



MINNESOTA STATE
Career and Technical Education

FY19 PERKINS GRANT APPLICATION

ANNUAL PERFORMANCE REPORT

Award Year: 2018

Report Period: 7/1/2018 – 6/30/2019

Consortium Name: East Range

Submitted by: Shannon Malovrh and Chris Vito

Submitted Date: 10/14/2019

Goal 1: Designing & Implementing Programs of Study: Goals, Objectives and Strategies

QUESTION: What activities were conducted during the grant year that supported quality Programs of Study (POS)?

FY18-19 – The East Range Consortium was the recipient of a Career Pathway Improvement Program (CPIP) Grant for FY 18-19. This grant specifically allowed us to review programs of study in medical and mining/engineering.

Goal number one was to review our current rigorous program of study – medical/nursing. Our strategy included meeting with instructional staff at both the secondary and post-secondary levels to determine current and changing courses and sequences based on economic needs in our area. We also planned to identify business and industry partners, and career force partners to make sure that we are identifying accurately current and projected industry needs.

Following an in-depth review of the RPOS the committee came to consensus that the East Range Partnership will be able to maintain a Rigorous Program of Study in the medical/nursing area. Secondary Medical Careers Instructor, Margaret Ratai, provided background materials and was extremely helpful in the process as she has taught at both secondary and post-secondary and recently worked in the private sector.

During one of the follow up meetings it was noted that student's need to be exposed to CTE careers at an earlier age. One of the educators pointed out the extensive time area youth organizations put in to sports at a young age; offering camps, trainings, seminars etc. The group came to the conclusion we need to increase the CTE activities that are already being done and even expose younger students in 5th and/or 6th grade. Post-Secondary instructor, Jeff Torrel, suggested he pilot a program next year with his nursing

students. The group was in 100% agreement; the pilot proposal is attached. The goal will be to duplicate this in other CTE areas in the future using this as the model for elementary exposure.

Secondary staff, Greg Foster and Zach Fairchild, volunteered to develop a new more detailed student survey that can be replicated across the consortium. The survey will be used following CTE tours and employer career exploration activities.

Fully Implemented:

- A date of January 11, 2019 was set for the four-hour meeting (11:00 am – 3:00 pm).
- The Mesabi Range College – Eveleth campus was secured as the meeting site.
- Created a tentative agenda that was shared with Shelli Sowles for feedback.
- Invited Shelli Sowles and Jeff Miller (Minnesota State). Both attended.
- Food and beverage arrangements were made.
- An email invitation was sent to over 80 individuals to attend the meeting.
- Received confirmation from invitees.
- Created a luncheon panel discussion for the meeting that included five business/industry partners.
- Finalized meeting agenda.
- Finalized goals and objectives for the meeting.
- Facilitated the medical meeting on Friday, January 11. 28 individuals participated.
- Sent out a link for an evaluation survey (see attached results).
- Surveys were returned within two weeks of the meeting.
- Facilitated a follow up meeting with instructors and administrators from both the secondary and post-secondary levels on April 2 at which we discussed the results of the surveys and reviewed our current rigorous program of study (state components rating form – 04/01/15 form). Approximately 20 individuals attended the meeting.

Goal number two was to create a new rigorous program of study – mining/engineering. The strategy was similar to the nursing/medical and included meeting with instructional staff at both the secondary and post-secondary levels to determine current and changing courses and sequences based on economic needs in our area. Business and industry partners were identified along with career force partners to make sure that we were identifying accurately current and projected industry needs.

After great discussion and reviewing the RPOS components, the group came to the conclusion that given the current rating for rating form (04/01/15) we are not presently prepared to create the new RPOS. However, the group is in favor of revisiting this once the new state guidelines are in place. Part of the concern in this area is the change in concurrent enrollment availability with the new HLC requirement of 18 master degree credits within field. Discussions will likely have to occur to bring back articulation agreements.

CTE instructors will follow the progress of the pilot medical project for 5th and 6th grade students with the intention of duplicating it in other areas. Several Engineering activities are already in place, including Camp Invention (offered by Iron Range Engineering) for elementary students. Mesabi Range will look at expanding summer mini camps to expose students. Mini camps for students in grades 9-12 were added at

the Eveleth campus in June as a result of our meetings. A welding mini-camp was very successful with 13 students participating. Activities included introductions to welding safety, best practices, tools, gases, basic welds and also a welding competition.

2018-19 Post-Secondary Activities:

Event	Date	College Faculty
St. Louis County Fair - MRC	8/8-12/2018	Brenda, Leo, Kevin, Jennifer, Mary Kay, Paul, Rosanne
MRC Welcome Back Picnic	8/2018	Various Faculty and Staff/Students
MRC Eveleth Campus High School Open House	10/17/2018	All Eveleth Faculty
Behind the Mask - MRC	3/5/2019	Randy, Ryan, Clayton
Skills & Knowledge Fair - MRC	3/21/2019	All MRC Eveleth Staff
Home Show - MRC	3/2019	Ryan, Scott, Chris, Rosanne
Iron Range Job Fair - MRC	3/29/2019	Various MRC Staff
Graphic Design Media Boot Camp - MRC	6/19-20/19	Paul McLaughlin
Welding Boot Camp - MRC	6/18-20/19	Randy Washenesky
High School Career Visits – VCC	11/1/18, 12/5//18	Jeff Nelson
Academic Journey Meals – VCC	3/26/19, 4/1-2/19, 5/9/19	Jeff Nelson
Voyageur Career Expo – Rainy River	10/8/2018	Various Rainy River Staff
College Knowledge Night – Rainy River	10/11/18	Various Rainy River Staff
New Student Registration Day – Rainy River	4/5/19	Various Rainy River Staff

2018-19 Secondary Activities:

Event	Date	High School/Schools
Construct Tomorrow-Eveleth-Curling Club	10/8/2019	Eveleth-Gilbert, Cherry, Northeast Range, Northwoods, Littlefork-Big Falls, Mesabi East, Virginia, and Hibbing, Chisholm, Grand Rapids, Floodwood and Nashwauk-Kewatin.
MRC Fall Open House	10/17/2018	Eveleth-Gilbert, Mesabi East, Mountain Iron-Buhl, Virginia, Ely
CTE Works		Virginia High School Instructors- Greg Foster, Zach Fairchild, Jason Strukel and Jade Andrie and CTE Coordinator Shannon Malovrh
Technical Career Day-HCC	12/ /2019	Virginia, Ely, Mesabi East
MN FCS Conference	2/19	Jeannine Bauman and Karla Olson-Line
Skills & Knowledge Fair - MRC	3/21/2019	Mt-Iron Buhl, Eveleth-Gilbert, Virginia, Mesabi East, Ely, Northwoods, Northeast Range, Cherry

Iron Range Job Fair - MRC	3/29/2019	Northeast Range- (most schools on spring break)
ACTE Policy Seminar	3/2019	Coordinator Shannon Malovrh
MACTA	4/19	Coordinator Shannon Malovrh Business Award Winner John Baxter
Culinary Boot Camp	6/19	Jade Andrie
Welding Boot Camp - MRC	6/18-20/19	Randy Washenesky

Dawn Kempainen – Olson and the Early Childhood/Early Childhood SPED Department secured the following grants during this time period:

Office of Higher Education: Growing Tomorrow’s Teachers \$109,482

Iron Range Resources & Rehabilitation Board to Grow Tomorrow’s Teachers and working with child care centers to assist staff in earning a credential from the National Council for Professional Recognition. \$62,392

She developed two new course offerings-particulars are listed below:

The first course, *Exploring Careers in Early Childhood Education*, provides pragmatic experiences for junior and senior high school students. Upon successful completion of the course, high school students will receive college credit from Mesabi Range College.

Exploring Careers in Education is offered “online” and will be taught by a Mesabi Range College instructor. The high school students will have an on-site mentor/supervisor who is a District #2142 employee. Expectations for the MRC instructor and school mentor are listed in the Growing Tomorrow’s Teachers Expectations Checklist.

Exploring Careers in Early Childhood Education course format is comprised of the following components:

- Reading: *101 Careers in Education* by Carlson & Carlson
- Reflections
- Conducting Interviews
- Interview Reflection Pages
- Classroom Observation/Volunteering
- Online Discussions
- College visits and field trips

High School students will have opportunities to document their experiences and show case their learning using an electronic portfolio.

High School students who are successful in their course work and are passionate about pursuing a degree in Early Childhood will have an opportunity to participate in a summer intensive program in which they will be provided a stipend to earn the National Council for Professional Recognition Child Development Associate Credential (CDA). The second new course is *Observation & Assessment of Young Children*. This three-credit course will equip high school students with strategies to use informal and formal assessment and evaluation to understand development in the physical, social, emotional, moral and cognitive domains of young learners.

MRC continued its new academic advising model that includes a more holistic approach to advising. Our advisors help students with other areas including financial aid, housing as well as loans and grants that may be available for them to help to help pay for school. A binder with all programs on both campuses is available so that all advisors are familiar with the programs we offer. This allows our support staff to provide guidance to all students.

Steve Johnson from the Arrowhead Economic Opportunity Agency (AEOA) continued to serve as an advisor with adult education. We continued the renovation of our academic support areas to make them more accessible and welcoming to our students. Students are easily able to identify tutors for specific subject areas. Steve continues to help the students with areas outside of the academic realm including housing, food, transportation, child care, Head Start, job skills and community engagement. Steve is a major contributor to our Welcome Back Picnic for students. This is put on by the area churches.

The “Boot Camp” initiated in FY 19 continued in FY 20 for MRC student-athletes. The “Boot Camp” took place in early August with our women’s volleyball team joining our football team. Steve, again, was a major contributor to this. MRC students would take part in academic refreshers in reading, writing and math. They will be able to get back in the routine of sitting in a classroom for 50 minutes. Steve also uses the “Boot Camp” as an opportunity to let our students know about the community from places to shop and eat to locations to recreate. Local law enforcement

were brought in to meet the students and to develop a positive relationship as friends and allies. Steve surveyed the students who take part to receive feedback.

Graphic Design Media instructor Paul McLaughlin and his students produced a commercial about our Eveleth campus programs. The video is on our website and also on loop on the monitors throughout the campus.

A high school open house was held on the MRC – Eveleth campus on October 17, 2018. Nearly 160 students from area high schools attended the round robin, which allowed them, see each our programs. See attached.

The Mesabi Range College Skills and Knowledge Fair returned to much acclaim after a one-year absence. Well over 100 students attended and took part in competitions in carpentry, emergency medical services, graphic design media, industrial mechanical technology, practical nursing, electrical controls and maintenance, welding, engineering, reader's theatre, early childhood education and business operations and management. Awards were given to first, second and third places.

The "Behind the Mask" welding competition was held on March 5, 2019 with 20 participants taking place. We had hoped for a larger turnout but the event had been rescheduled due to January's cold weather.

MRC Welding instructor Randy Washenesky and Graphic Design Media instructor Paul McLaughlin both held "Boot Camps" for both of their respective programs. The welding camp took place on June 18-20, 2019 and the graphic design media camp took place on June 19-20, 2019. Welding had 12 participants and Graphic Design Media had six.

All of our instructors at MRC, VCC and Rainy River continue to promote their programs (Graphic Design Media, IMT, Welding, Carpentry, ECM, CNA, Paramedic, Law Enforcement, Natural Resources) through high school visits, word of mouth and activities on campus events such as our open houses, program round robins and program shadow opportunities for high school students.

MRC Eveleth campus instructors received additional training to benefit their students in mill, CNC and robotic welder operation.

Vermilion Community College was active with their various programs. Wade Klingsporn (Water Resources) attended the MWOA and Minnesota Rural Water Conferences. Mark Carlson (Outdoor Leadership) acquired immersive paddling and adaptive kayaking equipment for his program. Alyssa Nelson (Wilderness & Park Management) acquired storage sacks and ice saws. CJ Ross (Law Enforcement – SPLERT) added a striking manikin, two youth-size shot guns, an air case, a gun security cabinet and a physician's scale. Lori Schmidt (Natural Resources Technology) obtained snow shoes, bindings, helmets with goggles, neoprene hip waders, maps tap measures and neoprene chest waders. All of this equipment allowed the VCC instructors to provide their students with cutting edge instruction in each of their respective disciplines. Jeff Nelson (Enrollment) promoted VCC's programs through high school visits and Academic Journey meals.

Rainy River hosted a variety of events throughout the academic year. The Voyageur Career Expo centered on three goals: Introduce high school students to career opportunities and the education need to pursue them, motivate students to continue their education or career training, beyond high school, and connect local employers to their future workforce. Rainy River's College Knowledge Night welcomes high school students and their guardians/parents to meet staff and faculty and learn about the typical admission and financial aid application process for any college. New Student Registration Day was held in April. Events for the day included: parent information session, meet RRCC staff and faculty, tour the campus and housing, and free lunch and prizes.

Mr. Foster's 9th Grade-Virginia High School Industrial Technology Class

Mr. Foster's class had the opportunity to learn to wire feed weld, arc weld, torch cut, so Mr. Foster made arrangements to tour L & M Radiator in Hibbing to expose students to these techniques used in industry and manufacturing. Another goal of his was to have students learn about all of the different types of jobs/careers that goes into manufacturing a product such as an industrial radiator, these jobs at L&M Radiator included: welding, assembly, painting, material handling, engineering, R&D, design techs, and more. After touring L&M Radiator he

took this group of freshman on a guided tour of HCC to learn about where students could go to get training for some of these types of careers

Ms Tina Meyers-Littlefork Big Falls High School

The Littlefork-Big Falls Business Professionals of America (BPA) class completed their annual Apprentice fundraiser for a cause. This year's fundraising efforts supported two non-profit organizations (Friends Against Abuse and Servants of Shelter). Dividing themselves into two teams, students were responsible for all aspects of the project including creative fundraising ideas, public relations posters, announcements, communications, meeting deadlines, fiscal responsibilities, and organizing these events with both the elementary and high school staff, students and local businesses.

Having a time frame of only two weeks the teams raised a total of \$2,437.20, which was given respectively to the two non-profit organizations.

QUESTION: Describe the impact of the POS in terms of participation, concentrators, student outcomes, etc.

The East Range Consortium continues to negotiate and work with stakeholders on buy-in and the application of POS and TSA. All colleges and high schools track student data; however, at this time, the collection of data has not been standardized to provide an easy way to view comparable data. Tracking and following student pathways is an important aspect of our collection process; however, at this point, it is still a manual process for tracking. We have the ability to utilize a district institutional research analyst that can provide reporting based on requests. We hope to standardize some of the reporting to generate an annual report for comparison of data and to identify student pathways that were successful.

Enrollment tracking and completion is an ongoing practice at both the high school and college level.

Documentation and assessment is an annual process which helps us identify and understand changes in our student interest based on grade level and location.

