

# 2021 IMPACT REPORT



## South Central Washington STEM

Science, Technology, Engineering, & Mathematics



**2021** was a year filled with tremendous change and provided unforeseen opportunities for all of us. The South Central STEM Network was no different. Over the past year, new opportunities have enabled us to expand our staff and welcome some outstanding individuals to our team. Being awarded an Education, Innovation, & Research (EIR) grant from the US Department of Education allowed us to hire Maddy Rogers as our Administrative Assistant and support for all things STEM and Career Connected Learning. In addition, Maribel Rebolledo and Nicole DeLeon came on board as our new STEM Specialists to support the schools and students involved in the Virtual STEM Role Model Project (EIR). To provide the necessary support for increased STEM Network projects, Hugo Moreno became the co-director of the STEM Network/Career Connect Washington Regional Network. Shelly O'Neill was hired in April to take over Hugo's former position as the ESD 105 CTE/Career Connected Learning Coordinator. These additional team members have allowed the STEM Network to increase the reach and impact of our work.

The South Central Washington STEM Network at Educational Service District (ESD) 105 was developed in 2012 by regional business, education, and community leaders to create a coordinated system to change outcomes for young people and employers in South Central Washington. Since its formation, the STEM Network has convened business, workforce development, community, and education partners to identify opportunity gaps for students and businesses. These regional partners have developed and implemented new and innovative programs to ensure that ALL students have access to a high-quality STEM education that prepares them to succeed in their chosen careers and in life.

It is our privilege to showcase a number of these opportunities in this year's Impact Report.

Sincerely,  
Mark Cheney and Hugo Moreno  
Co-Directors, South Central Washington STEM Network

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# NPOWER GORGE GIRLS

In an effort to help support and increase the Career Awareness opportunities for female students in the Columbia Gorge region, the South Central STEM Network partnered with Career Connect Southwest, First Nations MESA, and STEM professionals in the Columbia River Gorge to develop and implement the nPower Gorge Girls Project. Meeting the needs of our most rural students presents its own set of unique challenges when it comes to providing access to Career Connected Learning (CCL) opportunities, and the chance to explore STEM career pathways. These students often find themselves far from the businesses or professionals they would like to learn more about. The barriers of distance, transportation-related expenses, and lack of personal connection can prove to be insurmountable. Enter the nPower Gorge Girls Project. In each after school session the participating middle school girls:

- Are introduced to new careers and women working in that field who look like them, live where they live, and identify with the communities that support them,
- Meet other girls from the Columbia Gorge region who are also interested in STEM,
- Participate in fun, hands-on career exploration through authentic project-based learning, and
- Receive a mini-design challenge kit to explore the skills needed in the featured career

