



West Sound STEM Network
Engage • Educate • Employ



2020 Impact Report



Build A Bridge – STEM Café at Rice Fergus Miller

Imagine the Possibilities

What if all students, regardless of their demographics, have access to pathways that lead to postsecondary credentials and family-wage careers?

What if educators partner directly with industry leaders to engage in authentic, place-based career connected learning that models industry? How might educators be inspired and in turn inspire their students to catapult themselves into STEM learning and opportunities?

What level of innovation is possible when the perfect storm happens—centering racial and socioeconomic equity, partnering education and industry, using data to drive strategy and measure success, and co-creating change with community leaders from populations furthest from educational and institutional justice?

That's where West Sound STEM comes in.

As the Executive Director of West Sound STEM Network, I am amazed by the tenacity and impact of the Network of over 70 cross-sector partners. Amazed and impressed, yes. Surprised, no. It should not come as a surprise that when regional leaders are supported and empowered to unleash their expertise in a collective, collaborative and data-driven Network, great things happen for youth. We use data as a driver to catalyze student success and we focus on disrupting racial and socioeconomic inequities.

All Network operations, activities, goals, objectives, and actions are developed with the goal of reaching Demographic Equity. Our definition of equity is the state in which a student's educational and economic outcomes are not correlated with demographics or identities, such as race, income, rurality, ability status, or gender. To achieve our equity goal, we know and value that each Network member brings a unique skill set, stakeholder group, set of resources, range of needs, and area of influence and together, all Network members advance West Sound STEM's mission and vision. No one Network member's voice is of greater importance or influence than another; the Network recognizes the power of synergy in which the whole is greater than the sum of the parts.

Charlie Bolden, former administrator of NASA, when speaking about international space cooperation once said, "For a partnership to work, partners need to be at the table from the beginning. It is not a partnership if the program is designed and a partner is brought in at the end and asked to play." Well said, Charlie. West Sound STEM Network partners are not only at the table from the beginning—we create the table together. We work through the learning together, launch career-connected learning experiences for students, and set the stage for all students to be future ready and thrive in Washington's vibrant environment.