QUESTION: What activity (or POS) was the most successful, something that you would repeat or share with others and why?

Many career awareness activities are repeated yearly, as they are very successful and impactful for students. Repetition is a good thing as many activities are targeted for certain age groups/grades so they can sequence through multiple experiences during high school. This year in part due to the additional CPIP grant funding; we were able to focus on building relationships with employers and educators (secondary and post-secondary) for Program of Study development. The two Career Pathway meetings that were held at Mesabi Range with Medial and Mining/Engineering business partners was a huge success. The amount of information shared (both ways) was phenomenal! Relationships were established, creative pathway improvement ideas were shared, and as a result education partners are looking at implementing new opportunities for students working with the business and industry partners that attended. This is definitely worth repeating and expanding into other curriculum areas.

The East Range Consortium collaborated with the Northeast Office of Job Training to host a second Construct Tomorrow Event in Eveleth, Minnesota. Over 250 high school students from four area consortiums/14 high schools attended. Students had real life, hands-on activities provided by 10 local unions. Colleges did not attend this year as requested by Construct Tomorrow. See attached flyer.

Construct tomorrow indicated futuristically they would be looking at every other year event in Eveleth as it hard to be spread across the state for their events. The local planning committee made up of four Northeast Minnesota Office of Job Training staff and secondary Perkins Coordinator Shannon Malovrh came to the conclusion it might be a good time to break away from Construct Tomorrow and perhaps align a new event with the roll out of the 218 Trades website. This would allow more local control which would allow colleges and other industry partners to participate.

A high school open house was held on the MRC – Eveleth campus on October 17, 2018. Nearly 160 students from area high schools attended the round robin which allowed them see each MRC’s programs. The event will be held on October 24, 2019. Based on feedback from last year’s event time has been added to revisit favorite programs. An application station will be added to coincide with free application month.

The Mesabi Range College Skills and Knowledge Fair returned to much acclaim after a one-year absence. Well over 100 students attended and took part in competitions in carpentry, emergency medical services, graphic design media, industrial mechanical technology, practical nursing, electrical controls and maintenance, welding, engineering, reader’s theatre, early childhood education and business operations and management. Awards were given to first, second and third places.

With the previously mentioned CPIP Grant, we held two separate career pathway meetings in medical and mining/engineering. The turnout from business and industry partners was incredible. We had in excess of 30 participants at both sessions which included presentations by state staff and panel discussions by local business and industry CEOs.

The colleges continue to indicate that they would like to see more high school students and their instructors visit the college to tour the technical environment, interact with current college students, and witness hands-on education at the college level. Mesabi Range College continues to push its on-campus events (open house, skills and knowledge fair, boot camps) and program shadow opportunities.

QUESTION: Describe any innovative initiatives. Did your consortium award incentive sub-grants for exemplary performance or to promote innovation? If yes, please describe.

Yes, the East Range Consortium offers Perkins Tech Prep Mini Grants to all secondary consortium schools. Mini grants typically are used for career exploration activities as well as college/industry tours. An example of a mini grant is a tour of Twin Metals and Lake Superior College. See attached.

If you answer “Yes” to any of the following questions, please briefly describe your activities.

QUESTION: Did your consortium:

- expand the use of technology in CTE programs?

Yes. All CTE instructors have the opportunity to request purchase of technology that will enhance their program. They also have the option to use professional development funds to see or visit schools with new technological advancements.

- offer or provide professional development to CTE teachers, faculty, administrators, and/or career guidance and academic counselors?

Yes, professional development is available for everyone to access. This year we supported 5 staff and 2 consortia coordinators to attend CTE Works. Two secondary staff attended MAFCS in Mpls, Secondary coordinator attended ACTE National Policy Seminar for the first time, and MACTA meetings in Minneapolis. Secondary and Post-Secondary Perkins Coordinator participated in the Mentor/Mentee Program. Secondary Perkins Coordinator participated in the Intercultural Learning project and DACUM projects. In addition, supported Perkins CTE instructors from Eveleth-Gilbert and Virginia to tour Alexandria High School as they are pursuing a Career Academy model with the successful referendum passage of a co-district building project.

- provide support for CTE programs that improve the academic and career and technical skills of students through the integration of academics with CTE?

Yes. We have two academic advisors on the MRC-Eveleth campus that are partially funded (35% each) by Perkins and work directly with any secondary or post-secondary students interested in any of our career and technical programs.

- use Perkins funds to support CTE programs that offer experience in and understanding of, all aspects of an industry for which students are preparing to enter?

Yes. Perkins partners have access to Tech Prep mini-grant funding for activities such as Construct Tomorrow or job fairs.

- use Perkins funds to support the improvement or development of new career and technical education courses and initiatives, including career clusters, career academies, and distance education?

Supported Perkins CTE instructors from Eveleth-Gilbert and Virginia to tour Alexandria High School as they are pursuing a Career Academy model with the successful referendum passage of a co-district building project.

- use Perkins funds to provide activities to support entrepreneurship education and training?

Not currently.

Goal 2: Effectively Utilize Employer, Community, and Education Partnerships

QUESTION: How did your consortium support partnerships among local educational agencies, institutions of higher education, adult education providers, and, as appropriate, other entities, such as employers, labor organizations, intermediaries, parents, and local partnerships, to enable students to achieve state academic standards and career and technical skills?

The consortium is made up of a diverse community, business and industry partners, including Chamber, Workforce Center and all secondary districts and three local colleges. *See attached FY18-19 Board*

The consortium board is an active, hands-on board that meets approximately eight times a year to review faculty and/or district requests. In many respects, the grant year begins in the spring as the new Perkins grant is written. Each eligible secondary Perkins faculty member is sent a request form to provide the board a working document of things they are looking to implement the following year, supplies, equipment, professional development travel funds, etc. The principals from each school then review the requests and identify priorities and needs. This is then recommended to the full board and written into the grant with all grant goals. This is a multi-step process but ensures equitable representation and distribution of funds. This is the base of our strong consortium that has been sustained for over 20 years.

In addition to the 8 (on average) regular meetings small groups meet to discuss specific areas of need or to plan events. An example is the spring principals meeting. Each spring all secondary principals meet with the secondary Perkins Coordinator to review Perkins P File information. Districts review their data individually and collectively as a group to find ways to improve performance. It is a wonderful opportunity to discuss what is working and/or what is not and build improvement plans for the future.

QUESTION: Do business and industry partners help connect students to experiential and work-based learning opportunities? If so, what type of experiential/work-based learning is available to students in which programs? How many students were impacted in specific career pathways?

At the secondary level, have not have true work-based learning opportunities; however, initial discussions started in April 2019 with the Laurentian Chamber of Commerce to look at the possibility of designing a high school internship experience with local students that could be implemented in FY19. The Virginia High School was able to follow through with this concept and placed two students during FY19. One student worked at the Laurentian Chamber and another was placed at Parkview Learning Center. Students went through an application and interview process to be placed in each position. The goal is to expand this and create more opportunities in additional businesses next year. See chamber model attached.

Eveleth-Gilbert and Virginia schools passed a referendum in May that will unite the two schools in a collaboration to build one new Career Academy High School. There hope is to replicate something similar to what the new Alexandria High Schools has developed.

The consortium does offer many opportunities for career exploration through Perkins Tech Prep Mini Grants. Mini grants are capped at \$500. See attached examples.

218 Trades has been almost two years in the making. Industry, labor unions, chambers, Northeast Minnesota Office of Job Training (NEMOJT) and the East Range Partnership have collaborated to create a website and print materials for regional schools and community partners to use to promote careers in the trades. Currently NEMOJT career counselors are working on power point presentations that can be used with high schools and local community and business organizations. (See example of one of the flyers) <https://www.218trades.com/>

This is an approximation of actual costs and staff time to put this together from NEMOJT \$30k from MSPW, \$22k from the Grand Rapids Area Chamber, and \$5k from NEMJOT and the RC3 fund. We will end up with another \$20k from IRRR towards the campaign as well.

Staff Time.... 375 hours and counting...as a rough guess of 3 or 4 hours per week for the last 1.5 years. Michelle Ufford, Renee Marconett, Renee Prout, Nina Kangas, Marie Domiano, Dave Cook, Amanda Voller, Clare Balow, and Heath Boe.

The college Carpentry program does engage in a house build project with Habitat for Humanity. The outdoor law enforcement program at VCC partners with the National Park Service to provide students with opportunities for full-exposure learning. When local business and industry return to full production status, heavy industry partnerships will grow from a strengthened economy. VCC also made several purchases for their programs. Cameras for Crime Scene Investigations, Electro status Dust Print Lifters and Body Cameras were purchased for the Law Enforcement Program. The Natural Resources program purchased hip waders and wet suits.

QUESTION: Describe the status and activities of CTE advisory committees in your consortium. The advisory boards serve several important functions.

In our consortium, the advisory boards review program plans and make recommendations to changes in curriculum, certifications, and equipment needs. The CTE advisory boards are an integral component to our program direction and sustainability. The advisory boards are a critical link to business and industry and support for program growth, recruitment, and placement.

Some discussions have led to new employee hires from business and industry. Some of the critical conversations are directly linked to industry certifications (OSHA 30 in carpentry) or low voltage training in millwright. The Graphic Design Program is now investigating additional certifications in Adobe Illustrator.

At various times, we have received equipment from participating business and industry members (secondary and post-secondary). We have expanded on sharing equipment between the high schools and the college. The contributions that our partners make in regards to skills and training, and hiring trends are also a tremendous benefit.

QUESTION: Did your consortium use Perkins funds to support CTSOs? No If so, how?

QUESTION: Did your consortium use Perkins funds to support partnerships between education and business, or business intermediaries, including cooperative education and adjunct faculty arrangements at the secondary and postsecondary levels? If yes, please describe.

Goal 3: Improve Service to Special Populations

QUESTION: What strategies were adopted to overcome barriers for special populations and non-traditional (by gender) learners?

The East Range Consortium has operated from the belief that direct support services through the qualified personnel lead to the best intervention in serving special populations. Direct services through interpersonal contact have led to our best intervention in serving special populations. The ERC consortium continues to explore effective practices in serving special populations.

VCC, RRCC, and MRC have constructed a Student Success Committee to develop a Student Success Plan that can be used across the district. This Student Success Plan is tied directly to the Charting the

Future goals and strategies. This workgroup continues to vet effective strategies and investigate optional interventions to increase services to special populations.

The East Range Partnership also created a new secondary alignment with the local Soroptimist Club introducing their Dream It, Be It Program to local female high school students. The program targets girls in secondary school who face obstacles to their future success. It provides girls with access to professional role models, career education and resources to live their dreams. The topics covered include career opportunities, setting and achieving goals, overcoming obstacles to success and how to move forward after setbacks or failures. Soroptimist conducted research around the world to discover what girls need and what Soroptimists could do to address those needs. The secondary Perkins Coordinator worked with the local Soroptimist President to host student focus groups in two locations. Career Days help student examine their career goals, programs of study options and assists in planning when selecting high school electives. This was program was continued and expanded in FY19 to include Soroptimist Mentoring lunches at both high schools. In addition, several of the girls were able to complete a job shadowing experience with several members.

QUESTION: What support service was provided during the grant year that was most successful in increasing special population and/or non-traditional learner recruitment and retention?

The Perkins dollars continue to support special populations through increased access to learning center services and intensive support services via counseling and supplemental instructional services.

MRC added Steve Johnson from the Arrowhead Economic Opportunity Agency (AEOA) to serve as an advisor with adult education. We also renovated our academic support areas to make them more accessible and welcoming to our students. Students are easily able to identify tutors for specific subject areas. Steve helps the students with areas outside of the academic realm including housing, food, transportation, child care, Head Start, job skills and community engagement. Steve is a major contributor to our Welcome Back Picnic for students. This is put on by the area churches.

Preliminary planning began in FY 18 to start a “Boot Camp” in FY 19 for MRC student-athletes to take place in early August. Steve was a major contributor to this. MRC students would take part in academic refreshers in reading, writing and math. They will be able to get back in the routine of sitting in a classroom for 50 minutes. Steve will use the “Boot Camp” as an opportunity to let our students know about the community from places to shop and eat to locations to recreate. Local law enforcement will be brought in to meet the students and to develop a positive relationship as friends and allies. Steve will survey the students who take part.

Iron Range Engineering held its second annual engineering event designed for high school girls in grades 9-12. About 50 students from around a dozen high attended the event.

QUESTION: Describe how your consortium uses data-driven decisions to target consortium activities to the needs of special populations. What impact have these efforts had on success of special populations?

Data analysis is continuous and provides a foundation for further discussion between the high schools and the college. It allows us to review what we are doing and compare it to initiatives across the country.

QUESTION: How did your consortium provide preparation for non-traditional fields in current and emerging professions and other activities that expose students to high-skill, high-wage occupations?

The Mesabi Range College – Eveleth Campus used some different strategies to expose students to non-traditional fields. At fall orientation, all students on the Eveleth campus went through a round-robin to learn about ALL programs. We hosted a High School Open House in the October 2018. It was also a round-robin format which exposed high school students to ALL programs offered at MRC. The Skills and Knowledge fair was held in March 2019 and provided additional exposure to high school students. A welding “boot camp” was offered in June 2019 and open to all high school students. At each of these events, need for these professions as well as potential salaries were discussed at length.

Rainy River Community College held their Voyageur Career Expo in October 2018. This provided the opportunity for all populations to explore all their programs.

QUESTION: How did your consortium provide support for programs for special populations that led to high-skill, high-wage or in-demand occupations?

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Goal 4: Provide a Continuum of Service Provision for Enabling Student Transitions

QUESTION: Describe the kinds of articulation, dual enrollment, and transfer credit courses offered. What was the level of participation? How are these advanced credit courses transcribed on the student’s high school record and on college transcripts?

VCC, RRCC and MRC have robust CEP programs. MRC also delivers the Applied Learning Institute to 14 different secondary schools. The East Range Consortium served over 300 high school students with dual credit options and offered over seventy-course sections during the 2017-18 year.

QUESTION: To what degree and in what ways are these advanced credit courses transcribed on the students' high school record and on college transcripts?

College level courses are transcribed on the student's official transcript. Concurrent courses are transcribed on both high school and college transcripts. The student earns a grade, and that grade is then placed on the student's transcript. Subsequent grades of A, B, C, D, F are respectively transcribed as such.

QUESTION: Did your consortium use Perkins funds to establish agreements, including articulation agreements, between secondary school and postsecondary career and technical education programs to provide postsecondary education and training opportunities for students? If yes, please describe.

No. We did not.

QUESTION: Did your consortium use Perkins funds to improve career guidance and academic counseling programs and/or to support occupational and employment information resources? If yes, please describe.

Yes. Mesabi Range College employs a counselor who is funded 60% by Perkins funding.

QUESTION: Did your consortium use Perkins funds to support initiatives to facilitate the transition of sub-baccalaureate career and technical education students into baccalaureate programs? If yes, please describe.

