the slide show + having them pair up to talk about the ^{why} of why you would pick one process over the other.
Summary/Closure Did the teacher summarize all key elements of the lesson? Did they: <ul style="list-style-type: none"> • assess/summarize with students based on the objective? 	Yes	had them repeat the processes at the end + asked about how they would determine what process they would use

Engaging & Adjusting to Students

<p>Checking for understanding Did the teacher confirm students knew essential concepts from the lesson? Did they:</p> <ul style="list-style-type: none"> • use questions to confirm learning? • solicit specific feedback to help students self-assess? • AND can students reproduce what was taught? 	<p>Yes</p>	
<p>Smooth transitions Did the teacher plan and implement transitions within the lesson to connect within and between ideas?</p>	<p>Yes</p>	
<p>Instructional adjustments Did the teacher adjust to instructional disruptions? Did they:</p> <ul style="list-style-type: none"> • adjust to student behavior? • vary timing/methods in relation to student understanding? 	<p>Yes</p>	<p>picked up speed & adjusted when they started getting a little off topic.</p>
<p>Questioning Did the teacher use questions to effectively check for understanding and encourage students to think?</p>	<p>Yes</p>	<p>asked them to elaborate on their answers.</p>

Additional comments:

Thomas Harling
Mr. Knoll
ALEC 405
24 March 2023

Practicum Lesson #1 – Inquiry

1. Based on your self-observation, what do you think went well?

Based on my self-observation, I feel like the “flow” of the lesson went very well. From the second I walked in, things just seemed to flow smoothly. Students were engaged for most of the lesson. When students did get off-task, I feel like I did a good job of redirecting them back to the lesson being taught. Conversations were rich when students discussed processes with each other.

2. How did the teaching method(s) used positively or negatively impact instructional outcomes?

The very first thing I did was establish my authority. I did the exact same thing Mr. Hurt did the first day that I had his class, as I slammed the door and jumped right into the day, allowing no time for misbehavior after the bell. Ms. Dodson, the cooperating teacher for this lesson, wanted to see how her students would act without her in the room, so at the start of the lesson, she stayed hidden from students. This made it even more important for me to let the students know I was not there to mess around, I was there to teach, and they were going to learn. The students seemed pretty confused as to what was going on because I was not a substitute teacher, but they sure respected me. The students jumped right into the assignment and there were little to no issues. This was my inquiry lesson, so I made sure to ask plenty of questions. I found great value in “picking the brains” of my students. Simply asking a student to explain their answer or asking why they didn’t choose another answer can lead to great and enjoyable conversations!

3. What changes, if any, will you make based off this self-observation of your teaching?

Honestly, I would not change one thing about this lesson. After the lesson was over, I felt great joy because I knew for a fact that every one of those students reached the objectives for the day. Being in front of real students and truly seeing the “lightbulbs” turn on in their heads, reassured any doubt about becoming a teacher.

Daily Plan		Instructor: Mr. Harling
Course:	Precision Measurement	
Unit:	Micrometer (Standard)	
Subject Area:	Precision Measuring Equipment	
Materials, Supplies, Equipment, References, and Other Resources:	Standard Micrometers, Parts to measure	
NE Agricultural/STS Content Standards:	NE Academic Standards:	
Essential Question(s):	Why is it important to know how to make precision measurements?	
Objectives:		
1. Students can identify parts of a micrometer (standard)		
2. Students can measure using a standard micrometer.		

Interest Approach/Set (Preflection)	Estimated Time:	5 min
Let students attempt to make measurements and get familiar with the micrometer.		

Learning Activity 1	Teching Method(s):	PowerPoint	Estimated Time:	10 min
Instructor Directions / Materials		Brief Content Outline		
Discuss the 7 steps to reading a standard micrometer		Present PowerPoint over the 7 steps of reading a micrometer.		

Learning Activity 2	Teching Method(s):	Activity	Estimated Time:	10 min
Instructor Directions / Materials		Brief Content Outline		
Work through problems/ Help as needed		As a class, we will work through the problems on the PowerPoint. Students may come up and walk us through the process themselves.		