— Dr. Kareen Borders, Executive Director



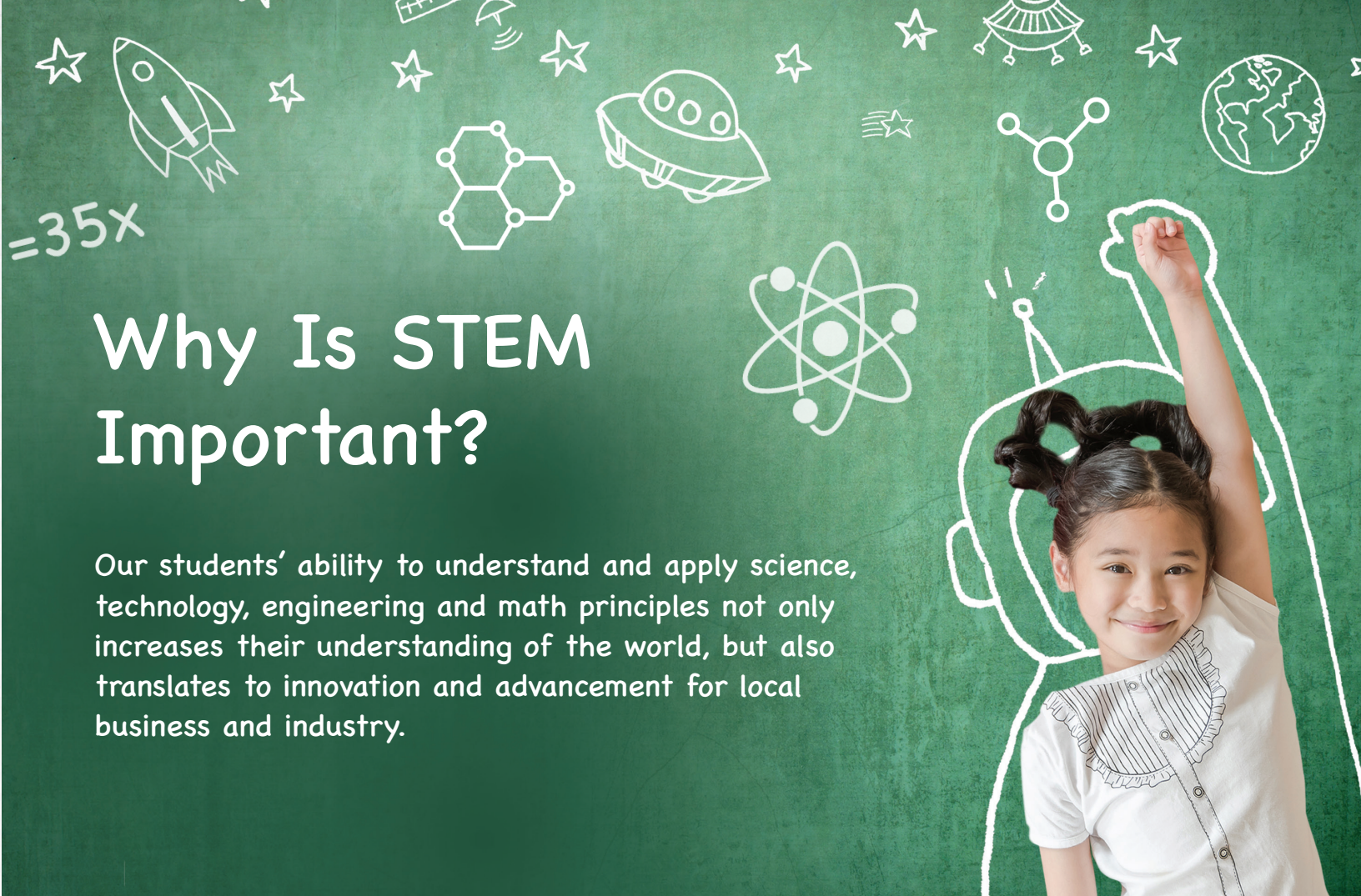
"I can think of no more important work going on at this very moment than ensuring our youth have paths to meaningful, sustainable careers that guarantee lifelong earning power. West Sound STEM Network is leading this work."

— Robert W. Andrade, Jr.,
General Manager, Johnson
Controls, Inc. & West Sound
STEM Executive Board Member

Network Goals & Objectives

We are collectively committed to building PreK-career pathways to postsecondary credentials to family-wage jobs, especially for those furthest from educational and institutional justice. We simultaneously focus on current and planned activities that demonstrate ongoing impact and catalyze institutional-level change for our region.





Why Is STEM Important?

Our students' ability to understand and apply science, technology, engineering and math principles not only increases their understanding of the world, but also translates to innovation and advancement for local business and industry.

West Sound STEM Network

is a Washington STEM Regional Network and a Regional Career Connect Washington Network.

We are an action-oriented, transformative, public-private regional network, covering the Olympic and Kitsap peninsulas, that convenes, manages, and supports a cross-sector network of partners from industry, business, school districts, education agencies, higher education institutions, Career and Technical Education (CTE) practitioners and providers, government, military, community, Tribes, library systems, nonprofits, out-of-school providers, and workforce development agencies.

Network Members



“As a business, we are asked frequently to join networks and other associations. From our years of experience please know that we seriously consider West Sound STEM Network to be the preeminent leader in the western U.S., if not the nation. When we receive an invitation to a conversation from West Sound STEM, our response is an automatic yes.”

— Frank Rimkus, CEO, Galaxy Theatres and West Sound STEM Executive Board member



We serve students who, based on data, face greater barriers to opportunity: students of color, students from low-income and rural communities, and young women.