Yes. Our counselor assisted students in potential baccalaureate options with programs such construction trades, graphic design media and practical nursing.

QUESTION: Describe other transition activities (secondary to postsecondary; secondary to work; postsecondary to work), courses, or services you provided. What were the lessons learned from these activities?

We have two academic advisors on the MRC-Eveleth campus that are partially funded (35% each) by Perkins and work directly with any secondary or post-secondary students interested in any of our career and technical programs.

Goal 5: Sustain the Consortium

QUESTION: What activities were conducted that helped to improve and sustain the consortium? Are you considering changes to your consortium structure to better serve students? If yes, please describe.

The East Range consortium board is an active hands-on board that meets approximately eight times a year to review faculty and/or district requests. In many respects, the grant year begins in the spring as the new

Perkins grant is written. Each eligible secondary Perkins faculty member is sent a request form to provide the board a working document of things they are looking to implement the following year, supplies, equipment, professional development, travel funds, etc. The principals from each school then review the requests and identify priorities and needs. This is then recommended to the full board and written into the grant with all grant goals. A similar format is being explored at the post-secondary for implementation during FY18. This is the base of our strong consortium that has been sustained for over 20 years. Consortium Supported Actives:

July 2018- DACUM Process- Karl Ohrn- Minneapolis

November 2018 - Minneapolis Perkins Coordinators meeting & CTE Works

January 2019-Medical Career Pathway Meeting

February 2019-Mining-Engineering Career Pathway Meeting

February 2019-MNFACS- Minneapolis, MN- 2 staff members attended - (See evaluation examples)

March 2019 – ACTE National Policy Seminar Secondary Perkins Coordinator attended

April 2019-MACTA-Minneapolis-Secondary Coordinator and Business Partner Award Winner John Baxter attended.

June 2019- Culinary Boot camp- See evaluation

2018-2019- Perkins Intercultural Development Program

2018-2019-CTE Works Professional Development Committee

Consortium Board Meetings-September, November, January, March, April, May, June. Sub committee's meet as needed; Membership and Marketing, Finance and Grants and CTE Scholarship Committee.

QUESTION: Provide an overview of the consortium leadership team (i.e. are they representing all districts, colleges, business and industry, and other community partners)?

The consortium is made up of a diverse community, business and industry partners, including Chamber, Workforce Center and all secondary districts and three local colleges. *See attached FY18-19 Board*

The consortium board is an active, hands-on board that meets approximately eight times a year to review faculty and/or district requests. In many respects, the grant year begins in the spring as the new Perkins grant is written. Each eligible secondary Perkins faculty member is sent a request form to provide the board a working document of things they are looking to implement the following year, supplies, equipment, professional development travel funds, etc. The principals from each school then review the requests and identify priorities and needs. This is then recommended to the full board and written into the grant with all grant goals. This is a multi-step process but ensures equitable representation and distribution of funds. This is the base of our strong consortium that has been sustained for over 20 years.

In addition to the 8 (on average) regular meetings small groups meet to discuss specific areas of need or to plan events. An example is the spring principals meeting. Each spring all secondary principals meet with the secondary Perkins Coordinator to review Perkins P File information. Districts review their data

individually and collectively as a group to find ways to improve performance. It is a wonderful opportunity to discuss what is working and/or what is not and build improvement plans for the future.

QUESTION: Did your consortium use Perkins funds to improve the recruitment and retention of career and technical education teachers, faculty, administrators, or career guidance and academic counselors, and the transition to teaching from business and industry, including small business? If yes, please describe.

Currently, we do not use Perkins funds for recruitment or retention. However, we do use Perkins funding for many staff development opportunities to hopefully retain talented instructors.

QUESTION: To what degree does the consortium seek additional grants (federal, state, or local) or braid various funding streams together to support consortium activities? Please provide examples.

Mesabi Range College submitted a grant on October 1, 2017, to the Office of Higher Education Concurrent Enrollment Grant Program for Fiscal Year 2018. The focus of this grant was to expand educational opportunities in the area of carpentry and construction trades to area high schools via the Concurrent and Applied Learning Institute (ALI) programs. The grant was funded for 105,957 dollars. As a result of this grant two new courses, Carpentry 1242: Safe Operation of Power and Industrial Trucks & Material Handling and Carpentry 1220 Basic Welding Skills were developed and four additional courses were revised to meet the needs of the students, high schools and employers. The grant is currently continued into FY20.

218 Trades has been almost two years in the making. Industry, labor unions, chambers, Northeast Minnesota Office of Job Training (NEMOJT) and the East Range Partnership have collaborated to create a website and print materials for regional schools and community partners to use to promote careers in the trades. Currently NEMOJT career counselors are working on power point presentations that can be used with high schools and local community and business organizations. (See example of one of the flyers) <https://www.218trades.com/>

This is an approximation of actual costs and staff time to put this together from NEMOJT \$30k from MSPW, \$22k from the Grand Rapids Area Chamber, and \$5k from NEMJOT and the RC3 fund. We will end up with another \$20k from IRRR towards the campaign as well. Staff Time.... 375 hours and counting...as a rough guess of 3 or 4 hours per week for the last 1.5 years. Michelle Ufford, Renee Marconett, Renee Prout, Nina Kangas, Marie Domiano, Dave Cook, Amanda Voller, Clare Balow, and Heath Boe.

QUESTION: How would the new definition of size, scope, and quality change the way you spent your Perkins funds this past year? What changes will you need to make in your next submission regarding size, scope, and quality?

The consortium will need more information to specifically answer this question, however as always we will implement any national and/or state requirements.

QUESTION: How is your consortium planning to conduct the comprehensive local needs assessment required for submission with the two-year Perkins V application?

The East Range, Hibbing-Chisholm and Itasca Perkins Consortiums began meeting in May of 2019 to discuss the possibility of becoming one large consortium. Several meetings with consortium staff, administration and state leaders have resulted in the conclusion that this is the best option for our area.

Consortium leaders have continued to meet twice a month and have outlined a three-year plan documenting the steps toward this merger. Specifically, for the two-year application, the three consortia will develop a calendar for all secondary and post-secondary activities throughout the region. New consortia board structure will be developed and secondary fiscal agent will be identified during this time frame. Funding request formats will be identified, reviewed and developed to best meet the needs of all consortium members.

Other Summary Comments

QUESTION: If you were unable to accomplish activities in your plan, indicate reasons why and what you might do differently. How can state staff better support your efforts?

We felt that we were able to accomplish what we set out to do.

QUESTION: What lessons-learned will you incorporate into your two-year application due May 1, 2020?

We have found the bimonthly multi-consortium meetings to be invaluable! Consortium leaders across the state resemble many of our CTE programs, which are stand-alone programs, with a single teacher in a district. The knowledge and experience we are gaining from working so closely together is ultimately going to create lasting friendships but more importantly strong, unified, knowledgeable CTE Perkins Coordinators. We areTrue North Stars!

State Staff Review:

Thank you for submitting a well-written, comprehensive APR. We also appreciated the activity brochures and testimonials. You excel at partnerships and bringing multiple revenue sources to your initiatives such as the OHE Growing Tomorrow's Teachers grant and the braiding of funding from IRRRB and ALI! The documentation of the CPIP funding to review/update the medial POS and create the new mining POS is well done. The Trades website to promote opportunities and show the results of active partnerships is just Best Practice!

Opportunities:

With your neighboring consortia, you have taken on the planning and implementation of new governance structures. There are continuing opportunities to review data collection, analysis and application. The regional CLNA process might provide an avenue to bring some standardization to those activities. Bringing authentic work experiences throughout the region might also be an initiative that is well served with the combining of consortia work.

Contact the program's instructor to schedule a visit!

Nursing/CNA

218-744-7537 Jeff Torrel j.torrel@mesabirange.edu
 218-744-7517 Kathy Bradach k.bradach@mesabirange.edu

EMT/Paramedic

218-749-0324 Laura Korpi l.korpi@mesabirange.edu

Carpentry

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Graphic Design Media

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 218-290-9574 Dan Prijatelj d.prijatelj@mesabirange.edu

Electrical Controls & Maintenance

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 218-744-7496 Cary Sattrang c.sattrang@mesabirange.edu

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Mesabi Range College Learn to Earn

OPEN HOUSE! Grades 9-12—Eveleth Campus
Wednesday, October 17 • 9:30–12:30

Average Placement Rate
89.3%

Learn about our outstanding programs:

Program	Ave. Median Income
Carpentry	\$45,520
Practical Nursing	\$45,520
Certified Nursing Assistant	\$31,980
Paramedic	\$37,860
IMT (Millwright)	\$37,860 - 89,860
Electrical Controls & Maintenance	\$81,220
Welding Technology	\$42,180
Graphic Design Media	\$48,060



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MESABI
 Range College

Lead the way!

Come and compete in the Skills Fair!

**Thursday, March 21 from 9:00 am – 1:00 pm.
Eveleth Campus**

- Mark your calendars and join other area high school students in competitions and informational sessions, more information coming soon!
- Meet and work with instructors and current students.
- Compete and win gold, silver or bronze medals.
- Prize giveaways!
- Free lunch!
- Learn about Mesabi Range College and the benefits of attending your local college and how you can launch your career in just two years or less.
- Compete in the following programs: Nursing, EMT/Paramedic, Carpentry, Graphic Design Media, Industrial Mechanical Technology (Millwright), Welding Technology, and more!

Visit us and Shadow in a Career Program

- Spend a day in a career program.
- Experience the skills you will learn in that program.
- Visit with current students and instructors.
- Shadowing available Monday–Thursday all year long.
- Have free lunch on us.
- Visit and have fun!
- **Contact a program instructor on the back page to set up a day to shadow.**



Lead the way!

CTE Works 2018- Jade Andrie/Virginia High School

The first keynote speaker was Neil Ridley, director of the Georgetown University on Education and the workforce. Neil spoke about how previously, good jobs were considered to be jobs that required a bachelor's degree or higher. Currently we are seeing growth in jobs that still require a post secondary education but not necessarily a college degree. These jobs also pay well and do not require students to go into debt to attain them. What I took from Neil's keynote was that at the high school level we need to be better about encouraging our students to consider getting a certification instead of a degree. They need to be looking at future employability. It doesn't do them any good to spend thousands on a degree if they won't be able to get a job that uses it. Neil didn't exactly say this in his speech but as I was listening to him I thought, if more students got a certificate in a skilled service they would be able to get a good paying job in a field that interests them. After working in that field they may decide to go to college and get a degree but taking this path allows them to be certain that they like their chosen field and earn money to put toward their college degree, hopefully preventing them from graduating with a mountain of debt to look forward to.

The first breakout session I chose to go to was our own, Jason Strukel's "Teach with Your Hair on Fire." This was a great session to get pumped up to teach, to want to make a difference. I think teachers get so bogged down with grading and unnecessary paperwork and meetings that we lose the passion from time to time and need that reminder of why we do all of this in the first place. Besides re-motivating teachers, Strukel had some insight on helping to motivate kids. He says the little things we do, motivates students which invokes an emotional response in the kids and gets them interested. "Give kids and uncommon experience, get an uncommon effort back."

The next session I went to was called "Changing Mindset from 'I Was Hired to Teach' to 'We Can Do This Together.'" This was presented by a group of CTE teachers who saw declining enrollment in their programs and what they did to fix it. Considering the High School FCS program is relatively new and I would love to see it grow, I was curious to see what they did. They had a lot of great ideas for marketing the program and getting industry partners involved. The only problem is that as the only teacher in the FCS department, when am I supposed to do this stuff? In the last 3 years I have added 4 new classes to my schedule, one of those years was during maternity leave. Besides the regular teacher duties we all have, there also needs to be time to go grocery shopping for school. Now I am supposed to add a club on top of all of that. I left this session with some great ideas, I am just overwhelmed at the thought of trying to implement them.

The next session I chose because it was specifically for FCS teachers. It was a look at how the Anoka-Hennepin district was able to partner with a company called Good Acre to gain some staff development for the FCS teachers. It sounded amazing and left me feeling disappointed that these kinds of opportunities aren't available everywhere. The best part of this session was when it was over and I got to talk to one of the presenters for a bit. Sadie was so nice to talk to and I think it was eye opening for us both to just discuss the differences in teaching the same subject in a rural area vs. an urban area. We exchanged contact information so that we could share some resources.

On the second day, I went to was "Masks, Myths, and Invisible Disabilities." I was hoping that this session would be more about mental illnesses because they are so common in our students now. It was really more about chronic illnesses. It was still a good reminder that sometimes people have things going on that we don't know about or can't see.

Culinary Bootcamp
Jade Andrie-Virginia High School
St. Paul College
June 20, 2019

I chose to attend this culinary training because I thought it would be a more hands on workshop that would give me some ideas I could easily bring back to the classroom. While it wasn't as hands on as I had hoped, I did learn a lot and come away with some activities to bring back this coming school year.

My favorite session was the knife skills session. This was by far the most hands on session I attended. I wish this would have been longer, since we didn't get to everything that the instructor had planned. We learned an easy, cheap recipe that is heavy in knife skills, that would be simple and quick enough for students to replicate individually in class.

The next session was a plethora of information, but the most useful was a simple diagram about the food system. Introducing this would be an easy way to start a discussion on the many careers related to the food industry other than the obvious, chef. Another thing I got from this session is that "foods have flavor AND function." I think this statement is an easy way to remind them that there is more to it than just how a single food tastes. You have to consider not only what the individual flavor is, but how it interacts and brings out other flavors or purposes of additional ingredients. Additionally the foods we are eating have functions within our bodies.

The next session was regarding ServSafe, I wasn't sure how helpful this would be but I did have some questions about the certification process for students. I am glad I attended this session and learned from peers. According to ServSafe, I can administer the test in the back of the workbook, grade it myself and give students a certificate. This never seemed very official to me. While I can continue doing this, I found out there is a better, more official way that I will try this coming school year. I will need to order answer sheets so there is a bit of additional cost, but the test is then graded by ServSafe and a more official certificate is issued to students. I will also get a breakdown of the types of questions that students struggled on.

The last session was technically for agriculture teachers but there is a lot of overlap with FACS. I learned about a free resource with prepared lessons that bring science into the FACS classroom. This is something I always want to do but science was never a strong suit of mine, I had no interest as a student but as an adult I see the connection to things I am interested in, like cooking and wish that I had a better background. I think this resource will make it easy to incorporate science into my classroom.

Virginia High School Students Tour Twin Metals and Vermilion Community College

On Thursday, May 9th 2010, twenty seven junior and senior environmental science, chemistry, and physics students from Virginia High School took a field trip to Ely and visited Twin Metals and Vermilion Community College.

At Twin Metals, students learned about the science, process, history, and business of copper mining from Dean DeBeltz, Director of Operations and Safety Director; Nikki Hoffman, Project Geologist; James Devine, Field Operations Coordinator, and Kevin Boerst, Chief Geologist.