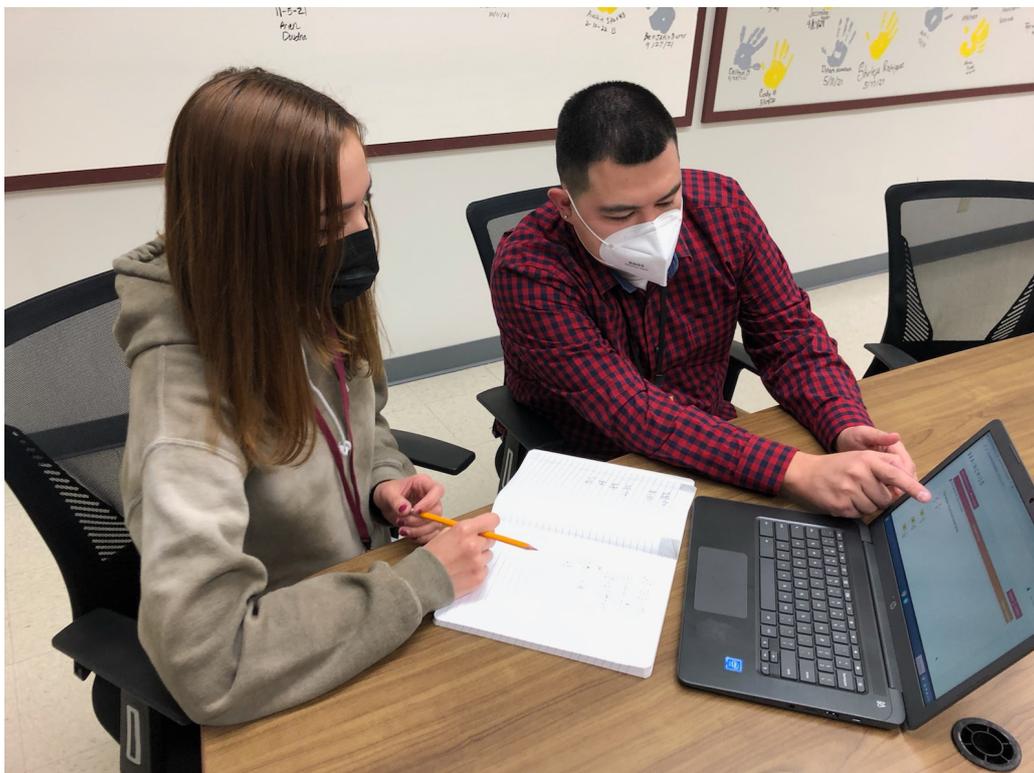
The success of the nPower Gorge Girls project depends on the commitment of STEM professionals from the region. These volunteers develop authentic work-based challenges and share their stories, giving the girls the opportunity to learn about possible STEM career pathways. We are so thankful for the women who partnered with us on this exciting project. Maza Brady is an example of one of these dedicated professionals. Maza works as a Mechanical Engineer at Trillium Engineering in Hood River, Oregon. She shared her story of what initially interested her about engineering, what classes she enjoyed, what course of study she pursued, and what challenges she faced. The nPower Gorge Girls Project is an example of a data-driven opportunity to increase female interest and participation in STEM career pathways.



# VIRTUAL STEM ROLE MODEL PROJECT

In January of 2021, the South Central Washington STEM Network/ESD 105 and its partner organization RGI Corporation were awarded funding from the United States Department of Education to implement an Education, Innovation, and Research (EIR) grant entitled the STEM Virtual Role Model Project. The project will research the impact of the increasing use of new virtual technologies to connect diverse STEM Role Models with farmworker students in isolated small rural communities, and to examine student performance data in STEM courses as well as changes in attitudes about pursuing STEM fields. These students in rural communities lack STEM Role Models that look like them and understand their educational challenges. Virtual technology is becoming more universally common and is an emerging and promising innovation to make these connections possible.

There is an abundant amount of evidence that suggests STEM role models have a positive impact on girls. However, there is limited research on STEM role models and their impact on influencing minority and underrepresented students in STEM fields to pursue STEM careers. In addition, there is no research that meets What Works Clearinghouse (WWC) standards on the impact role models have on farmworker students. Farmworker students from 6 districts (scaling up to 22) will participate in 8 virtual interactions with STEM professionals & Near Peer Role Models during each year of the project. Researchers will evaluate data on students' achievement in math and science, enrollment in STEM courses, career pathway interests, and postsecondary STEM program enrollment. A Virtual STEM Role Model Toolkit will be developed to support project scale-up. Funding provided from the EIR grant allowed ESD 105 to hire Nicole DeLeon and Maribel Rebelledo in July of 2021 to serve as STEM Specialists in the project. Virtual role model sessions will begin in early 2022.



# EARLY MATH

The instructional coaches, classroom teachers, and teacher's aids from 27 classrooms attended professional development for two Studio Cycles in 2021. In each of these early learning classrooms, students worked with Math for Love (Tiny Polka Dot cards) activities during two Studio Cycles. Each student was provided a set of Tiny Polka Dot cards to take home and play with their families. Instructions for each activity as well as choice grids developed by the ESD 105 Regional Math Coordinator and Regional Science Coordinator were sent home to families as resources to support the use of the activities. The 2021 impact goal was met with 351 students using the Math for Love materials in their classrooms. In addition, approximately 1,170 family members used the Tiny Polka Dot cards in the home.