Learning Activity 3	Teching Method(s):	Student Practice	Estimated Time:	10 min
Instructor Directions / Materials		Brief Content Outline		
Watch students / Help as needed		Students will practice measuring using standard micrometers.		

Summary (Reflection)- What did we learn and where are we going?	Estimated Time:	5 min
By a show of hands, who feels like they can now confidently read an outside micrometer?		

Evaluation Based on the Learning Outcome Expressed in the Objective(s)

Reading an Outside Micrometer

Precision Measurement - Mr. Harling

Step 1: Identify frame label

- Size?
- Standard or Metric?



1-2 Inch Micrometer

0-25 mm Micrometer

0-1 Inch Micrometer



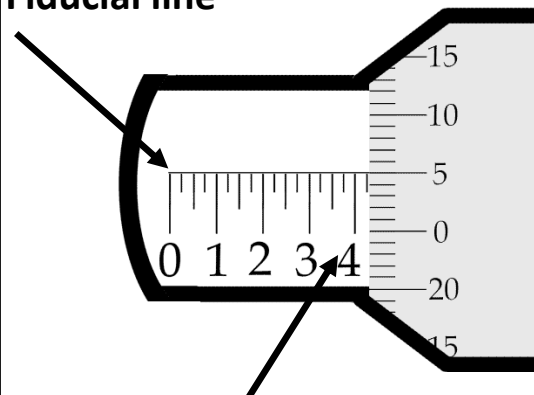
Step 2: Tighten until measuring faces are tight (without movement) to the piece you are measuring, lock when ready using lock nut

Always wipe measuring faces before use

Step 3: Record the largest visible numbered graduation mark on the ***Fiducial*** line.

*Each numbered graduation represents 0.100" *

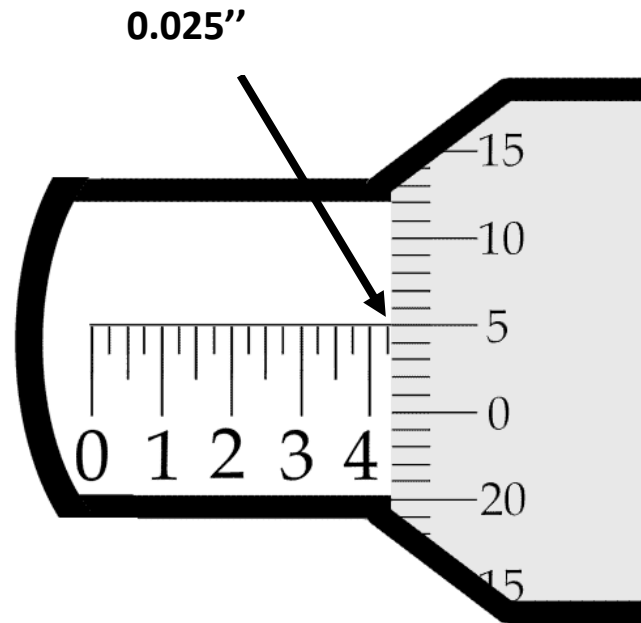
Fiducial line



Largest Graduation mark
(0.400)

Step 4: Record the graduation mark that is between the numbered graduations

*Each line represents 0.025" *



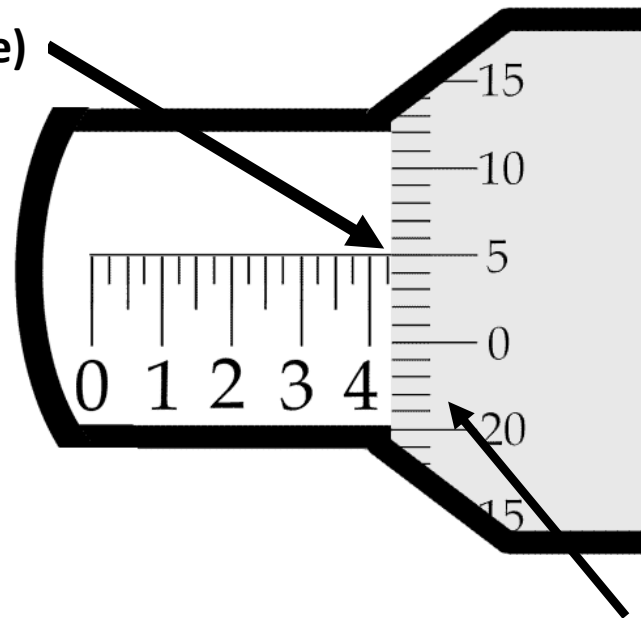
Step 5: Add numbers from step 3 and 4

Example: $0.400 + 0.025 = 0.425$

0.005" (Closest to Fiducial Line)