Dean DeBeltz explains the Twin Metals project.

Dean shared live details of the project, explaining how Twin Metals has already invested 432 million dollars in the local economy. As indicated by the Minnesota DNR, the mine will produce no acid mine drainage, and no waste rock. The output is estimated to be 275,000 tons of copper concentrate per year. He explained how the mineral deposits are located in the Superior National Forest and in close proximity to the Boundary Waters Canoe Area, which requires a rigorous permitting process that is tightly regulated by local, state, and national professionals. Dean spoke on the subject of regulators and policies students recently only studied in their environmental science

textbooks, including the Bureau of Land Management, Department of Natural Resources, Environmental Protection Agency, Army Corps of

Engineers, US Forest Service, and environmental impact statements.

Nikki informed students about common minerals such as feldspar, quartz, olivine, silicates, and pyrite that are found in the area's bedrock. She showed students the spatial geometry of the copper nickel mineral deposit in northeast Minnesota, while explaining why the location is a perfect candidate for an underground mine. She went on to discuss how copper mining differs from iron mining, including froth floatation-a process that is almost the opposite of the separation processes used by the iron mining industry. Strategic uses for metals such as copper and nickel were also addressed. For example, copper is used in hospitals to coat surfaces because is a natural anti-bacterial agent, and in CO₂-emission-free electric cars. Platinum and palladium are used in catalytic converters and medical instruments. Currently, much of our platinum and palladium are sourced from countries where mining is not carried out sustainably or in a socially responsible manner. Students also learned about the Permanent School Trust Fund from which all public schools in the state receive



funding. In 2016 \$25.6 million dollars went into VHS Juniors Andrew Horvat and Izzy Baggenstoss study samples trust fund (\$21.4 million from mining minerals, obtained for Twin Metal's massive hydrogeologic study of \$4.1 million forest products, \$300,000 real estate). northeastern Minnesota.



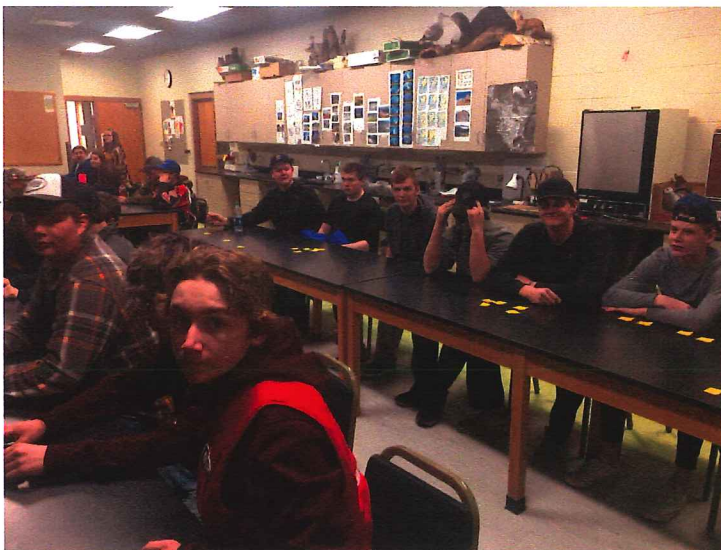
James Devine, Twin Metals Field Operation Coordinator, speaks about core samples in the core sample library.

The professionals expounded upon topics recently learned in the business and science classrooms including: water resources, demographic transitions, urbanization, supply and demand, population growth, mineral assays, elements, trigonometry, 3-D modeling software, igneous rock deposits, mining engineering, chemical engineering, fluid dynamics, tailings, and chemical formulas for minerals containing copper, nickel, platinum, palladium, and gold.

Some of the questions the students asked included: "What does MDH stand for?" and "On the open market, who do you usually sell to?" Another student asked, "Do they have problems with pollution at the mines in Chile?" which prompted the question, "How do you map underground to determine where minerals are?"



Aspiring engineer Maggie Peterson, along with Molly Vagle and Gabrielle Elliot study a mineral sample.

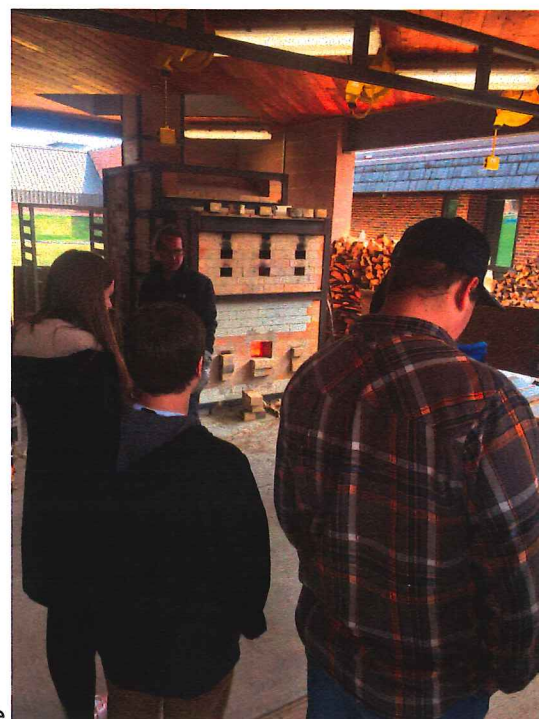
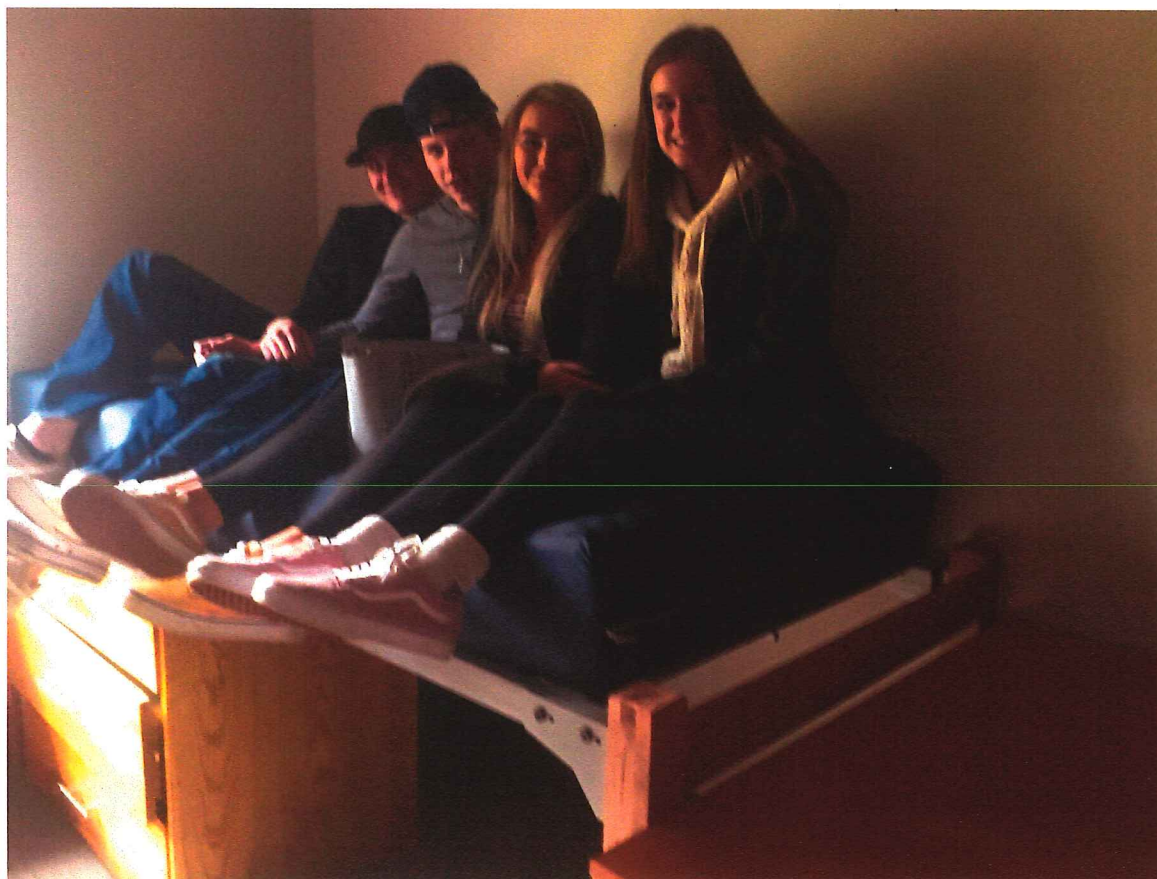


VHS students learning about programs offered at Vermilion Community

After Twin Metals, the students visited Vermilion Community College. Several students at Virginia High School are enrolled in chemistry and physics classes at VHS where they earn college credit from VCC. Students enjoyed a complementary (and tasty) lunch in the cafeteria, toured the campus, and learned about the unique programs offered at VCC including Natural Resources, Outdoor Recreation, Law Enforcement and Emergency Services, Wildland & Wildlife Law Enforcement, and Student Life. They were able to watch an artist in action at the wood fired kiln, and also tour the on-campus housing.

Industry and college based field trips are a strategy for kids to make connections between the classroom and the community, with the intent of showing students opportunities in their local communities. Outside experiences make more informed citizens, while allowing students to make the connection from textbook to the real world. Thank you Twin Metals and Vermilion Community College for helping make this trip happen.

Submitted by Lisa Rudstrom,
Chemistry,
Environmental
Science, and
Physics Teacher at
Virginia High School
on May 9th, 2019.



Juniors Jayden Bernard, Zack Kilen, Cori Ringsred, and Gabrielle Elliot explore the on campus housing available at Vermilion Community College.

Students watch a demonstration at the wood fired kiln at Vermilion Community College

Mesabi Range College
Spring 19 Enrolled Students by Perkins Majors (CIP), with Disability, Gender, and Pell Eligibility Status
data as of 1/10/19

MAJOR_CIP_CODE_1 (Multiple Items)

Sum of Disability 1
 Sum of HEADCOL 195

MAJOR_CIP_CODE_1 (Multiple Items)

Majors by Gender:		Sum of HEADCOUNT	Column Labels	F	M	Grand Total
CIP	Row Labels					
46.0201	Carpentry			1	10	11
13.1015	Early Childhood/Early Childhood Special Education			17	2	19
10.0301	Graphic Design Media			10	13	23
47.0303	Industrial Mechanical Technology			4	34	38
51.3901	Practical Nursing			36	1	37
15.0613	Electrical Controls and Maintenance			3	16	19
48.0508	Welding			6	42	48
	Grand Total			77	118	195

Majors by Pell Eligibility:
 MAJOR_CIP_CODE_1 (Multiple Items)

Majors by Pell Eligibility:		Sum of HEADCOUNT	Column Labels	No	Unknown	Yes	Grand Total
CIP	Row Labels						
46.0201	Carpentry					1	11
13.1015	Early Childhood/Early Childhood Special Education					4	19
10.0301	Graphic Design Media					5	23

47.0303 Industrial Mechanical Technology	13	10	15	38					
51.3901 Practical Nursing	6	3	28	37					
15.0613 Electrical Controls and Maintenance	8	1	10	19					
48.0508 Welding	14	6	28	48					
Grand Total	51	26	118	195					

Source: Minn State ISRS Operational Data Table
S:\jrddata\ocr reviews\mr data files\Spr19_Enr_wMajGendDisabPel_PerksRpt, 1/10/2019

Mesabi Range College – Practical Nursing Program

Preliminary Plan – Service Learning Project

Who: 2nd Semester PN Students

What: Service Learning to Local Elementary Schools (5th Grade)

When: Fall Semester 2019, Spring Semester 2020.

Why: To get nursing students out into the schools to give young students an introduction to health care and nursing.

Where: Eveleth-Gilbert, Virginia, Mesabi East, Mt. Iron-Buhl, Cherry, North Woods (possibly to expand to West Range and Others).

Plan: In NURS 1240 “Transition into Practice”, all students collaboratively will develop a learning plan that is age-appropriate for 5th grade students. The learning plan will include introducing 5th grade students to healthcare and nursing through visual, auditory, tactile, and interactive means. Development of the plan will fall exclusively on the practical nursing students with instructors only providing coordination with the elementary schools, direction on learning theory, and materials. The plan will then be implemented in the local 5th grade classrooms. These learning sessions will last up to 60 minutes in the classrooms.

The students will be able to use these hours towards community service hours which are required in the class. This project also meets the following student learner outcomes and course outcomes for the nursing program and for the class. Below is the language in the NURS 1240 syllabus regarding community service for the class and also a table with the program outcomes and the course outcomes listed in the NURS 1240 course outline.

“Community Service/Support Group Assignment

For this course, you are required to volunteer for **6 hours of community service** and **must attend two hours of some sort support group setting** (8 hours total). The community service does not have to be nursing related, but would probably be the most beneficial. Be creative. Do something that interests you or you are curious about. Please see Kelly if you have questions whether something counts as community service. You cannot be compensated with money for your time whatsoever. Be stewards of your community and show that nurses go the extra mile”. **This project will be added to the language in the above syllabus for Fall 2019.*

Student Learner Outcomes (Program)	Course Outcomes (NURS 1240)
SLO: PROFESSIONAL INTEGRITY AND BEHAVIORS	1. Develop a plan which includes strategies and resources to demonstrate the importance of seeking lifelong, continuous learning for one's self as a LPN. 2. Value ethical, legal, and regulatory bodies within the PN scope of nursing practice.
SLO: TEAMWORK AND COLLABORATION	4. Recognize conflict and when to report conflict to supervisor.
SLO: QUALITY IMPROVEMENT	5. Clarify the LPN role in providing input in the development and revision of policies/procedures to improve patient care outcomes.

Greg Foster-Virginia High School

On Saturday May 4th I had a very unique opportunity to tour Camp Ripley. The Army National Guard has an educator day at Camp Ripley, where 50 plus educators from all over MN got to take part in. My wife Corrie was able to attend as well since she is an educator and works for the St. Louis County Schools-Cherry School.

We flew in a Blackhawk helicopter from Duluth to Camp Ripley. This was an amazing ride, which included 120 mph tree top elevations while making 60 plus degree banking turns, which was by far the highlight of the day!

Once at Camp Ripley we learned about the National Guard and what all they can offer to our students. We toured thru several different areas of Camp Ripley and learned about many different types jobs that enlisting soldiers can choose from based on their test scores and interests. We toured thru their huge maintenance facility and got to climb around on and look at all of the large equipment and tanks. We then went to an outdoor training area where they had a staged helicopter crash site where newly enlisted National Guard members were practicing to rescue wounded soldiers. We also toured through the educator center and learned about Camp Ripley and how educators and students can make use of Camp Ripley facilities to help educate students. Lastly we got to watch a tank do some maneuvering and firing.