# COMMUNICATIONS

We are excited to share that we have officially launched our website in addition to our quarterly newsletters. These tools will help share news and provide our community with the STEM and Career Connected Learning Resources. Visit our website at [www.scwstem.com](http://www.scwstem.com).

## THE SCOOP! BROWSE OUR PAST NEWSLETTERS



FEBRUARY 2021



MAY 2021



AUGUST 2021



JANUARY 2022



[HOME](#) [WHO WE ARE](#) [NEWS](#) [PROJECTS](#) [RESOURCES](#)

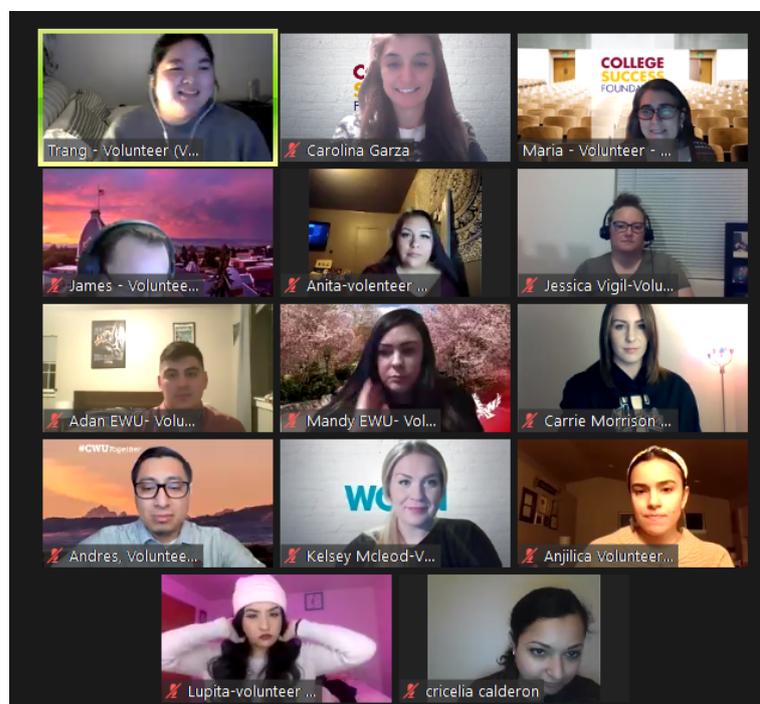


# FINANCIAL AID AWARENESS

During the 2020 legislative session, Senate Bill 6141 was passed requiring all districts serving high school students to provide a Financial Aid awareness event by December 1st, 2020. Financial Aid completion is an ongoing challenge throughout the state, especially for students of color, rural communities, and low-income areas. When COVID hit, the need for support grew even greater, especially in Central Washington. To meet this need, the South Central STEM Network and the College Success Foundation partnered together to host virtual Financial Aid awareness events throughout the Fall and Winter of the 2020/2021 school year. Seven events were hosted between November and December, with four additional events held in February.

Students from 20 regional school districts attended the events. During the February events over 100 students attended with the support of 44 Financial Aid Volunteers. College Success Foundation's Student Financial Services Department led the events, with support from ESD 105, Heritage University, Central Washington University, and the Ready to Rise/Act Six Program. This collaborative effort provided support to districts in meeting the legislative requirement during a very trying time, as well as bringing together stakeholders from across the state to support students and families in deepening their understanding of Financial Aid and in completing their FAFSA/WASFA.

The events were provided in both English and Spanish and were scheduled at various times to accommodate the diverse needs of students and families. In the fall of 2021, these regional partners hosted 3 Financial Aid Awareness Day (FAAD) events, with additional events planned for February 2022. The STEM Network provides mini-grants to schools/districts to host virtual or in-person events.