Equity Drives Everything We Do

The current reality is that not all students have the same opportunity. Access to transportation, technology, social capital, spaces to convene, paid work experience, and credential programs with labor-market value are all prime examples of the barriers our students face, and ones that we must work to systematically address.

We are committed to ensuring that ALL students are supported with the relationships, connections and resources they need to thrive in the future career they choose for themselves. Specifically, this means access to a multitude of developmental paths that lead to high-demand, family-wage careers in our communities.

As we work toward a future where ALL students find a career path, we have the following shared commitments to ensure our shared work is serving students from priority populations:

- Regular reflection and analysis of the barriers that limit access to opportunities, and a commitment to address and remove those barriers.
- Respect for, and integration of, the wisdom, voice, experience, and leadership of community perspectives.
- Regular use of disaggregated data to identify and target resources for the people and places in greatest need, to maximize impact.
- Develop shared ownership, co-creating the programmatic, systemic, and policy solutions needed to address systemic inequities in our region.
- Commitment to find solutions that will have impact at a region-wide (perhaps state-wide) scale.
- Prioritize cultural proficiency, and intentionally reach out to our whole community.
- Conduct ongoing self-examination to ensure that the membership, and leadership, in our network are also demographically representing our region.



A Commitment to Data

Data Deep Dives

We cannot change what we cannot measure! WSSN hosted three in-depth presentations of regional educational, demographic and workforce data in partnership with Washington STEM to help inform decision-making by legislators, educators, industry and other local leaders.

Regional Summits

Two Regional Summits were held in May and December with over 100 participants at each Summit. Topics included "Building Pathways to the Future: The Importance of STEM Education and Family Wage Jobs," "Learning and Leading for Equity," and "Breaking Down Financial and Systemic Barriers to Credential Attainment."



Centering Equity

WSSN regularly hosts listening sessions, roundtables, and events to center equity by examining existing systems, co-creating change with partners from populations furthest from opportunity, and providing tools and resources. For example, WSSN hosted "Lifting Up Our Community: Five Things You Can Do to Create Lasting Change Around Equity" Regional Roundtable led by Jiquanda Nelson. Jiquanda Nelson is a West Sound STEM Network Executive Board Member and was also the Equity, Inclusion, and Diversity & Workforce Development Lead for Kaiser Permanente at the time.

Discussions centered around:

- Create a space to discuss how to make change in your ecosystem--both now and in the future.
- Meet participants where they are at with "Five Things You Can Do" to uplift your sphere.
- Equip leaders with tools to model within their organizations.

West Sound STEM Network utilizes a number of comprehensive data sources to inform our own work as well as share with our partners. These include WA STEM "CORI" <https://washingtonstem.org/cori/>, STEM by the Numbers, numerous Washington State Workforce Development Councils and the OSPI School Report Card.

Policy Engagement

Two-Way Communication

WSSN, in partnership with other Networks, WA STEM and Career Connect Washington, participate in and lead two-way conversations with elected officials.

Roundtables

Conversations are regularly convened, via roundtables and team meetings with elected leaders. Senator Christine Rolfes, Congressman Derek Kilmer, OSPI Superintendent Chris Reykdal and Senator Emily Randall provided regular updates to WSSN.

Listening and Sharing

Two of WSSN's Executive Leadership Team delivered a presentation to the Washington State Senate's Higher Education & Workforce Development Committee emphasizing the positive impact apprenticeship expansion can have on the state's economy.



From Summits and Data Deep Dives to lectures and special events, West Sound STEM offered multiple opportunities in 2020 for the public and private sectors to explore regional data, discuss workforce, educational and equity-based issues, share best practices, legislative news and network.

We support elected representatives and other leaders in learning more about issues related to STEM education and career opportunities.

We engage with and play a leading role in Career Pathways in our region. We champion, lead, and support the development and continuous improvement of career exploration and awareness, career preparation, and career launch programs. We work with partners to create durable systems changes resulting in immediate and longer-term impacts for young people from priority populations.