This as an excellent day, the only bad part of the day is that lunch consisted in eating an MRE-Meals Ready to Eat" it actually wasn't that bad, and it certainly added to the experience!



CNC Demo

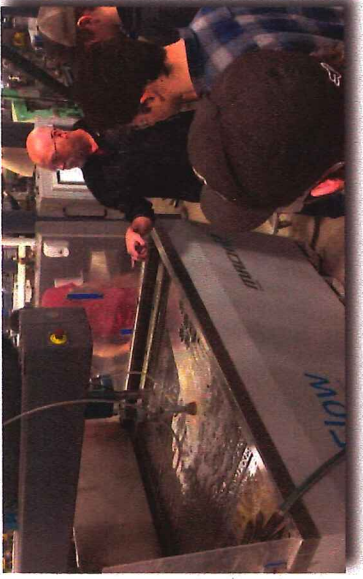


LSC Machine Shop

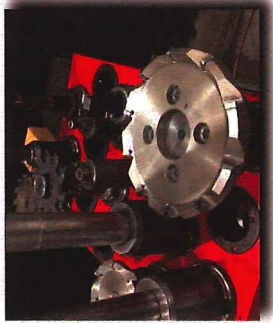
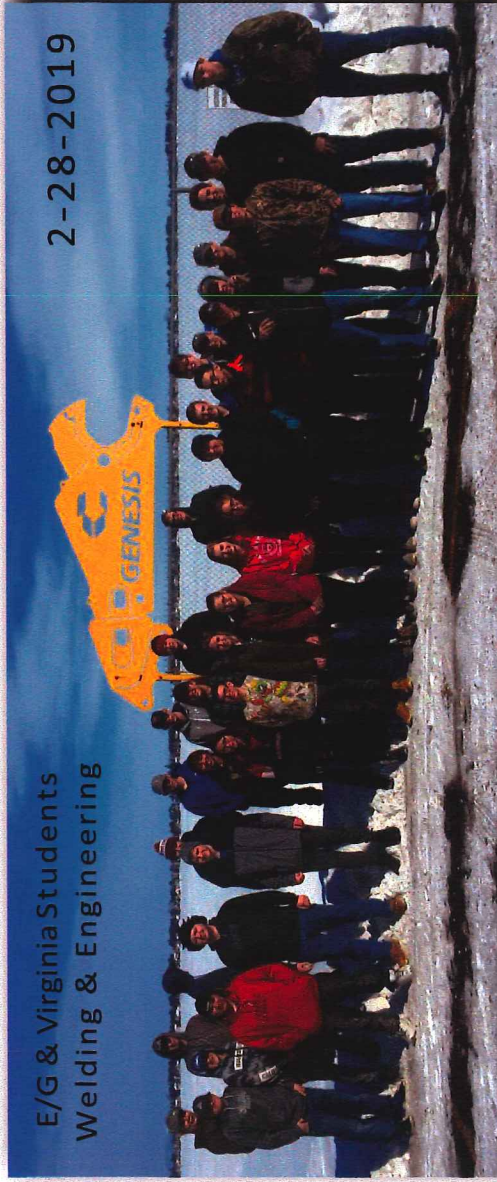
Mr. Foster's and Mr. Eichholz's Welding and Engineering students from Eveleth



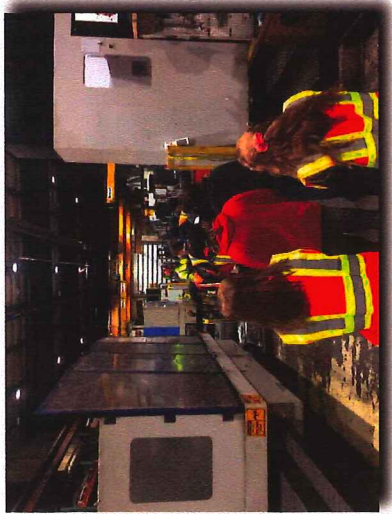
CNC Programming



Water Jet Table Demo



Gilbert and Virginia had the opportunity to tour LSC Integrated Manufacturing Program. Students learned about LSC's Machine Tool Technology, Welding, and Engineering CADD Technology courses. Students also toured Genesis Attachments in Superior. Genesis employees Engineers, CADD Techs, Machinists, and Welders, students saw first hand what these types of workers do while touring through the Genesis facility. Students were also made aware of the high-demand, high-paying job opportunities that Genesis has to offer.



CNC Equipment



Robotic Welding



Metal Shears 250k-500K



\$600K CNC



Internship Opportunity:

High School and Laurentian Chamber of Commerce Businesses

Overview:

This program would enable high school students to have the opportunity to intern at a business in the region providing students with real-work experiences. Each participating company is able to have a student learn their business and the experience should be tailored to the company. This initiative will show students the workforce opportunities that are available in the region. It would help prepare the students for their next steps after graduation. The goal is to connect students with employers in the area and give them a chance to shape their future.

Steps:

1. Interested businesses express interest to the Laurentian Chamber of Commerce.
2. High School counselors meet with the students to gauge interest in this internship program. For the Delta Airlines partnership, this will be done after the fall bus tour.
3. Business will have the student fill out application and go through hiring that company uses. It should be the same process (for the most part) rather than something extra the company needs to do. Remember the key is to provide real examples. Employers will interview the students to determine if it is a good fit and "hire" the intern.
4. Students are brought on board in the company and given the chance to learn skilled jobs. Again, this should be like any new employee and not random jobs.

Highlights:

1. Students can be available for 1-4 hours in the morning or afternoon, five days a week in accordance to the school schedule and student needs for graduation. We ask that the employer clarify the hours when advertising the opening.
2. Program would be for 16-18 weeks, depending upon the school schedule. If two businesses would like to share one student, we can split 8 weeks to one business and 8 weeks to a second business. Likewise, if a business would like someone for the entire school year, we can make the student available for 32-38 weeks. The business just needs to be clear what they prefer.
3. The internship is not paid for by the business. Students earn credits for completing the internship.
4. Internship would give students experience in that field. For example, the students would not be doing the cleaning, unless it was a maintenance position.

5. Businesses would be required to determine if the student is fulfilling the internship by filling out basic paperwork as applied by the school. Think of this as the same document you would use to evaluate your personnel.

Status Update and Progress:

- We have been working on identifying around five businesses that would be interested in participating in the program.
- Information has gone out to chamber members to gauge interest. Contact has been made with Delta, BCBS and Anthem.
Notes: BCBS would like to meet to learn more.
Delta is interested and met with corporate and is reviewing how they could incorporate this based on hiring criteria and processes.
Anthem is checking on the interest and will get back to us
The Laurentian Chamber of Commerce would be an interested business in hosting an intern.

Are there other businesses the schools would want to see involved. Are there other partners moving forward that would be good to have a part of this initiative? (i.e. NEMOJT)
- Next step: Set up a meeting with Shannon, interested businesses and interested school Districts.
- Move forward on Implementing the intern pilot as defined to fit the needs of the school district.

Minnesota Association of
Family and Consumer Sciences

State Annual Conference

February 2019

and

Culinary Boot Camp

February 2019

Attended by

Jeannine Bauman

2

In February, 2019, I attended the State FACS conference in St. Paul, MN. I have attended this conference for the last number of years and have always found it to be very valuable. Later in the month I also attended Culinary Boot Camp held at the St. Paul College. The following is a brief account of some of the learning sessions I attended.

Textile and Sewing Careers - This session was about commercial sewing, not home sewing. She talked a lot about new textiles and their applications: solar powered items, military uniforms and popup tents, maternity shirts that monitor the baby's heartbeat, compression garments for surgical applications, and sharkskin fabric that promotes wound healing. She also talked about technology that is on the horizon that will allow you use your own photo to "try on" outfits and spin the view 3D. This will further enhance on-line shopping.

Teacher of the Year - Amanda Herman, Northdale Middle School. Amanda does quite a bit in her middle school classroom, and is a leader in her school. She spearheads a number of projects involving the Veterans and families. I especially like how she teaches technical reading during her sewing unit.

Personal Finance - Stephanie Love. Stephanie went through a large number of online curriculum sites and student apps from which she designs her curriculum. I found I use quite a few of them so it was good validation that I am on the right track. I also liked to hear from a few others how specific sites and lessons did or did not work well in certain situations.

3

Culinary Bootcamp - I really enjoyed the opportunity to work in the large commercial kitchen. We worked in groups of 4 teachers so we shared a lot of tips and tricks as we were preparing food. I tried to really pay attention to how the space was set up and where things were stored. They usually have class sizes much smaller than I would have in a Culinary I class, so I might need a little more space. Yet it would be a very good place to tour again and ask questions about what does and doesn't work. This would give me good ideas in designing a space in our new school. (Hopefully).

The 2nd part of the day we listened to presentations by a Farm to Table group. While they had some good ideas, many were based on having a school greenhouse or being close to the Metro for guest speakers. It was interesting, and I tucked my notes away in case we get a green house at our new school (Hopefully)

Networking between sessions - I always find it valuable and enjoyable to talk with a variety of FCS teachers throughout the state. During these casual conversations I got new ideas for cooking labs, found new websites and apps, and explored some different curriculum ideas. I also heard how different teachers and different schools offer courses in similar and very different ways.

This State Convention is a very valuable way for me to stay connected with my profession and to keep updated on new research in my field. I sincerely thank you for providing me this opportunity.

Iron Range

constrTract tomorrow

October 9 ♦ 9 a.m. – 3 p.m.

Range Recreational Civic Center

901 Hat Trick Avenue, Eveleth

Join us for the Iron Range Skilled Trades & Construction Careers Expo for area high school students to learn about careers in the building and construction trades.

Hands-on exploration of construction trades careers!

Learn about what classes to take, what training is needed, and how to prepare!

Talk to professionals to learn about what they do on the job!

Attending Trades

Bricklayers
Electricians
Carpenters
Plumbers & Pipefitters
Iron Workers
Sheet Metal Workers
...and more!

Attending Training Programs

Welding
Equipment Maintenance
HYAC
Millwright
Industrial Technology
...and more!

This event is recommended for students in grades 10 – 12

- ☀ Assistance with school transportation and subsistence costs available
 - ☀ Students should be sure to bring a bag lunch to eat on the bus
 - ☀ Schools will be assigned one of three two-hour time blocks based on distance from event
- Reserve a spot for your school today! Contact Renee Prout at renee.prout@nemotl.org or call 734-6176 to request a registration form.

This event was made possible by the Northeast Minnesota Office of Job Training (Northeast Career Adventure, Career & Tech Ed/Peckins), the Northland Foundation and IARRB.

East Range School-to-Work and Tech Prep Partnership Members 2018-2019

Officers- Chair-John Vukmanich

Vice Chair- Marnie Maki

Secretary- Jennifer Jerulle

Treasurer- Bryan Kehoe

Post-Secondary

Mesabi Range Community and Technical College- Shelly McCauley Jugovich, Interim Provost

Rainy River Community College- Tammy Cook, Perkins Coordinator

Vermilion Community College- Patty Zuponcich, Perkins Coordinator

Secondary

East Range Consortium-, Shannon Malovrh Secondary Perkins Coordinator

Ely – Megan Anderson, High School Principal

Eveleth-Gilbert- Angie Williams, High School Principal

International Falls- Tim Everson, High School Principal

Littlefork- Big Falls- Jamie Wendt, Superintendent

Mesabi East- Bill Wietman, High School Principal

Mountain Iron Buhl- James Jotter, High School Principal

Nett Lake School- Jim Varichak, Superintendent/Principal

St. Louis County Schools- Michael Johnson, Principal Cherry High School, John Vukmanich-Northwoods & Kelly Engman-Northeast Range

Virginia- Lisa Perkovich, High School Principal

Business, Industry and Community

Arrowhead Economic Opportunity Agency- Skip Ferris, Director Head Start

Arrowhead Economic Opportunity Agency-Terri Ferris, Lead Vocational Evaluator and Lead ABE Teacher

Cliffs National Resources/United Taconite- John Baxter, Human Resources Manager

Community Member-Bryan Kehoe, retired Virginia High School Principal and Littlefork Big Falls Superintendent

Essentia Health-Teri Nystrom- Human Resource Manager

Habitat for Humanity-Marnie Maki

Laurentian Chamber of Commerce, Melissa Cox, CEO-President

Northeast Office of Job Training- Marie Domiano, Career Counselor

St. Louis County Family Services Collaborative- Jennifer Jerulle, Director

St. Louis County Health Department- Margaret Ratai, Public Health Nurse, former MIB School Board- former Medical Careers Instructor East Range Secondary Technical Center

Wells Fargo-Taylor Wudinich, Program Manager

218 TRADES



FACT SHEET

SKILLED LABOR CAREERS

218trades.com

According to DEED's Quarterly Census of Employment and Wages (QCEW) data, the 7-county Northeast Minnesota region was home to 960 construction firms providing 6,653 jobs in 2018. At that level, construction accounted for 4.6 percent of total employment in the region, making it the seventh largest industry. However, construction also accounted for 10.9 percent of all establishments in the region, giving it the second largest number of firms.

These construction firms paid out \$411 million in total payroll in 2018, making it the sixth largest industry payroll. Average annual wages in construction were \$61,832 in 2018, which was 37 percent higher than the total of all industries.

In addition to the more than 900 employer establishments covered by the QCEW program, there were also 2,374 non-employers in the construction industry in Northeast Minnesota, with total sales receipts of just under \$116.5 million in 2015.

Industry Occupational Employment

DEED's Occupational Employment Statistics (OES) program provides detailed employment and wage data for a wide range of occupations involved in construction. In sum, there were an estimated 5,950 people working in construction and extraction occupations in Northeast Minnesota, accounting for about 4.2 percent of total employment in the region.

The largest construction and extraction occupations in the region include carpenters (1,020 jobs), operating engineers and other construction equipment operators (890 jobs), construction laborers (710 jobs), electricians (510 jobs), highway maintenance workers (410 jobs), and plumbers, pipefitters, and steamfitters (410 jobs). The region also had a larger share of mobile heavy equipment mechanics, millwrights, excavating and loading machine op-

erators, and electrical power-line installers and repairers. Median hourly wages for construction occupations ranged from around \$18 an hour at the low end to more than \$40 an hour at the high end. Civil Engineers and construction managers were the highest-earning occupations in the industry, pulling in over \$80,000 per year. Twenty-five different occupations had median wages above \$50,000 per year in the region, representing over 6,500 jobs.

Despite the relatively high wages, all but six of these construction-related occupations can be gained with a high school diploma or less and some level of on-the-job training.

Occupations in Demand

Because of the huge spike in demand for construction workers the past few summers, several construction-related occupations are in high demand in Northeast Minnesota. Of the 293 occupations that have exhibited high demand in the region – having three, four, or five stars in the current demand indicator – 15 are construction-related occupations (see Table 1-Northeast Minnesota Construction Related Occupations in Demand).