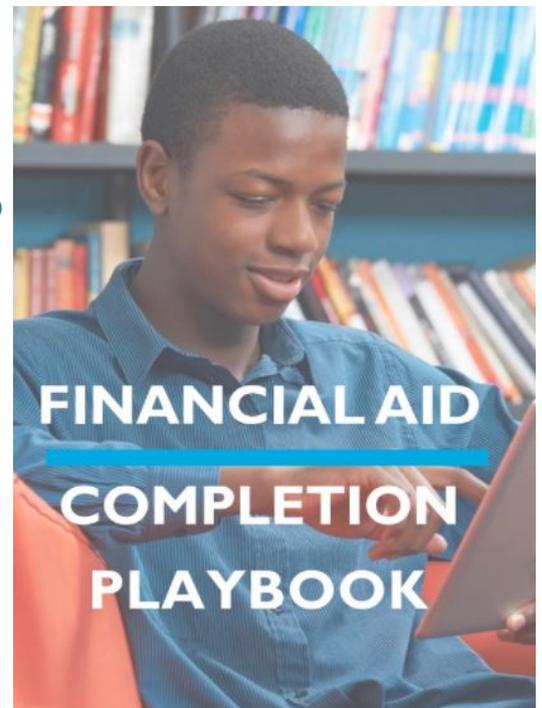


# FAFSA PROVISO LEADERSHIP

During the 2020 legislative session, a proviso to support Financial Aid completion in Washington passed with bipartisan support. This proviso provided funds to the South Central STEM Network (Yakima Valley), West Sound STEM Network (Kitsap & Olympic Peninsulas), Northwest STEM Network (Skagit Valley), and to the statewide WA STEM network. The West Sound STEM Network served as the coordinating agency for this important work. The proviso partner organizations developed a playbook that documents current success and recommended actions to create a culture that supports successful postsecondary credential attainment. Included in the Financial Aid Completion Playbook are 10 case studies sharing success stories from across the state.

The South Central Washington STEM Network was asked to provide two case studies to be included in the playbook. The first case study details the data journey experienced by the advising team from Eisenhower High School in the Yakima School District. The case study describes how the team at Eisenhower High School used data to inform the FAFSA/WASFA completion work and to increase their completion rate by 10+% in the 2019-2020 school year, and surpass the state completion average by 11% in 2020/2021.

The second case study describes how the South Central STEM Network partnered with the College Success Foundation and the Washington College Access Network (WCAN) to support small, rural school districts in offering Financial Aid awareness events and increasing FAFSA/WASFA completion. In 2020/2021 this coalition of cross-sector partners co-hosted 11 regional Financial Aid Advising Day (FAAD) events in Kittitas County, Grant County, Upper Yakima Valley, and Lower Yakima Valley. The events were held virtually with school districts in ESD 105 serving as co-sponsors. FAAD events were provided for both English and Spanish-speaking students and their families. The Steering Committee for the FAFSA Proviso will continue to support regional STEM Networks to leverage state financial aid tools and processes with an overarching goal of developing a college-going culture, especially for those furthest from educational justice.



# LIVE HERE, WORK HERE

Live Here, Work Here is an engaging, virtual Career Awareness opportunity for industry professionals to showcase their occupation and career/job opportunities at their company to regional middle school and high school students. The STEM Network has partnered with the Yakima County Development Association to engage Industry partners for this project. The project is intended to highlight the variety of in-demand, family-wage jobs in our region. Many of our youth drive by amazing companies with great jobs every day, without knowing what kind of career opportunities are available in their own backyard. Live Here, "Work Here!" is designed around career exploration and career awareness that allows all youth in South Central Washington to learn about careers in their own communities through short, Tik Tok-like videos.

Each partnering company will feature 5 employees in their short, 5-10 minute video representing the variety of occupations at their company. The videos will introduce students to local professionals from multiple career pathways and those representing a variety of post-secondary credentials. This includes Apprenticeship Programs, Technical Schools, 4-Year Degrees, 2-Year Degrees, Professional Degrees, or Industry Recognized Certifications/Credentials. In each video the goal is to have a diverse demographic representation of employees featured, that reflects the demographics of the youth in our communities. Each of the 5 employees featured will have a one-pager created that provides an overview of their pathway to their current position including education, special skills, and past work experience.