2020 Career Pathways

Building student enthusiasm
for STEM careers

STEM Like ME!SM Explore

STEM Like ME!SM Explore, launched in early 2020, pairs STEM professionals (Mentors) with small groups of middle-school students. Students engaged in a hands-on activity designed by their Mentor and Q&A time to explore how the Mentor found their career pathway. With a few live sessions successfully completed, the program quickly re-grouped in March/April to develop and deliver a virtual version to students. New mentors and improvements to the virtual experience have continued throughout 2020.

Business & Community Partnerships

WSSN partnerships with business and community organizations provide students with exciting connections to potential careers. From Astronomy to Biotech or Controls Technology to Construction, these relationships allowed the scheduling of guest speakers, worksite tours, job shadows and more for regional students.

Career Connected Learning

West Sound STEM joined Tacoma STEAM to host the first Pierce County Regional Apprenticeship Summit where educators, business and community leaders gathered to better understand how to develop and scale career connected learning opportunities and the essential role apprenticeships can play in a career pathway. The Controls Programmer Apprenticeship and Associate Controls Specialist Apprenticeships, co-created by WSSN, enrolled the first apprentices for both programs in 2020. WSSN continues building and strengthening Career Connected Learning systems and meets regularly with the OESD Career Connected Learning Coordinator.

Computer Science and Cybersecurity



With an OSPI-awarded grant, teachers across the Kitsap and Olympic peninsulas work in partnership with district administrators, industry, the Suquamish Tribe, WWU, UW, Olympic College, and MacDonald-Miller Facility Solutions to ensure that Computer Science Opportunities Across the Region (COSTAR) are available to all students. The group creates localized, coherent and streamlined computer science pathways for students. Teachers partner with professionals to increase their computer science skills and explore strategies for introducing and engaging students from historically underrepresented groups to computer science throughout the year.

We engage with the early learning ecosystem of their region. We center early STEM and the ways STEM intersects with other disciplinary domains (e.g. social and emotional learning, language and literacy learning). We play a leading role where appropriate, and work with partners to create durable systems changes resulting in immediate and longer-term impacts for children from priority populations via the adult caregivers and educators in their lives.

PreK-12

Sharing knowledge.
Sharing resources.

STEM Cafés

WSSN designs, hosts and presents, or hosts with a presenting partner, to deliver professional learning opportunities for teachers. Featuring STEM topics and activities, the STEM Cafés engage teachers in activities designed to deepen or broaden their knowledge in a STEM-related area of study and provide activities and resources for use in their classrooms. WSSN delivered 61 STEM Cafés, book studies and workshops to teachers in 2020—many were so popular they generated waitlists and resulted in multiple offerings.

Northwest Earth & Space Sciences Pipeline

The NESSP three-year long Professional Learning Cohort, conducted by WSSN, offers teachers a chance to more deeply explore scientific topics in their field of study, sharply honing their expertise, and allows them to develop new knowledge and skill-sets in additional fields. Currently the teachers are in their third year and have been engaged with one of the Network's newest partner-members, Slooh.