Table 1. Northeast Minnesota Construction-Related Occupations in Demand

SOC Occupational Title	Current Demand Indicator	Median Annual Wage	Projected 10-year Growth Rate	Projected 10-year Total Openings
Construction Laborers	Five Stars	\$39,985	0.20%	1,054
Heavy & Tractor-Trailer Truck Drivers	Five Stars	\$46,169	-1.50%	2,553
Cement Masons and Concrete Finishers	Five Stars	\$51,199	5.40%	231
Construction Equipment Operators	Five Stars	\$68,136	2.70%	991
Electricians	Five Stars	\$67,847	-8.50%	521
Construction Managers	Five Stars	\$79,205	-7.70%	199
Civil Engineers	Five Stars	\$87,758	12.90%	383
Mobile Heavy Equipment Mechanics	Four Stars	\$52,680	6.20%	653
Cost Estimators	Four Stars	\$65,195	0.50%	198
Helpers--Carpenters	Three Stars	\$40,154	-13.30%	35
Architects, Except Landscape & Naval	Three Stars	\$64,184	-2.40%	56
Carpenters	Three Stars	\$53,873	-4.30%	1,221
Plumbers, Pipefitters, & Steamfitters	Three Stars	\$78,747	-7.00%	397
Tile & Marble Setters	Three Stars	\$48,961	N/A	N/A

Source: DEED [Occupations in Demand](#)

Check out 218trades.com

Contact the Office of Job Training for more info.

218 TRADES



FACT SHEET

SKILLED LABOR CAREERS

218trades.com

Industry and Occupational Outlook

According to DEED's 2016 to 2026 Employment Outlook data, the construction industry is projected to grow by nearly 9 percent with an increase of 10,329 jobs over the next 10 years in the state of Minnesota.

The projected job growth in the construction industry is expected to carry over into construction-related occupations as well, with many expected to see small gains in Northeast Minnesota through 2026. Construction equipment operators are expected to see the most growth from 2016 to 2026, followed by steady growth for cement masons and concrete finishers, construction and building inspectors, highway maintenance workers, pipelayers, and construction laborers.

But rather than new jobs being created, the region is expected to have more demand for labor market exit openings and occupations transfer openings – jobs that become available because the existing worker retires out of the labor force or changes career. There may be as many as 7,411 total openings for construction and extraction workers in the region, with 2,621 of them being for replacement due to labor market exits. Most construction-related occupations in the region will have more replacement openings than new jobs created, requiring new workers to replace existing workers. For example, the largest number of total openings is for heavy and tractor-trailer truck drivers, who could have over 2,500 total job openings in the next 10 years, despite a projected loss of jobs overall. The region is projected to need 1,054 construction laborers due to 364 labor market exit openings and 688 occupational transfer openings, as well as 1,221 carpenters and 991 construction equipment operators, almost entirely from labor market exits and occupational transfers as opposed to new growth. Electricians, mobile heavy equipment mechanics, first line supervisors of construction workers, and plumbers are also projected to see steady demand in Northeast Minnesota in the next 10 years (see Table 2).

Table 2. Northeast Minnesota Construction-Related Occupation Projections, 2016-2026

Occupation	Estimated Employment 2016	Projected Employment 2026	2014-2026 Total Openings **
Total, All Occupations	160,337	162,062	179,072
Construction Managers	349	322	199
Cost Estimators	204	205	198
Construction & Extraction Occupations	7,433	7,440	7,411
First-Line Spvrs. of Construction Workers	497	498	474
Brickmasons & Blockmasons	103	122	130
Carpenters	1,459	1,396	1,221
Cement Masons & Concrete Finishers	202	218	231
Construction Laborers	1,043	1,045	1,054
Construction Equipment Operators	880	904	991
Electricians	543	497	521
Painters, Construction & Maintenance	354	354	298
Pipelayers	40	44	47
Plumbers, Pipefitters, & Steamfitters	429	399	397
Sheet Metal Workers	164	164	169
Helpers-Carpenters	30	26	35
Construction & Building Inspectors	114	122	133
Highway Maintenance Workers	469	479	483
Installation, Maintenance, & Repair Occs.	7,500	7,843	7,454
Mobile Heavy Equipment Mechanics	633	672	653
Heating, Air Cond, & Refrig. Mechanics	184	192	186
Millwrights	147	130	105
Electrical Power-Line Installers/Repairers	222	217	165
Transportation & Material Moving Occs.	9,105	8,821	10,010
Heavy & Tractor-Trailer Truck Drivers	2,481	2,443	2,553



Check out 218trades.com

Contact the Office of Job Training for more Info.

Contact the program's instructor to schedule a visit!

Nursing/CNA

218-744-7537 Jeff Torrel j.torrel@mesabirange.edu
 218-744-7517 Kathy Bradach k.bradach@mesabirange.edu

EMT/Paramedic

218-749-0324 Laura Korpi l.korpi@mesabirange.edu

Carpentry

218-744-7473 Leo Lukas l.lukas@mesabirange.edu

Graphic Design Media

218-744-7480 Paul McLaughlin p.mclaughlin@mesabirange.edu
 218-290-9574 Dan Prijatel d.prijatel@mesabirange.edu

Electrical Controls & Maintenance

218-744-7518 Scott Norcia s.norcia@mesabirange.edu

Industrial Mechanical Technology (Millwright)

218-742-3447 Keith Bundermann k.bundermann@mesabirange.edu
 218-744-7496 Cary Sattrang c.sattrang@mesabirange.edu

Welding Technology

218-744-7532 Randy Washenesky r.washenesky@mesabirange.edu
 218-471-0012 Ryan Dall r.dall@mesabirange.edu
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Perkins Coordinator

218-393-3826 Chris Vito c.vito@mesabirange.edu



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Mesabi Range College Learn to Earn

OPEN HOUSE! Grades 9-12—Eveleth Campus
Wednesday, October 17 • 9:30–12:30

Average Placement Rate
89.3%

Learn about our outstanding programs:

Program	Ave. Median Income
Carpentry	\$45,520
Practical Nursing	\$45,520
Certified Nursing Assistant	\$31,980
Paramedic	\$37,860
IMT (Millwright)	\$37,860 - 89,860
Electrical Controls & Maintenance	\$81,220
Welding Technology	\$42,180
Graphic Design Media	\$48,060



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MESABI
 Range College

Lead the way!

Come and compete in the Skills Fair!

**Thursday, March 21 from 9:00 am – 1:00 pm.
Eveleth Campus**

- Mark your calendars and join other area high school students in competitions and informational sessions, more information coming soon!
- Meet and work with instructors and current students.
- Compete and win gold, silver or bronze medals.
- Prize giveaways!
- Free lunch!
- Learn about Mesabi Range College and the benefits of attending your local college and how you can launch your career in just two years or less.
- Compete in the following programs: Nursing, EMT/Paramedic, Carpentry, Graphic Design Media, Industrial Mechanical Technology (Millwright), Welding Technology, and more!

Visit us and Shadow in a Career Program

- Spend a day in a career program.
- Experience the skills you will learn in that program.
- Visit with current students and instructors.
- Shadowing available Monday–Thursday all year long.
- Have free lunch on us.
- Visit and have fun!
- **Contact a program instructor on the back page to set up a day to shadow.**



CTE Works 2018- Jade Andrie/Virginia High School

The first keynote speaker was Neil Ridley, director of the Georgetown University on Education and the workforce. Neil spoke about how previously, good jobs were considered to be jobs that required a bachelor's degree or higher. Currently we are seeing growth in jobs that still require a post secondary education but not necessarily a college degree. These jobs also pay well and do not require students to go into debt to attain them. What I took from Neil's keynote was that at the high school level we need to be better about encouraging our students to consider getting a certification instead of a degree. They need to be looking at future employability. It doesn't do them any good to spend thousands on a degree if they won't be able to get a job that uses it. Neil didn't exactly say this in his speech but as I was listening to him I thought, if more students got a certificate in a skilled service they would be able to get a good paying job in a field that interests them. After working in that field they may decide to go to college and get a degree but taking this path allows them to be certain that they like their chosen field and earn money to put toward their college degree, hopefully preventing them from graduating with a mountain of debt to look forward to.

The first breakout session I chose to go to was our own, Jason Strukel's "Teach with Your Hair on Fire." This was a great session to get pumped up to teach, to want to make a difference. I think teachers get so bogged down with grading and unnecessary paperwork and meetings that we lose the passion from time to time and need that reminder of why we do all of this in the first place. Besides re-motivating teachers, Strukel had some insight on helping to motivate kids. He says the little things we do, motivates students which invokes an emotional response in the kids and gets them interested. "Give kids and uncommon experience, get an uncommon effort back."

The next session I went to was called "Changing Mindset from 'I Was Hired to Teach' to 'We Can Do This Together.'" This was presented by a group of CTE teachers who saw declining enrollment in their programs and what they did to fix it. Considering the High School FCS program is relatively new and I would love to see it grow, I was curious to see what they did. They had a lot of great ideas for marketing the program and getting industry partners involved. The only problem is that as the only teacher in the FCS department, when am I supposed to do this stuff? In the last 3 years I have added 4 new classes to my schedule, one of those years was during maternity leave. Besides the regular teacher duties we all have, there also needs to be time to go grocery shopping for school. Now I am supposed to add a club on top of all of that. I left this session with some great ideas, I am just overwhelmed at the thought of trying to implement them.

The next session I chose because it was specifically for FCS teachers. It was a look at how the Anoka-Hennepin district was able to partner with a company called Good Acre to gain some staff development for the FCS teachers. It sounded amazing and left me feeling disappointed that these kinds of opportunities aren't available everywhere. The best part of this session was when it was over and I got to talk to one of the presenters for a bit. Sadie was so nice to talk to and I think it was eye opening for us both to just discuss the differences in teaching the same subject in a rural area vs. an urban area. We exchanged contact information so that we could share some resources.

On the second day, I went to was "Masks, Myths, and Invisible Disabilities." I was hoping that this session would be more about mental illnesses because they are so common in our students now. It was really more about chronic illnesses. It was still a good reminder that sometimes people have things going on that we don't know about or can't see.

Culinary Bootcamp
Jade Andrie-Virginia High School
St. Paul College
June 20, 2019

I chose to attend this culinary training because I thought it would be a more hands on workshop that would give me some ideas I could easily bring back to the classroom. While it wasn't as hands on as I had hoped, I did learn a lot and come away with some activities to bring back this coming school year.

My favorite session was the knife skills session. This was by far the most hands on session I attended. I wish this would have been longer, since we didn't get to everything that the instructor had planned. We learned an easy, cheap recipe that is heavy in knife skills, that would be simple and quick enough for students to replicate individually in class.

The next session was a plethora of information, but the most useful was a simple diagram about the food system. Introducing this would be an easy way to start a discussion on the many careers related to the food industry other than the obvious, chef. Another thing I got from this session is that "foods have flavor AND function." I think this statement is an easy way to remind them that there is more to it than just how a single food tastes. You have to consider not only what the individual flavor is, but how it interacts and brings out other flavors or purposes of additional ingredients. Additionally the foods we are eating have functions within our bodies.

The next session was regarding ServSafe, I wasn't sure how helpful this would be but I did have some questions about the certification process for students. I am glad I attended this session and learned from peers. According to ServSafe, I can administer the test in the back of the workbook, grade it myself and give students a certificate. This never seemed very official to me. While I can continue doing this, I found out there is a better, more official way that I will try this coming school year. I will need to order answer sheets so there is a bit of additional cost, but the test is then graded by ServSafe and a more official certificate is issued to students. I will also get a breakdown of the types of questions that students struggled on.

The last session was technically for agriculture teachers but there is a lot of overlap with FACS. I learned about a free resource with prepared lessons that bring science into the FACS classroom. This is something I always want to do but science was never a strong suit of mine, I had no interest as a student but as an adult I see the connection to things I am interested in, like cooking and wish that I had a better background. I think this resource will make it easy to incorporate science into my classroom.

Virginia High School Students Tour Twin Metals and Vermilion Community College

On Thursday, May 9th 2010, twenty seven junior and senior environmental science, chemistry, and physics students from Virginia High School took a field trip to Ely and visited Twin Metals and Vermilion Community College.

At Twin Metals, students learned about the science, process, history, and business of copper mining from Dean DeBeltz, Director of Operations and Safety Director; Nikki Hoffman, Project Geologist; James Devine, Field Operations Coordinator, and Kevin Boerst, Chief Geologist.



Dean DeBeltz explains the Twin Metals project.

Dean shared live details of the project, explaining how Twin Metals has already invested 432 million dollars in the local economy. As indicated by the Minnesota DNR, the mine will produce no acid mine drainage, and no waste rock. The output is estimated to be 275,000 tons of copper concentrate per year. He explained how the mineral deposits are located in the Superior National Forest and in close proximity to the Boundary Waters Canoe Area, which requires a rigorous permitting process that is tightly regulated by local, state, and national professionals. Dean spoke on the subject of regulators and policies students recently only studied in their environmental science

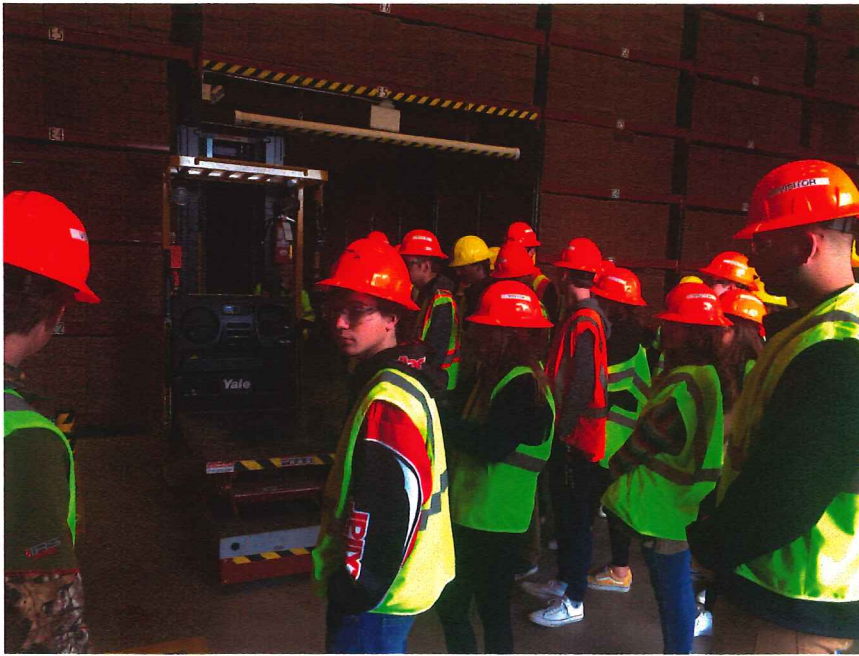
textbooks, including the Bureau of Land Management, Department of Natural Resources, Environmental Protection Agency, Army Corps of

Engineers, US Forest Service, and environmental impact statements.