Step 6: Record the *Thimble* graduation line that is closest to the **Fiducial line**

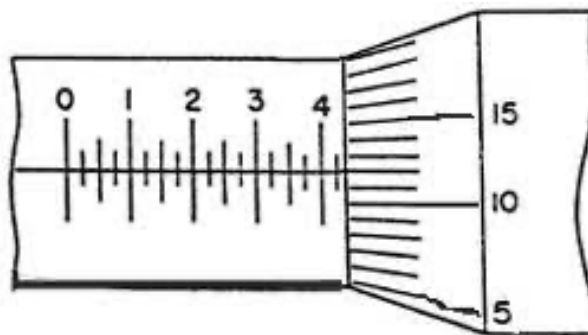
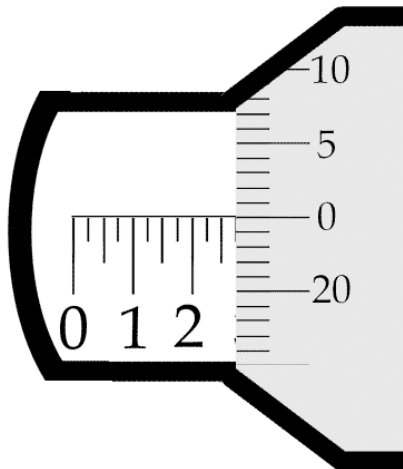
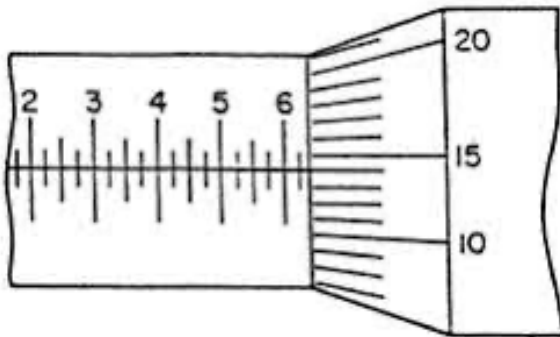
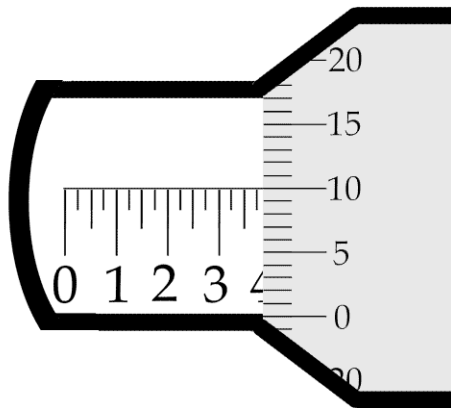
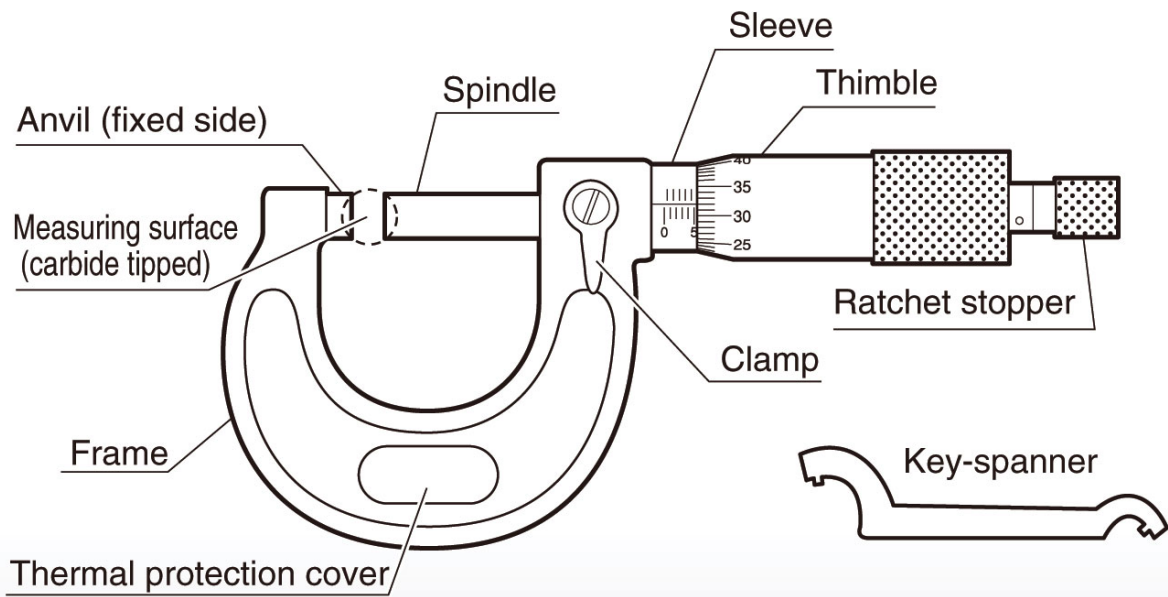
*Each line represents 0.001", there are a total of 25 marks