Early Learning

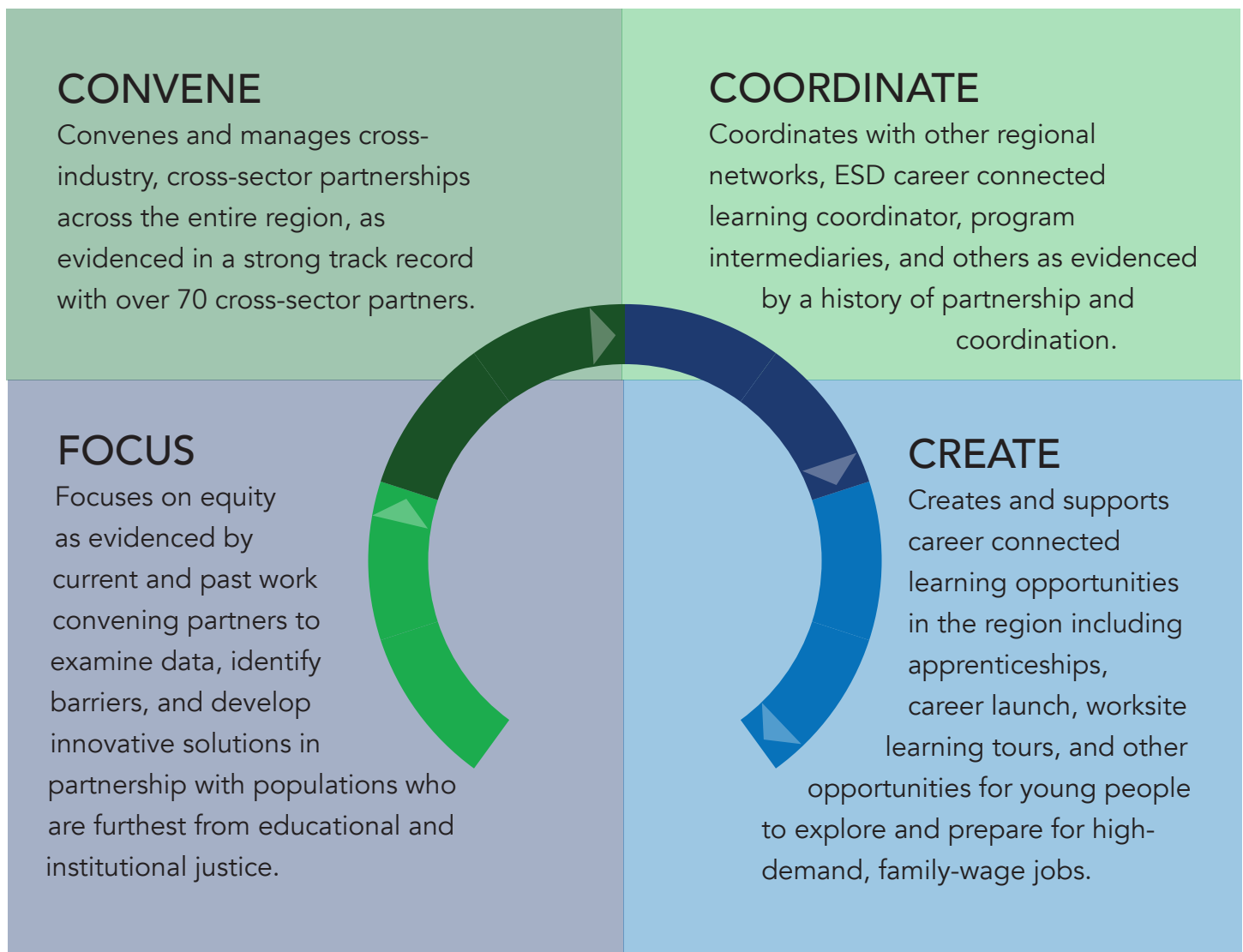
2020's newest partnership brings the Storytime STEM program, which connects children's literature with STEM and computer science, to our region's elementary schools. Teacher training provided by WSSN, enabled educators without formal STEM training to facilitate STEM activities for young children. Anchored by a popular storybook, young learners engage in themed science, mathematics, and engineering design activities or computer science Bee-Bot adventures. Activities are based on the Next Generation Science, Common Core Math, and Computer Science Standards, and are grounded in cognitive research on how children learn. WSSN also supported OESD 114 in their partnership with Zeno Math. Zeno Math's 5 Practices: Explore, Play, Talk, Build, and Connect, are designed to leverage the role of family relationships and social emotional learning in the development of math skills.

Maritime and Marine Sciences

By partnering with maritime and marine science leaders, WSSN is building access points to these high-demand sector pathways. Two recent "Tides and Currents" STEM Cafes, co-hosted with the Northwest Maritime Center, centered Indigenous Maritime practices and industry use of charts and technology to analyze tides and currents. Partnerships with the Pacific Northwest National Laboratory and with the University of Washington School of Oceanography provided professional learning for educators in ocean science acidification and threats to our coastal marine science ecosystem.