There will also be an opportunity for students to learn even more from our featured local professionals in a live virtual panel discussion. Over the next two years, a total of 20 videos will be completed and be made available via the STEM Network website and youtube page.



# STEM RISING STAR

The Washington STEM Rising Star award was created as a state-wide effort to encourage girls in grades 9-11 to reach for the stars and embrace STEM education, career exploration, and personal development in and outside the classroom.

In the spring of 2021, 22 young female students from the ESD 105 region were nominated for the WA STEM Rising Star Award. On June 15th the South Central STEM Network team hosted a celebration honoring all of our nominees. The ceremony included a recognition slideshow, speakers including Angela Jones, CEO of WA STEM, Jasmine James an applied mathematics student at Central Washington University, an inspirational video message from Senator Patty Murray, and a keynote address by the 13th legislative district representative Gina Mosbrucker.

After a regional review of 22 amazing nominations, the top five student nominees were sent to WA STEM for the final decision. The first-place winner receiving \$500 was Sara Khan from West Valley High School, the second-place winner receiving \$250 was Anna Mitre from A.C. Davis High School, and the third-place winner Thalisa Saldivar from Toppenish High School received \$100. Sara Khan was involved in organizing two STEM fairs showcasing school-wide projects. She taught classes to parents on the use of Skyward software and Google Classroom to assist parents in providing support to their students during virtual learning. Sara has volunteered with the STEM Building at the Central Washington Fair. A link to the STEM Rising Star ceremony if you would like to watch it. We are excited to highlight our next generation of STEM leaders!





# CLIMBING HIGHER: EXPEDITION CWU SERIES

The Climbing Higher: Expedition CWU series was created through a partnership between the South Central STEM Network Team at ESD 105 and Central Washington University (CWU). This cohort-based model will provide students with the opportunity to meet other high school students from across the region who are interested in attending CWU, meet university staff who can help support the transition from high school to college, and receive much-needed resources and guidance. This is especially important for our low-income and first-generation college students. Through the three-part series of events, organizers will address barriers that prevent students from getting to and through a college degree and provide parents with the opportunity to hear from the parents of current university students to answer any questions they might have.

The three-part series offered during the 2021-2022 school year will have individual sessions focused on Admissions (Fall), Financial Aid (Winter), and Summer Transition (Spring). This pilot program will expand in future years to include additional universities that are highly attended by students in the ESD 105 region.

On August 19, 2021, we held our inaugural event for the Climbing Higher CWU Expedition Series-Summer Transition. We had over 100 Students and parents attend this in-person event at the Yakima Valley Technical Skills Center. Wellington, the CWU mascot and student ambassadors from CWU did a great job welcoming everyone! Students and parents were greeted with a box of delicious finger food appetizers and bottled water. Parents received a gift bag including their own CWU coffee mug!



# COMPUTER AND SOFTWARE TECHNICIAN (CAST) PROGRAM

In partnership with Computing for All, the Yakima Valley Technical Skills Center (YV Tech), Yakima Valley College, the South Central STEM Network, and its partners have developed the Computer and Software Technician (CAST) program. The CAST program received Career Launch endorsement in June of 2021 from the State Board of Career and Technical Colleges and Connect Washington. The CAST program was introduced in the fall of 2021 at YV-Tech. In the fall of 2022, students at the West Valley School District Innovation Center will also have the opportunity to begin this program. The program provides students with the opportunity to earn an Industry Recognized Credential in IT (CompTIA A+ Certification) and the opportunity to interview for an 8 week paid summer internship with local employers that could possibly lead to full-time employment. Each CAST intern will gain up to 540 hours of classroom instruction in core competencies and up to 400 hours of work-based learning.

In addition to the Computer and Software Technician program, The STEM Network and its partners are developing a new program in Cyber Security at YV-TECH that will align with the CAST program to create a new 2-yr. CTE Graduation Pathway in IT.