Thimble Graduation

Step 7: Add up all recorded numbers for final measurement.

Example: $0.400 + 0.025 = 0.425$ \longrightarrow $0.425'' + 0.005'' = \underline{0.430''}$



Evaluation of Classroom Instruction

Student Teacher Observed: Thomas Harling

Cooperating School: Hastings High School

UNL Evaluator: Daniel Birnie

Date: 3/24/23

Lesson(s): Reading An Outside Micrometer

Competency	YES/NO	Comments
Connecting with Students		
Was the teacher ready for instruction? Did the teacher: <ul style="list-style-type: none"> • know their content? • use familiar analogies? • practice what they asked students to do? • prepare varied instruction at an appropriate level? 	Yes	Thomas had all materials needed for the lesson
Were students ready for instruction? Did the teacher: <ul style="list-style-type: none"> • gain student interest and attention before beginning? • pause when attention was interrupted? • exhaust students' attention? 	Yes	Some students had experience with Micrometers, but he gave their full attention and interest.
Processing Content		
Essential Question Did the teacher use an essential question or bell ringer to establish the focus of the lesson? Did they: <ul style="list-style-type: none"> • know the language of the learners? • USE the question through the lesson to gain feedback from students? • use clear and concise language? 	Yes	Mr. Harling taught the lesson ensuring to use language students understood. When needed, he did a good job on expanding the information being presented.
Objectives presented Did the teacher state/present the lesson objectives? Did they: <ul style="list-style-type: none"> • communicate a clear objective, using verbs, for what students should be able to do at the end of the lesson? • assess/summarize with students based on the objective? 	Yes	Before the lesson was presented, students knew what they would be learning today
Student Engagement in Learning Did the teacher clearly define the activity and excite the learner to engage in the learning process? <ul style="list-style-type: none"> • could students connect to the learning? • did the teacher activate students' thinking and encourage students to do the work of learning? 	Yes	Thomas did a great job working around the room checking for understanding and engagement
Summary/Closure Did the teacher summarize all key elements of the lesson? Did they: <ul style="list-style-type: none"> • assess/summarize with students based on the objective? 	Yes	There was one student with no experience with a micrometer. Mr. Harling was able to teach the lesson well and all students were able to read a micrometer by the end. Mr. Harling did a great job working the room, checking for understanding, re-teaching when needed, and praise. Overall, Mr. Harling did a great job.