We engage with and play a leading role in PreK-12 STEM education improvement initiatives.

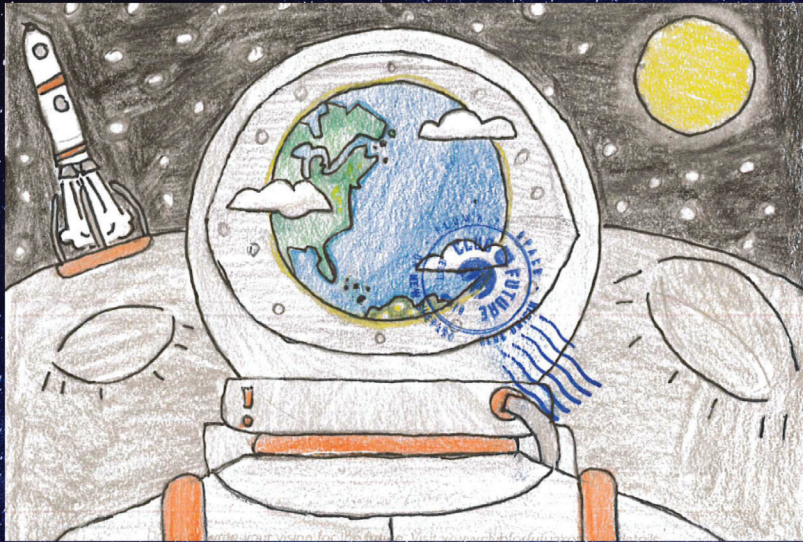
Theory of Action: How We Work



“We have a rich and vibrant STEM learning at our school that is intricately tied to sustainability and therefore career-connected learning. The Suquamish maintain a strong connection to the environment and to being economically aware. Computer science pathways and maritime pathways are imperative in order to engage in field and environmental science and will be highly valuable to our students and teachers. Past and current experience with the West Sound STEM Network has demonstrated to us that our culture, students, and teachers are honored, served, and are invited to lead.”

—Lucy Dafoe, Principal, Chief Kitsap Academy
and West Sound STEM Network Executive Board member

LETTERS TO SPACE



"What do you think would be the best thing to have on the moon? I think a sense of curiosity, and schools, museums and laboratories so we can learn more and spread our knowledge."