Nikki informed students about common minerals such as feldspar, quartz, olivine, silicates, and pyrite that are found in the area's bedrock. She showed students the spatial geometry of the copper nickel mineral deposit in northeast Minnesota, while explaining why the location is a perfect candidate for an underground mine. She went on to discuss how copper mining differs from iron mining, including froth floatation-a process that is almost the opposite of the separation processes used by the iron mining industry. Strategic uses for metals such as copper and nickel were also addressed. For example, copper is used in hospitals to coat surfaces because is a natural anti-bacterial agent, and in CO₂-emission-free electric cars. Platinum and palladium are used in catalytic converters and medical instruments. Currently, much of our platinum and palladium are sourced from countries where mining is not carried out sustainably or in a socially responsible manner. Students also learned about the Permanent School Trust Fund from which all public schools in the state receive



funding. In 2016 \$25.6 million dollars went into VHS Juniors Andrew Horvat and Izzy Baggenstoss study samples trust fund (\$21.4 million from mining minerals, obtained for Twin Metal's massive hydrogeologic study of \$4.1 million forest products, \$300,000 real estate). northeastern Minnesota.



James Devine, Twin Metals Field Operation Coordinator, speaks about core samples in the core sample library.

The professionals expounded upon topics recently learned in the business and science classrooms including: water resources, demographic transitions, urbanization, supply and demand, population growth, mineral assays, elements, trigonometry, 3-D modeling software, igneous rock deposits, mining engineering, chemical engineering, fluid dynamics, tailings, and chemical formulas for minerals containing copper, nickel, platinum, palladium, and gold.

Some of the questions the students asked included: "What does MDH stand for?" and "On the open market, who do you usually sell to?" Another student asked, "Do they have problems with pollution at the mines in Chile?" which prompted the question, "How do you map underground to determine where minerals are?"



Aspiring engineer Maggie Peterson, along with Molly Vagle and Gabrielle Elliot study a mineral sample.

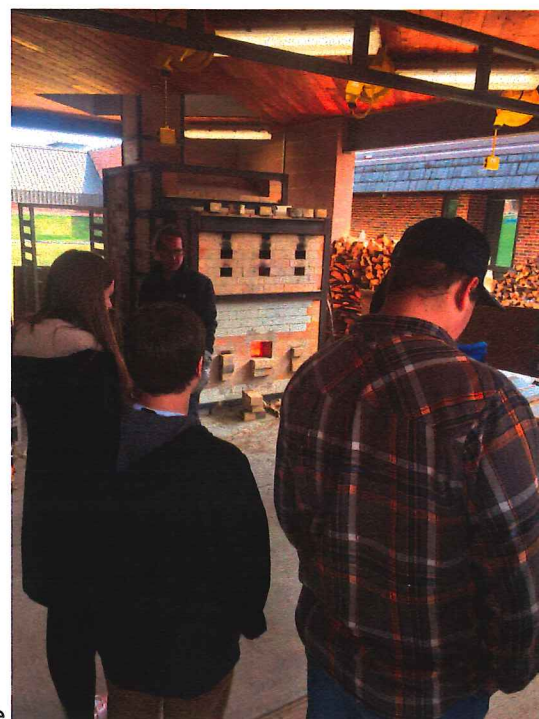


VHS students learning about programs offered at Vermilion Community

After Twin Metals, the students visited Vermilion Community College. Several students at Virginia High School are enrolled in chemistry and physics classes at VHS where they earn college credit from VCC. Students enjoyed a complementary (and tasty) lunch in the cafeteria, toured the campus, and learned about the unique programs offered at VCC including Natural Resources, Outdoor Recreation, Law Enforcement and Emergency Services, Wildland & Wildlife Law Enforcement, and Student Life. They were able to watch an artist in action at the wood fired kiln, and also tour the on-campus housing.

Industry and college based field trips are a strategy for kids to make connections between the classroom and the community, with the intent of showing students opportunities in their local communities. Outside experiences make more informed citizens, while allowing students to make the connection from textbook to the real world. Thank you Twin Metals and Vermilion Community College for helping make this trip happen.

Submitted by Lisa Rudstrom,
Chemistry,
Environmental
Science, and
Physics Teacher at
Virginia High School
on May 9th, 2019.



Juniors Jayden Bernard, Zack Kilen, Cori Ringsred, and Gabrielle Elliot explore the on campus housing available at Vermilion Community College.

Students watch a demonstration at the wood fired kiln at Vermilion Community College

Mesabi Range College
Spring 19 Enrolled Students by Perkins Majors (CIP), with Disability, Gender, and Pell Eligibility Status
data as of 1/10/19

MAJOR_CIP_CODE_1 (Multiple Items)

Sum of Disability 1
 Sum of HEADCOL 195

MAJOR_CIP_CODE_1 (Multiple Items)

Majors by Gender:		Sum of HEADCOUNT	Column Labels	F	M	Grand Total
CIP	Row Labels					
46.0201	Carpentry			1	10	11
13.1015	Early Childhood/Early Childhood Special Education			17	2	19
10.0301	Graphic Design Media			10	13	23
47.0303	Industrial Mechanical Technology			4	34	38
51.3901	Practical Nursing			36	1	37
15.0613	Electrical Controls and Maintenance			3	16	19
48.0508	Welding			6	42	48
	Grand Total			77	118	195

Majors by Pell Eligibility:
 MAJOR_CIP_CODE_1 (Multiple Items)

Majors by Pell Eligibility:		Sum of HEADCOUNT	Column Labels	No	Unknown	Yes	Grand Total
CIP	Row Labels						
46.0201	Carpentry					1	11
13.1015	Early Childhood/Early Childhood Special Education					4	19
10.0301	Graphic Design Media					5	23

47.0303 Industrial Mechanical Technology	13	10	15	38
51.3901 Practical Nursing	6	3	28	37
15.0613 Electrical Controls and Maintenance	8	1	10	19
48.0508 Welding	14	6	28	48
Grand Total	51	26	118	195

Source: Minn State ISRS Operational Data Table
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Mesabi Range College – Practical Nursing Program

Preliminary Plan – Service Learning Project

Who: 2nd Semester PN Students

What: Service Learning to Local Elementary Schools (5th Grade)

When: Fall Semester 2019, Spring Semester 2020.

Why: To get nursing students out into the schools to give young students an introduction to health care and nursing.

Where: Eveleth-Gilbert, Virginia, Mesabi East, Mt. Iron-Buhl, Cherry, North Woods (possibly to expand to West Range and Others).

Plan: In NURS 1240 “Transition into Practice”, all students collaboratively will develop a learning plan that is age-appropriate for 5th grade students. The learning plan will include introducing 5th grade students to healthcare and nursing through visual, auditory, tactile, and interactive means. Development of the plan will fall exclusively on the practical nursing students with instructors only providing coordination with the elementary schools, direction on learning theory, and materials. The plan will then be implemented in the local 5th grade classrooms. These learning sessions will last up to 60 minutes in the classrooms.

The students will be able to use these hours towards community service hours which are required in the class. This project also meets the following student learner outcomes and course outcomes for the nursing program and for the class. Below is the language in the NURS 1240 syllabus regarding community service for the class and also a table with the program outcomes and the course outcomes listed in the NURS 1240 course outline.

“Community Service/Support Group Assignment

For this course, you are required to volunteer for **6 hours of community service** and **must attend two hours of some sort support group setting** (8 hours total). The community service does not have to be nursing related, but would probably be the most beneficial. Be creative. Do something that interests you or you are curious about. Please see Kelly if you have questions whether something counts as community service. You cannot be compensated with money for your time whatsoever. Be stewards of your community and show that nurses go the extra mile”. **This project will be added to the language in the above syllabus for Fall 2019.*

Student Learner Outcomes (Program)	Course Outcomes (NURS 1240)
SLO: PROFESSIONAL INTEGRITY AND BEHAVIORS	1. Develop a plan which includes strategies and resources to demonstrate the importance of seeking lifelong, continuous learning for one's self as a LPN. 2. Value ethical, legal, and regulatory bodies within the PN scope of nursing practice.
SLO: TEAMWORK AND COLLABORATION	4. Recognize conflict and when to report conflict to supervisor.
SLO: QUALITY IMPROVEMENT	5. Clarify the LPN role in providing input in the development and revision of policies/procedures to improve patient care outcomes.

Greg Foster-Virginia High School

On Saturday May 4th I had a very unique opportunity to tour Camp Ripley. The Army National Guard has an educator day at Camp Ripley, where 50 plus educators from all over MN got to take part in. My wife Corrie was able to attend as well since she is an educator and works for the St. Louis County Schools-Cherry School.

We flew in a Blackhawk helicopter from Duluth to Camp Ripley. This was an amazing ride, which included 120 mph tree top elevations while making 60 plus degree banking turns, which was by far the highlight of the day!

Once at Camp Ripley we learned about the National Guard and what all they can offer to our students. We toured thru several different areas of Camp Ripley and learned about many different types jobs that enlisting soldiers can choose from based on their test scores and interests. We toured thru their huge maintenance facility and got to climb around on and look at all of the large equipment and tanks. We then went to an outdoor training area where they had a staged helicopter crash site where newly enlisted National Guard members were practicing to rescue wounded soldiers. We also toured through the educator center and learned about Camp Ripley and how educators and students can make use of Camp Ripley facilities to help educate students. Lastly we got to watch a tank do some maneuvering and firing.

This as an excellent day, the only bad part of the day is that lunch consisted in eating an MRE-Meals Ready to Eat" it actually wasn't that bad, and it certainly added to the experience!



CNC Demo

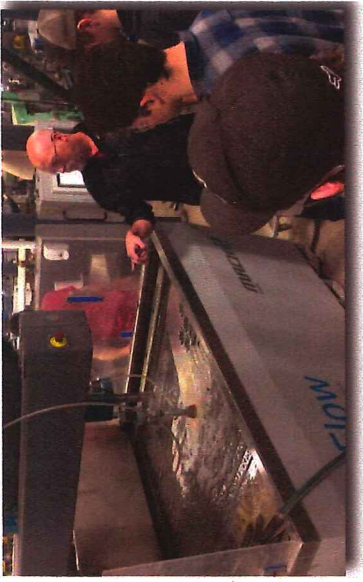


LSC Machine Shop

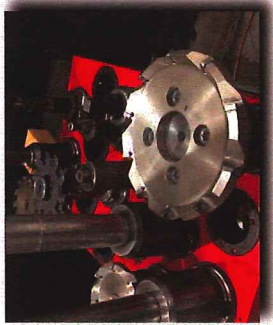
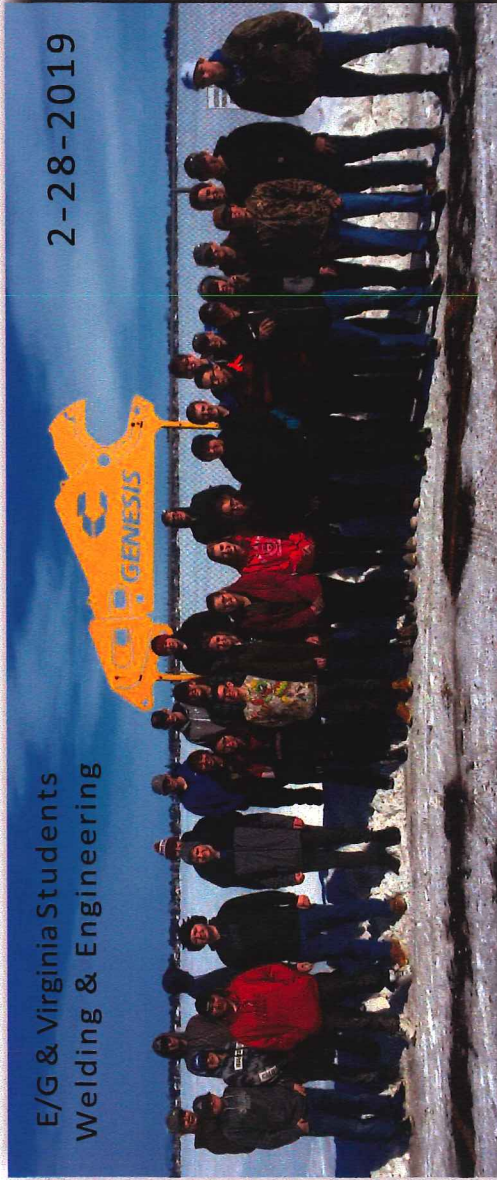
Mr. Foster's and Mr. Eichholz's Welding and Engineering students from Eveleth



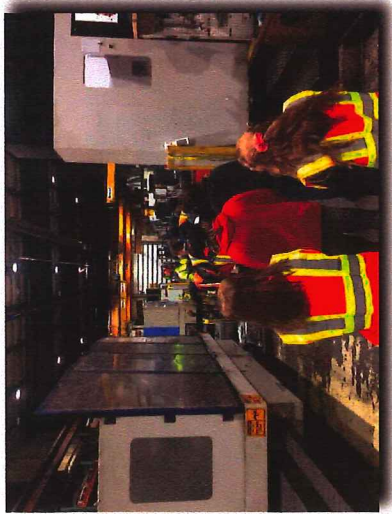
CNC Programming



Water Jet Table Demo



Gilbert and Virginia had the opportunity to tour LSC Integrated Manufacturing Program. Students learned about LSC's Machine Tool Technology, Welding, and Engineering CADD Technology courses. Students also toured Genesis Attachments in Superior. Genesis employees Engineers, CADD Techs, Machinists, and Welders, students saw first hand what these types of workers do while touring through the Genesis facility. Students were also made aware of the high-demand, high-paying job opportunities that Genesis has to offer.



CNC Equipment



Robotic Welding



Metal Shears 250k-500K



\$600K CNC



Internship Opportunity:

High School and Laurentian Chamber of Commerce Businesses

Overview:

This program would enable high school students to have the opportunity to intern at a business in the region providing students with real-work experiences. Each participating company is able to have a student learn their business and the experience should be tailored to the company. This initiative will show students the workforce opportunities that are available in the region. It would help prepare the students for their next steps after graduation. The goal is to connect students with employers in the area and give them a chance to shape their future.

Steps:

1. Interested businesses express interest to the Laurentian Chamber of Commerce.
2. High School counselors meet with the students to gauge interest in this internship program. For the Delta Airlines partnership, this will be done after the fall bus tour.
3. Business will have the student fill out application and go through hiring that company uses. It should be the same process (for the most part) rather than something extra the company needs to do. Remember the key is to provide real examples. Employers will interview the students to determine if it is a good fit and "hire" the intern.
4. Students are brought on board in the company and given the chance to learn skilled jobs. Again, this should be like any new employee and not random jobs.