Engaging & Adjusting to Students

Checking for understanding Did the teacher confirm students knew essential concepts from the lesson? Did they: <ul style="list-style-type: none">• use questions to confirm learning?• solicit specific feedback to help students self-assess?• AND can students reproduce what was taught?	Yes	
Smooth transitions Did the teacher plan and implement transitions within the lesson to connect within and between ideas?	Yes	
Instructional adjustments Did the teacher adjust to instructional disruptions? Did they: <ul style="list-style-type: none">• adjust to student behavior?• vary timing/methods in relation to student understanding?	Yes	
Questioning Did the teacher use questions to effectively check for understanding and encourage students to think?	Yes	

Additional comments:

Thomas Harling
Mr. Knoll
ALEC 405
24 March 2023

Practicum Lesson #2 – Micrometer Reading

1. Based on your self-observation, what do you think went well?

Based on my self-observation, I think the learning itself went well. There was a wide variety of knowledge levels in the class. Some students knew how to use a micrometer, and some had never even heard of one. My PowerPoint was clear and easy to understand, even for those who knew nothing about micrometers. Students were engaged, and none of them gave up. I felt like, after just a couple of examples, all the students had a good understanding of how to read a micrometer.

2. How did the teaching method(s) used positively or negatively impact instructional outcomes?

I used direct instruction for this lesson. This positively impacted the instructional outcome more than any other method would have. When it comes to measurement, especially precision measurement, it would be nearly impossible for an entire class to gather around something to measure in the shop setting. Being able to “blow up” the micrometer on the PowerPoint provided a clear resource to the students. The law of the teacher says that a teacher must truly “know” the lesson for it to be properly taught. When it comes to Micrometers, I feel like there is not much more I could learn about them, so I feel very comfortable discussing/teaching the subject.

3. What changes, if any, will you make based off this self-observation of your teaching?

Although I found the lesson to be satisfactory and didn't feel it required any major changes, there were a few aspects that I would have altered. However, these issues were solely due to the arrangement of the room itself. The lesson was moved to a different room than I was expecting, so I had very little time to prepare and make changes to the setup. The limited space made it uncomfortable for me to move around and I occasionally experienced some awkwardness while presenting (because I was bumping into things). If it were my own classroom, I would have created stations for measurement practice, but since it wasn't, I didn't make any changes.

Daily Plan	Instructor: Mr. Harling
Course: Welding – Mr. Hurt	
Unit Title: Careers	
Lesson Plan Title: Setting up MIG Machine	

Contextual/Set	Where have you been?	Where are you going?
	Welding Stations	MIG Setup
Essential Question: (Law 2)	What are the steps to properly set up a MIG welder?	
Objective: (Law 1, 4)	The learner will be able to identify the steps to setting up a MIG welder. The learner will be able to properly set up MIG Welder using the provided steps.	

Learning Activity 1 (Laws 3,4,5)	Estimated Time:	5 min
Instructor Directions	What will the teacher do?	What will the student do?
Prepare skill-sheets	Introduce EQ & Objectives before leading students to lab.	Listen to directions.

Summary (Law 6,7)	Transition
Essential points to summarize	Essential connections to the next Objective. (Scaffold)
<ul style="list-style-type: none"> - Understand the Objectives and the task for the lesson. 	<ul style="list-style-type: none"> - What are the steps to setting up a MIG welder? - TLW be able to properly set up a MIG welder.

Contextual/Set	Where have you been?	Where are you going?
	Classroom	Lab
Essential Question: (Law 2)	What are the steps to properly set up a MIG welder?	
Objective: (Law 1, 4)	The learner will be able to identify the steps to setting up a MIG welder. The learner will be able to properly set up MIG Welder using the provided steps.	

Learning Activity 2 (Laws 3, 4, 5)	Estimated Time:	10 min
Instructor Directions	What will the teacher do?	What will the student do?
Have a MIG welder ready to go for instruction.	Guide students through skill sheets- explaining each part.	Watch and fill out skill sheets as we go. When completed, students will demonstrate.

Summary (Reflection) (Law 6, 7) (End of the class)
Have students identify and demonstrate the 5 steps to set up the MIG welder.

Materials, Supplies, Equipment, References, and Other Resources: (Law 1)

Pencil, Skill Sheets, MIG Welder.

Gas Metal Arc Welding (MIG) Start-Up Guide

Step 1:

- Are they plugged in in the proper spots?
- Tight Connections?