Peyton E. - 7th Grade

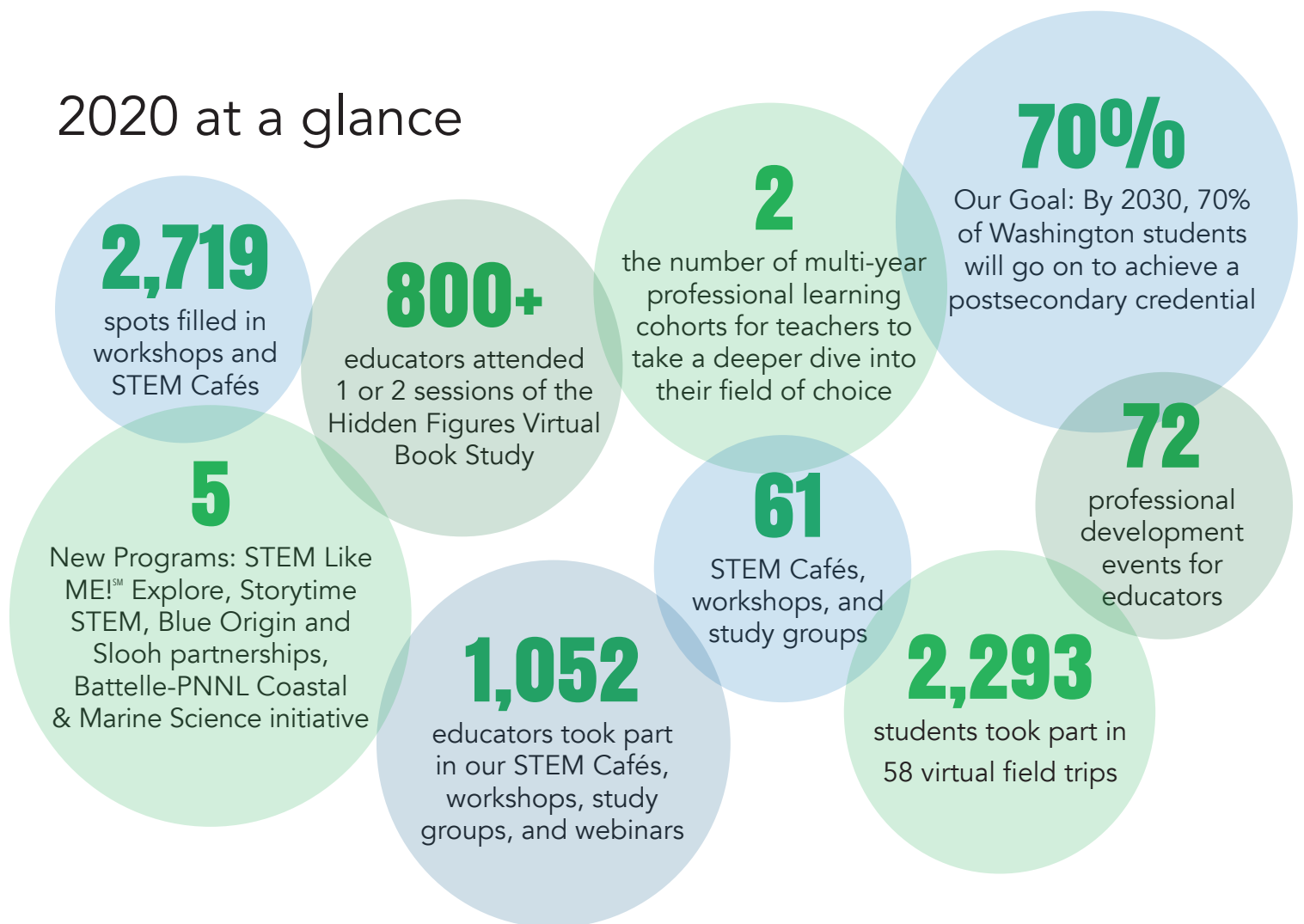
Postcards from Space!

Blue Origin's Postcards from Space program encourages students to get creative with their postcards as they ponder the question, "Why do you think Earth needs space?"

Battelle Investment

Battelle committed \$75,000 to support STEM education opportunities closely connected to its work in coastal and marine sciences. The WSSN and Pacific Northwest National Laboratory partnership will create a Teacher-Scientist Partnership program to develop the future coastal and marine energy workforce needed by connecting middle and high school science teachers with real-world science challenges in these areas.

2020 at a glance



Financial Aid Completion

The immediate need for equitable access to earning a postsecondary credential, especially for populations furthest from opportunity, is highly dependent upon Free Application For Federal Student Aid (FAFSA)/Washington Application for State Financial Aid (WASFA) completion. Yet students from poverty, students of color, and students from remote and rural areas have significantly lower financial aid completion rates. This is a glaring example of inequity. A 2020-21 proviso, passed with bipartisan support, provided multiple West Sound STEM Network (WSSN) partners the support to engage in closing this disproportionate gap by building upon existing systems in new and synergistic ways.

To address this need, a Steering Committee comprised of the Office of the Superintendent of Public Instruction (OSPI), Washington Student Achievement Council (WSAC), College Success Foundation (CSF), Association of Washington School Principals (AWSP), community-based organizations, Washington STEM, regional STEM Networks, and the WSSN partnered with leaders of populations furthest from educational and institutional justice.