# PATHWAY TO THE TOP

The Pathway To the Top regional career and college fair sponsored by the South Central STEM Network Team took place on Oct. 12, 14, 15, 2021 from 8:00 am - 11:00 am each day. The event was hosted via NOVVA Tech's virtual reality online platform. This year, 25 high schools and approximately 4,200 students from the ESD 105 region participated in the event. NOVVA uses a virtual reality platform in which matches pre-registered students to post-secondary opportunities according to their levels of interest, skills, and aspirations. The platform allowed students to virtually enter a College Fair as if they were entering into a college fair lobby. They enter into specific exhibit booths which have been created by Colleges, Universities, Technical Schools, Military, and Industry representatives.

***"Every young adult in Washington will have multiple pathways toward economic self-sufficiency and fulfillment, strengthened by a comprehensive statewide system for career connected learning."***

Students are instantly greeted by a representative and a personal conversation begins. Additionally, students can view photos, videos, and review program information at their own pace while visiting each booth. Brochures can also be viewed and saved in a virtual backpack which a student can access for an entire year and share with family members and peers. Another incredible feature is that the whole platform can immediately be translated into several languages, thus removing language barriers for participants.

As a STEM Network, we depend on data to inform program effectiveness and improvement as it relates to diversity, equity, and inclusion. Upon completion of the fair, several data points are collected. As a host organization, the STEM Team has access to data illustrating how many students participated, the percentage of male and female participants, and other demographic data. Furthermore, the team can access student preferences for housing, university size, rural, suburban or urban location, and if a student is planning to apply to a particular school. Representatives and students both receive transcript messages if they used the chat feature.

The STEM Team is looking forward to showcasing this platform again next September to allow students the opportunity to learn about their post-secondary options before in-person college fairs, visits, or open houses are scheduled later in the school year.

# 2021 STEM SUMMIT

The annual Washington STEM Summit brings together 250+ business, education, and community leaders from across the state who support Washington STEM's mission to leverage STEM for social change, remove barriers to credential attainment, and create pathways to in-demand, family-wage jobs for all Washington students.

On November 17, 2021, the South Central STEM Network was honored to be featured at this year's Summit. The STEM Network leadership team had the opportunity to share their experience and partnership with the Aerospace Joint Apprenticeship Committee (AJAC) in developing and expanding Career Pathways in the manufacturing industry. The program highlighted was AJAC's Production Technician Apprenticeship program. This innovative program was the first in-school (during school hours) Registered Youth Apprenticeship offered in the state of Washington. Shelly O'Neill provided her unique experience from helping establish the program and how AJAC and the West Valley School District overcame system-level barriers during implementation. Along with sharing the program development process, Steven Sanchez, a West Valley High School graduate, and current Central Washington University student, was featured during the Youth Panel portion of the session.

The Youth Panel was hosted by South Central STEM Network Co-Director, Hugo Moreno, and featured three students who had participated in the career pathway programs highlighted during the session. Steven shared his experience in AJAC's Production Technician program and how it opened his eyes to what career pathway he wanted to pursue. He is currently completing his Engineering degree at Central Washington University with a focus on manufacturing. Steven provided a very important perspective that is seldom heard by Summit participants. He was able to articulate why he chose to participate in the program, how it impacted his future, the challenges he faced, and the benefits of such career pathway programs for ALL students.



# PRESENTATIONS

In 2021 the STEM Team at ESD 105 had numerous opportunities to share the STEM and Career Connected Learning work that the Network and its partner organizations have collaborated to develop and implement across South Central Washington. The STEM Team has used these presentation opportunities to increase awareness of the amazing work being done in support of students, families, businesses, and communities in the region. The following list of presentations illustrates how widely this awareness strategy was implemented in 2021.