Step 2:

- Always look & listen for problems.



Step 3:

- Check that regulator is set around 10-15 CFH (If not, ask instructor)



Step 4:



Step 5: Quick-Settings

Material Thickness

Voltage (V)

Wire Feed Speed



1/8"

19

290

1/4"

22

420

***Set "Auto-Set to highest setting for whatever thickness you are welding!**

If all steps are complete, you are **READY** to weld!

Evaluation of Classroom Instruction

Student Teacher Observed: Thomas Hurling Cooperating School: Hunting Senior High
 UNL Evaluator: M. Max Date: 3-31-23
 Lesson(s): MIG Welding Set-up

Competency	YES/No	Comments
Connecting with Students		
Was the teacher ready for instruction? Did the teacher: <ul style="list-style-type: none"> know their content? use familiar analogies? practice what they asked students to do? prepare varied instruction at an appropriate level? 	yes	- Thomas was very prepared. - He created a great Start-up Guide
Were students ready for instruction? Did the teacher: <ul style="list-style-type: none"> gain student interest and attention before beginning? pause when attention was interrupted? exhaust students' attention? 	yes	- He gained & kept student attention & engagement
Processing Content		
Essential Question Did the teacher use an essential question or bell ringer to establish the focus of the lesson? Did they: <ul style="list-style-type: none"> know the language of the learners? USE the question through the lesson to gain feedback from students? use clear and concise language? 	yes	
Objectives presented Did the teacher state/present the lesson objectives? Did they: <ul style="list-style-type: none"> communicate a clear objective, using verbs, for what students should be able to do at the end of the lesson? assess/summarize with students based on the objective? 	yes	Thomas clearly stated the objective of the lesson.
Student Engagement in Learning Did the teacher clearly define the activity and excite the learner to engage in the learning process? <ul style="list-style-type: none"> could students connect to the learning? did the teacher activate students' thinking and encourage students to do the work of learning? 	yes	He did a great job encouraging all students to be part of the lesson - Make students demonstrate
Summary/Closure Did the teacher summarize all key elements of the lesson? Did they: <ul style="list-style-type: none"> assess/summarize with students based on the objective? 	yes	At the end of the lesson he asked the students to repeat back the steps

Great Job engaging the whole class!

- He had students demonstrate their learning!

Engaging & Adjusting to Students

Checking for understanding

Did the teacher confirm students knew essential concepts from the lesson? Did they:

- use questions to confirm learning?
- solicit specific feedback to help students self-assess?
- AND can students reproduce what was taught?

yes

Explained his great concept on other side

Smooth transitions

Did the teacher plan and implement transitions within the lesson to connect within and between ideas?

yes

Instructional adjustments

Did the teacher adjust to instructional disruptions? Did they:

- adjust to student behavior?
- vary timing/methods in relation to student understanding?

yes

Student showed up late & he adjusted well

Questioning

Did the teacher use questions to effectively check for understanding and encourage students to think?

yes

He had students demonstrate their learning

Additional comments:

Thomas Harling
Mr. Knoll
ALEC 405
31 March 2023

Practicum Lesson #3 – MIG Welding

1. Based on your self-observation, what do you think went well?

Based on my self-observation, I feel like I framed this lesson well. Providing skill sheets to the students once again proved to be a successful tactic. A clear and concise skill sheet is a great tool to help the flow of the lessons, plus it's a great resource for the students to fall back on if they forget something later in the course.

2. How did the teaching method(s) used positively or negatively impact instructional outcomes?

As I mentioned before, I found that providing skill sheets to students greatly helped frame where the lesson was going to go. Leaving blanks for the students to fill in was a helpful tactic. One thing that I did not bother to do was establish any bit of authority. In my past lessons, this was never a problem as the students were quiet and listened to me the whole time. This group of students was much different, as some were noisy and did not seem to care. This could have been avoided by asserting my authority better from the start. This lesson felt like it was "too much" demonstration. Demonstrating a process to a large group of students proved to be more difficult than I thought. When I had students demonstrate what they learned, that left the rest of the class to lose focus.