Highlights:

1. Students can be available for 1-4 hours in the morning or afternoon, five days a week in accordance to the school schedule and student needs for graduation. We ask that the employer clarify the hours when advertising the opening.
2. Program would be for 16-18 weeks, depending upon the school schedule. If two businesses would like to share one student, we can split 8 weeks to one business and 8 weeks to a second business. Likewise, if a business would like someone for the entire school year, we can make the student available for 32-38 weeks. The business just needs to be clear what they prefer.
3. The internship is not paid for by the business. Students earn credits for completing the internship.
4. Internship would give students experience in that field. For example, the students would not be doing the cleaning, unless it was a maintenance position.

5. Businesses would be required to determine if the student is fulfilling the internship by filling out basic paperwork as applied by the school. Think of this as the same document you would use to evaluate your personnel.

Status Update and Progress:

- We have been working on identifying around five businesses that would be interested in participating in the program.
- Information has gone out to chamber members to gauge interest. Contact has been made with Delta, BCBS and Anthem.
Notes: BCBS would like to meet to learn more.
Delta is interested and met with corporate and is reviewing how they could incorporate this based on hiring criteria and processes.
Anthem is checking on the interest and will get back to us
The Laurentian Chamber of Commerce would be an interested business in hosting an intern.

Are there other businesses the schools would want to see involved. Are there other partners moving forward that would be good to have a part of this initiative? (i.e. NEMOJT)
- Next step: Set up a meeting with Shannon, interested businesses and interested school Districts.
- Move forward on Implementing the intern pilot as defined to fit the needs of the school district.

Minnesota Association of
Family and Consumer Sciences

State Annual Conference

February 2019

and

Culinary Boot Camp

February 2019

Attended by

Jeannine Bauman

2

In February, 2019, I attended the State FACS conference in St. Paul, MN. I have attended this conference for the last number of years and have always found it to be very valuable. Later in the month I also attended Culinary Boot Camp held at the St. Paul College. The following is a brief account of some of the learning sessions I attended.

Textile and Sewing Careers - This session was about commercial sewing, not home sewing. She talked a lot about new textiles and their applications: solar powered items, military uniforms and popup tents, maternity shirts that monitor the baby's heartbeat, compression garments for surgical applications, and sharkskin fabric that promotes wound healing. She also talked about technology that is on the horizon that will allow you use your own photo to "try on" outfits and spin the view 3D. This will further enhance on-line shopping.

Teacher of the Year - Amanda Herman, Northdale Middle School. Amanda does quite a bit in her middle school classroom, and is a leader in her school. She spearheads a number of projects involving the Veterans and families. I especially like how she teaches technical reading during her sewing unit.

Personal Finance - Stephanie Love. Stephanie went through a large number of online curriculum sites and student apps from which she designs her curriculum. I found I use quite a few of them so it was good validation that I am on the right track. I also liked to hear from a few others how specific sites and lessons did or did not work well in certain situations.

3

Culinary Bootcamp - I really enjoyed the opportunity to work in the large commercial kitchen. We worked in groups of 4 teachers so we shared a lot of tips and tricks as we were preparing food. I tried to really pay attention to how the space was set up and where things were stored. They usually have class sizes much smaller than I would have in a Culinary I class, so I might need a little more space. Yet it would be a very good place to tour again and ask questions about what does and doesn't work. This would give me good ideas in designing a space in our new school. (Hopefully).

The 2nd part of the day we listened to presentations by a Farm to Table group. While they had some good ideas, many were based on having a school greenhouse or being close to the Metro for guest speakers. It was interesting, and I tucked my notes away in case we get a green house at our new school (Hopefully)

Networking between sessions - I always find it valuable and enjoyable to talk with a variety of FCS teachers throughout the state. During these casual conversations I got new ideas for cooking labs, found new websites and apps, and explored some different curriculum ideas. I also heard how different teachers and different schools offer courses in similar and very different ways.

This State Convention is a very valuable way for me to stay connected with my profession and to keep updated on new research in my field. I sincerely thank you for providing me this opportunity.

Iron Range

construct tomorrow

October 9 ♦ 9 a.m. – 3 p.m.

Range Recreational Civic Center

901 Hat Trick Avenue, Eveleth

Join us for the Iron Range Skilled Trades & Construction Careers Expo for area high school students to learn about careers in the building and construction trades.

Hands-on exploration of construction trades careers!

Learn about what classes to take, what training is needed, and how to prepare!

Talk to professionals to learn about what they do on the job!

Attending Trades

Bricklayers
Electricians
Carpenters
Plumbers & Pipefitters
Iron Workers
Sheet Metal Workers
...and more!

Attending Training Programs

Welding
Equipment Maintenance
HYAC
Millwright
Industrial Technology
...and more!

This event is recommended for students in grades 10 – 12

- ☀ Assistance with school transportation and subsistence costs available
- ☀ Students should be sure to bring a bag lunch to eat on the bus
- ☀ Schools will be assigned one of three two-hour time blocks based on distance from event
- ☀ Reserve a spot for your school today! Contact Renee Prout at renee.prout@nemofl.org or call 763-6176 to request a registration form.

This event was made possible by the Northeast Minnesota Office of Job Training (Northeast Career Adventure, Career & Tech Ed/Peckins), the Northland Foundation and IARRB.

East Range School-to-Work and Tech Prep Partnership Members 2018-2019

Officers- Chair-John Vukmanich

Vice Chair- Marnie Maki

Secretary- Jennifer Jerulle

Treasurer- Bryan Kehoe

Post-Secondary

Mesabi Range Community and Technical College- Shelly McCauley Jugovich, Interim Provost

Rainy River Community College- Tammy Cook, Perkins Coordinator

Vermilion Community College- Patty Zuponcich, Perkins Coordinator

Secondary

East Range Consortium-, Shannon Malovrh Secondary Perkins Coordinator

Ely – Megan Anderson, High School Principal

Eveleth-Gilbert- Angie Williams, High School Principal

International Falls- Tim Everson, High School Principal

Littlefork- Big Falls- Jamie Wendt, Superintendent

Mesabi East- Bill Wietman, High School Principal

Mountain Iron Buhl- James Jotter, High School Principal

Nett Lake School- Jim Varichak, Superintendent/Principal

St. Louis County Schools- Michael Johnson, Principal Cherry High School, John Vukmanich-Northwoods & Kelly Engman-Northeast Range

Virginia- Lisa Perkovich, High School Principal

Business, Industry and Community

Arrowhead Economic Opportunity Agency- Skip Ferris, Director Head Start

Arrowhead Economic Opportunity Agency-Terri Ferris, Lead Vocational Evaluator and Lead ABE Teacher

Cliffs National Resources/United Taconite- John Baxter, Human Resources Manager

Community Member-Bryan Kehoe, retired Virginia High School Principal and Littlefork Big Falls Superintendent

Essentia Health-Teri Nystrom- Human Resource Manager

Habitat for Humanity-Marnie Maki

Laurentian Chamber of Commerce, Melissa Cox, CEO-President

Northeast Office of Job Training- Marie Domiano, Career Counselor

St. Louis County Family Services Collaborative- Jennifer Jerulle, Director

St. Louis County Health Department- Margaret Ratai, Public Health Nurse, former MIB School Board- former Medical Careers Instructor East Range Secondary Technical Center

Wells Fargo-Taylor Wudinich, Program Manager

218 TRADES



FACT SHEET

SKILLED LABOR CAREERS

218trades.com

According to DEED's Quarterly Census of Employment and Wages (QCEW) data, the 7-county Northeast Minnesota region was home to 960 construction firms providing 6,653 jobs in 2018. At that level, construction accounted for 4.6 percent of total employment in the region, making it the seventh largest industry. However, construction also accounted for 10.9 percent of all establishments in the region, giving it the second largest number of firms.

These construction firms paid out \$411 million in total payroll in 2018, making it the sixth largest industry payroll. Average annual wages in construction were \$61,832 in 2018, which was 37 percent higher than the total of all industries.

In addition to the more than 900 employer establishments covered by the QCEW program, there were also 2,374 non-employers in the construction industry in Northeast Minnesota, with total sales receipts of just under \$116.5 million in 2015.

Industry Occupational Employment

DEED's Occupational Employment Statistics (OES) program provides detailed employment and wage data for a wide range of occupations involved in construction. In sum, there were an estimated 5,950 people working in construction and extraction occupations in Northeast Minnesota, accounting for about 4.2 percent of total employment in the region.

The largest construction and extraction occupations in the region include carpenters (1,020 jobs), operating engineers and other construction equipment operators (890 jobs), construction laborers (710 jobs), electricians (510 jobs), highway maintenance workers (410 jobs), and plumbers, pipefitters, and steamfitters (410 jobs). The region also had a larger share of mobile heavy equipment mechanics, millwrights, excavating and loading machine op-

erators, and electrical power-line installers and repairers. Median hourly wages for construction occupations ranged from around \$18 an hour at the low end to more than \$40 an hour at the high end. Civil Engineers and construction managers were the highest-earning occupations in the industry, pulling in over \$80,000 per year. Twenty-five different occupations had median wages above \$50,000 per year in the region, representing over 6,500 jobs.

Despite the relatively high wages, all but six of these construction-related occupations can be gained with a high school diploma or less and some level of on-the-job training.

Occupations in Demand

Because of the huge spike in demand for construction workers the past few summers, several construction-related occupations are in high demand in Northeast Minnesota. Of the 293 occupations that have exhibited high demand in the region – having three, four, or five stars in the current demand indicator – 15 are construction-related occupations (see Table 1-Northeast Minnesota Construction Related Occupations in Demand).

Table 1. Northeast Minnesota Construction-Related Occupations in Demand

SOC Occupational Title	Current Demand Indicator	Median Annual Wage	Projected 10-year Growth Rate	Projected 10-year Total Openings
Construction Laborers	Five Stars	\$39,985	0.20%	1,054
Heavy & Tractor-Trailer Truck Drivers	Five Stars	\$46,169	-1.50%	2,553
Cement Masons and Concrete Finishers	Five Stars	\$51,199	5.40%	231
Construction Equipment Operators	Five Stars	\$68,136	2.70%	991
Electricians	Five Stars	\$67,847	-8.50%	521
Construction Managers	Five Stars	\$79,205	-7.70%	199
Civil Engineers	Five Stars	\$87,758	12.90%	383
Mobile Heavy Equipment Mechanics	Four Stars	\$52,680	6.20%	653
Cost Estimators	Four Stars	\$65,195	0.50%	198
Helpers--Carpenters	Three Stars	\$40,154	-13.30%	35
Architects, Except Landscape & Naval	Three Stars	\$64,184	-2.40%	56
Carpenters	Three Stars	\$53,873	-4.30%	1,221
Plumbers, Pipefitters, & Steamfitters	Three Stars	\$78,747	-7.00%	397
Tile & Marble Setters	Three Stars	\$48,961	N/A	N/A

Source: DEED [Occupations in Demand](#)

Check out 218trades.com

Contact the Office of Job Training for more info.

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FACT SHEET

SKILLED LABOR CAREERS

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Industry and Occupational Outlook

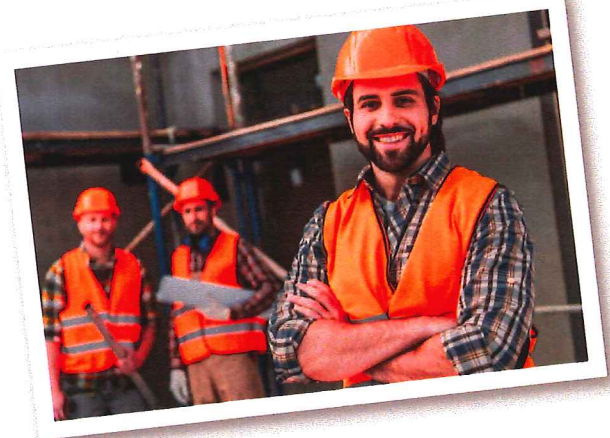
According to DEED's 2016 to 2026 Employment Outlook data, the construction industry is projected to grow by nearly 9 percent with an increase of 10,329 jobs over the next 10 years in the state of Minnesota.

The projected job growth in the construction industry is expected to carry over into construction-related occupations as well, with many expected to see small gains in Northeast Minnesota through 2026. Construction equipment operators are expected to see the most growth from 2016 to 2026, followed by steady growth for cement masons and concrete finishers, construction and building inspectors, highway maintenance workers, pipelayers, and construction laborers.

But rather than new jobs being created, the region is expected to have more demand for labor market exit openings and occupations transfer openings – jobs that become available because the existing worker retires out of the labor force or changes career. There may be as many as 7,411 total openings for construction and extraction workers in the region, with 2,621 of them being for replacement due to labor market exits. Most construction-related occupations in the region will have more replacement openings than new jobs created, requiring new workers to replace existing workers. For example, the largest number of total openings is for heavy and tractor-trailer truck drivers, who could have over 2,500 total job openings in the next 10 years, despite a projected loss of jobs overall. The region is projected to need 1,054 construction laborers due to 364 labor market exit openings and 688 occupational transfer openings, as well as 1,221 carpenters and 991 construction equipment operators, almost entirely from labor market exits and occupational transfers as opposed to new growth. Electricians, mobile heavy equipment mechanics, first line supervisors of construction workers, and plumbers are also projected to see steady demand in Northeast Minnesota in the next 10 years (see Table 2).

Table 2. Northeast Minnesota Construction-Related Occupation Projections, 2016-2026

Occupation	Estimated Employment 2016	Projected Employment 2026	2014-2026 Total Openings **
Total, All Occupations	160,337	162,062	179,072
Construction Managers	349	322	199
Cost Estimators	204	205	198
Construction & Extraction Occupations	7,433	7,440	7,411
First-Line Spvrs. of Construction Workers	497	498	474
Brickmasons & Blockmasons	103	122	130
Carpenters	1,459	1,396	1,221
Cement Masons & Concrete Finishers	202	218	231
Construction Laborers	1,043	1,045	1,054
Construction Equipment Operators	880	904	991
Electricians	543	497	521
Painters, Construction & Maintenance	354	354	298
Pipelayers	40	44	47
Plumbers, Pipefitters, & Steamfitters	429	399	397
Sheet Metal Workers	164	164	169
Helpers-Carpenters	30	26	35
Construction & Building Inspectors	114	122	133
Highway Maintenance Workers	469	479	483
Installation, Maintenance, & Repair Occs.	7,500	7,843	7,454
Mobile Heavy Equipment Mechanics	633	672	653
Heating, Air Cond, & Refrig. Mechanics	184	192	186
Millwrights	147	130	105
Electrical Power-Line Installers/Repairers	222	217	165
Transportation & Material Moving Occs.	9,105	8,821	10,010
Heavy & Tractor-Trailer Truck Drivers	2,481	2,443	2,553



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Contact the Office of Job Training for more Info.