- Future Focused Educator Summit
- Washington Association of School Administrators South Central Region (WASA SCR)
- Yakima Valley Career and Technical Education (CTE) General Advisory Council (GAC)
- Kittitas CTE GAC
- Central Washington University (CWU) Career Counselors
- Washington Career Development Association (WCDA)
- Career Connect Washington (CCW) Cross-Agency Work Group
- Washington STEM Summit
- Educational Service District (ESD) 105 Counselors Professional Learning Community (PLC)
- Migrant Education PLC
- ESD 105 Board of Directors
- Puget Sound CCW Regional Network
- Society of Human Resource Managers (SHRM)
- CCW Career Connected Learning (CCL) Coordinators
- Washington Association for Career Counseling and Employment readiness (WACCER) Conference
- Association of Career and Technical Education (ACTE) Conference
- Jobs for the Future (JFF)

## CAREER CONNECTED LEARNING IN SOUTH CENTRAL WASHINGTON

- Career Awareness & Exploration
- Career Preparation
- Career Launch



South Central Washington STEM



# PARTNER RECOGNITION



STATE FAIR PARK & Event Center

BICKLETON SCHOOL DISTRICT  
*Home of the Pirates*



EAST VALLEY SCHOOL DISTRICT NO. 90



ELLENSBURG SCHOOL DISTRICT

GRANDVIEW SCHOOL DISTRICT

Granger School District

cfa Computing for All



Ignite WORLDWIDE

Inspiring Girls Now in Technology

Highland School District 203  
A Quality Education For All Students

WEST VALLEY SCHOOL DISTRICT

GEAR UP

Kittitas School District  
To Achieve Academic and Personal Success

COLUMBIA Strategic Consulting Group LLC

Mabton School District

AAC Aerospace Joint Apprenticeship Committee



Mount Adams School District #209

Naches Valley SCHOOL DISTRICT



SUNNYSIDE SCHOOL DISTRICT



SELAH SCHOOL DISTRICT

THORP SCHOOL DISTRICT

TOPPENISH SCHOOL DISTRICT

Wahluke School District  
Recognizing Excellence



Yakima SCHOOL DISTRICT



COLLEGE SUCCESS FOUNDATION

CWU Central Washington University

Kwik Lok



PNW Health Sciences

PERRY TECHNICAL INSTITUTE

WCAN WASHINGTON COLLEGE ACCESS NETWORK

Washington State Tree Fruit Association

WASHINGTON STUDENT ACHIEVEMENT COUNCIL  
EDUCATION • OPPORTUNITY • RESULTS

Yakima County Development Association  
CHOOSE YAKIMA VALLEY

DISCUREN FOUNDATION

CAREER CONNECT WASHINGTON

Washington Office of Superintendent of PUBLIC INSTRUCTION

ESD105 EDUCATIONAL SERVICE DISTRICT 105

WASHINGTON STEM CELEBRATING 10 YEARS

WEST VALLEY TECHNICAL COLLEGE YV-TECH

# THANK YOU

We hope you enjoyed reflecting with us on an incredible and eventful year! The work of the South Central STEM Network/Career Connect Washington Regional Network would not be possible without the partnership and financial support of so many committed individuals and organizations from all over South Central Washington and across the state. Our partners include leaders from K-12 education, post-secondary institutions, business & industry, community-based organizations, government, and the students and families of our communities.

The Network leadership would like to express sincere thanks for the commitment to improving STEM education and Career Connected Learning that these partners demonstrate consistently for ALL the students in South Central Washington.

We also want to express our sincere appreciation to those who guide the STEM Network as advisory board members. In 2021 two of our board members chose to pursue another adventure - retirement! We express our sincere thanks to Mike Brown and Martha Kurtz for their many years of service to the STEM Network. Both Mike and Martha served as members of the leadership team that started the STEM Network back in 2012. We wish them all the best in this next chapter of their lives! We also had the chance to celebrate with Will Sarrett as he left his STEM Network board position to become the Executive Director of Human Resources for the Yakima School District.

While 2021 provided many opportunities to celebrate, we also felt the grief that accompanies a great loss. Our good friend and colleague, Ric Pilgrim passed away on January 2nd. Ric was a committed advocate for STEM education and equity in our region. **He will be greatly missed!**

The new year is underway and we look forward to sharing the exciting opportunities, events, and successes in our 2022 Impact Report!

Best regards,  
Mark Cheney and Hugo Moreno  
Co-Directors