3. What changes, if any, will you make based off this self-observation of your teaching?

There are a few things that I would change after this lesson. To start, I would do a better job of establishing my authority over the students. This will help with respect in the lab setting. In my future classroom, I think it will be ideal for me to teach certain methods by utilizing small groups. Trying to teach an entire welding process to an entire class was difficult, and I will plan to do things differently in my future classroom.

Summary (Reflection) (Law 6, 7) (End of the class)

Have each student teach the lesson themselves, without their skill sheets. Go over the steps as a class when completed.

Materials, Supplies, Equipment, References, and Other Resources: (Law 1)

Pencil, Skill Sheets, SawStop, Tape Measure, Square.

Daily Plan	Instructor: Mr. Harling
Course: Woodworking – Mr. Birnie	
Unit Title: Equipment Set-Up	
Lesson Plan Title: Setting up and operating a SawStop Table saw	

Contextual/Set	Where have you been?	Where are you going?
	???	Table Saw Setup
Essential Question: (Law 2)	What are the steps to properly set up a SawStop table saw?	
Objective: (Law 1, 4)	<p>The learner will be able to identify the steps to setting up a SawStop table saw.</p> <p>The learner will be able to properly set up a SawStop table using the provided steps.</p>	

Learning Activity 1 (Laws 3,4,5)	Estimated Time:	5 min
Instructor Directions	What will the teacher do?	What will the student do?
Prepare skill-sheets	Introduce EQ & Objectives before leading students to lab.	Listen to directions.

Summary (Law 6,7)	Transition
Essential points to summarize	Essential connections to the next Objective. (Scaffold)
<ul style="list-style-type: none"> - Understand the Objectives and the task for the lesson. 	<ul style="list-style-type: none"> - TLW be able to identify the steps to setting up a SawStop table saw? - TLW be able to properly set up a SawStop table saw using the provided steps.

Contextual/Set	Where have you been?	Where are you going?
	Classroom	Lab
Essential Question: (Law 2)	What are the steps to properly set up a SawStop table saw?	
Objective: (Law 1, 4)	<p>The learner will be able to identify the steps to setting up a SawStop table saw.</p> <p>The learner will be able to properly set up a SawStop table using the provided steps.</p>	

Learning Activity 2 (Laws 3, 4, 5)	Estimated Time:	10 min
Instructor Directions	What will the teacher do?	What will the student do?
Have a SawStop ready for instruction.	Guide students through skill sheets-explaining each part.	<p>Watch and fill out skill sheets as we go.</p> <p>When completed, students will teach the lesson themselves. (without their skill sheets)</p>

SawStop Table Saw Start Up Guide

Woods 1 – Mr. Harling



Step 1:

Is the saw _____ ?

- On/Off Switch in the "On" Position
- If the Green light is on, the saw is ready for startup

Red Light?

If there is a red light DO NOT operate the saw

There is most likely a short in the safety circuit

Check the blade for anything that may be coming in contact

Ask the teacher





Step 2:

Inspect the blade for _____.

- Make sure there is nothing on or around the saw blade

Is the blade _____ attached?

- Make sure the blade guard is securely attached and working properly

Step 4:

Check the blade _____.

Is the blade set to your desired angle?

- Use Angle Adjustment Wheel for adjustments
- Use a square to ensure 90°

You never know who was using the saw before you so ALWAYS double check before making a cut



Step 5:

Blade _____.

- Make sure the blade has at least 1/8" Clearance over stock
- Adjust blade using the Height Adjustment Wheel



Step 6: Check the _____.

- Is it tight?
 - Once tightened, it is smart to double check with a measuring device to make sure you have the desired length
- *The measurements on the fence are not always accurate, it is a good habit to always double-check*
- *The fence tends to move when tightening, so keep this in mind*



Final Steps

If prior steps are complete:

- Use caution and start the saw by pulling the red lever
- Look and listen for anything that's not right

If all steps are complete, you are **READY** to make your cut!



Evaluation of Classroom Instruction

Student Teacher Observed: Thomas Harling
 UNL Evaluator: Daniel Birnie
 Lesson(s): Table Saw

Cooperating School: Hastings High School
 Date: 3/31/23

Competency	YES/NO	Comments
Connecting with Students		
Was the teacher ready for instruction? Did the teacher: <ul style="list-style-type: none"> • know their content? • use familiar analogies? • practice what they asked students to do? • prepare varied instruction at an appropriate level? 	<i>yes</i>	Mr. Harling had all materials Ready to go
Were students ready for instruction? Did the teacher: <ul style="list-style-type: none"> • gain student interest and attention before beginning? • pause when attention was interrupted? • exhaust students' attention? 	<i>yes</i>	Mr. Harling did a great Job getting Students ready for instruction. Making sure they were Ready or paying attention
Processing Content		
Essential Question Did the teacher use an essential question or bell ringer to establish the focus of the lesson? Did they: <ul style="list-style-type: none"> • know the language of the learners?.. • USE the question through the lesson to gain feedback from students? • use clear and concise language? 	<i>yes</i>	Wrong Correct. Safe way to Run a Sawstop Table Saw
Objectives presented Did the teacher state/present the lesson objectives? Did they: <ul style="list-style-type: none"> • communicate a clear objective, using verbs, for what students should be able to do at the end of the lesson? • assess/summarize with students based on the objective? 	<i>yes</i>	Safety
Student Engagement in Learning Did the teacher clearly define the activity and excite the learner to engage in the learning process? <ul style="list-style-type: none"> • could students connect to the learning? • did the teacher activate students' thinking and encourage students to do the work of learning? 	<i>yes</i>	Students were engaged. Mr. Harling had a great re-direct when a couple students were getting off task.
Summary/Closure Did the teacher summarize all key elements of the lesson? Did they: <ul style="list-style-type: none"> • assess/summarize with students based on the objective? 	<i>yes</i>	Students were able to Show what was learned.

Engaging & Adjusting to Students

Checking for understanding Did the teacher confirm students knew essential concepts from the lesson? Did they: <ul style="list-style-type: none">• use questions to confirm learning?• solicit specific feedback to help students self-assess?• AND can students reproduce what was taught?	yes	Throughout entire lesson.
Smooth transitions Did the teacher plan and implement transitions within the lesson to connect within and between ideas?	yes	
Instructional adjustments Did the teacher adjust to instructional disruptions? Did they: <ul style="list-style-type: none">• adjust to student behavior?• vary timing/methods in relation to student understanding?	yes	Mr. Harling had students move from behind the screen to in front where they could see better & he could interact with them more.
Questioning Did the teacher use questions to effectively check for understanding and encourage students to think?	yes	

Additional comments:

Mr. Harling does well presenting himself as confident in his teachings & comfortable at the front of the room.

Thomas Harling
Mr. Knoll
ALEC 405
31 March 2023

Practicum Lesson #4 – SawStop Table Saw

1. Based on your self-observation, what do you think went well?

Based on my self-observation, I feel like this lesson went much better than my third lesson in the welding lab. To start, I feel more comfortable and knowledgeable when dealing with woodworking equipment. My confidence was apparent, and I believe the students picked up on that. The students were much more respectful this time compared to when I was demonstrating the welder. It was a different set of students, but it was the last class on a Friday, and as soon as I was finished, the students showed much less respect. I do believe that my confidence kept a crucial role in keeping the students interested and engaged throughout the lesson.

2. How did the teaching method(s) used positively or negatively impact instructional outcomes?

I structured this lesson similarly to my previous one in the welding lab, but with a few modifications. To ensure an effective learning experience, I prepared the learning environment by setting up the necessary equipment and positioning the students in a location where they could easily see and hear me. After presenting the essential information, I experimented with a flipped classroom approach by having the students teach the lesson to each other. This approach proved successful, as all students demonstrated confidence in operating the table saw by the end of the activity, indicating that my objectives had been achieved.

3. What changes, if any, will you make based off this self-observation of your teaching?

Overall, the lesson went smoothly, and I can't say I would make many changes. However, to make the lesson more engaging, I would have each student individually cut some lumber. Given that it is late in the semester and the students have prior experience with the saw, this is not an issue today. However, in the future, all students getting some experience with the saw would greatly improve the lesson, especially for an introductory-level class.

Placeholder for Letters of
Recommendation