Professional Learning for Educators

WSSN plays a major role in providing the region's educators with innovative, engaging events and opportunities to increase or deepen their knowledge. The Network held over 70 events for teacher participation in 2020: lectures, workshops, STEM Cafés, Roundtable Discussions, book studies and more.

STEM Cafés

- Wind Energy, with Siemens
- NASA Stars & Galaxies (2 sessions)
- Building Bridges, with Rice Fergus Miller
- Astronomy STEM Café
- Biomedical career exploration, with Project Lead The Way
- Wildfires, with Pacific Education Institute
- Electrical Engineering (2 sessions), with PSNS & IMF and NUWC Keyport
- Cybersecurity career exploration, with Olympic College and WWU Poulsbo
- Reach for the Stars, with NASA
- Occupational Analysis 101 (3 sessions)
- Cryptography Workshop, with WWU Poulsbo Cybersecurity faculty (4 sessions)
- Diversity, Equity and Inclusion, with Kaiser Permanente
- NASA 101
- Ocean Sciences Engineering, with the USS Turner Joy and PSNS & IMF
- NEAR Science, with Kitsap Strong
- NASA Down To Earth
- STEM Education Training, with US Naval Academy, PSNS & IMF, and NUWC Keyport
- Mars Engineering Challenge, with Pacific Science Center
- Maker Space Workshop, with OSPI
- Catch a Phish, Cybersecurity, with WWU Poulsbo
- Tech XPO & Coding, with Timberland Regional Library
- NASA's Eye on Earth Climate Science
- Healthcare Pathways, with Olympic College
- Mechanical and Electrical Engineering, with Olympic College
- Advanced Manufacturing, with Olympic College

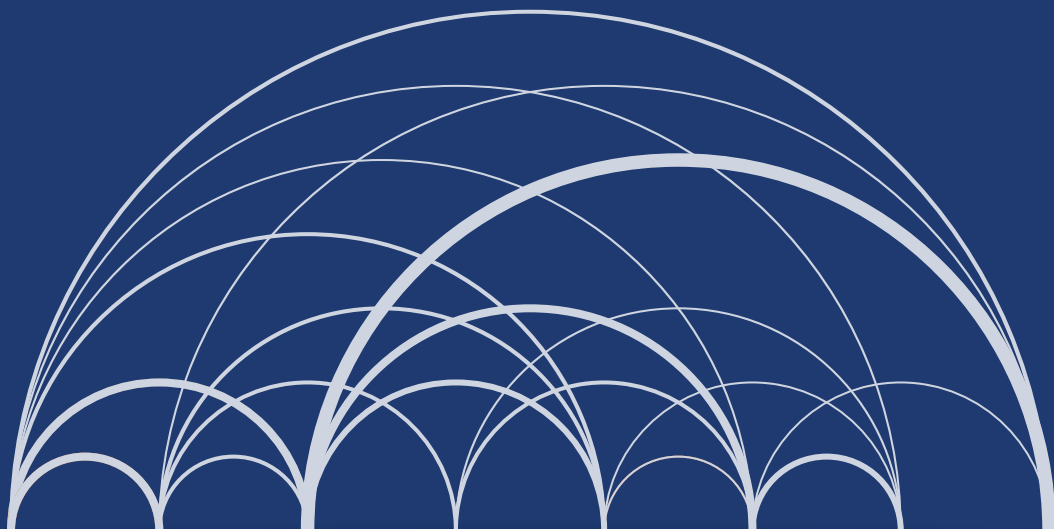
Other Events

- Hidden Figures Book Study (6 sessions)
- NGSS 101
- STEM Notebook Workshop
- Black Holes on Five Different Levels
- Regional Summit (2 sessions)
- Guest Lecturer Myron Dueck Webinar Series: Change, Listening and Failing IS an Option
- Code.Org Workshop
- Controls Technology Workshop
- COSTAR Summer Workshop
- NESSP Summer Workshop
- Storytime STEM Training (2 sessions)
- Equity Roundtable
- HB1599 Understanding Multiple Pathways to Graduation

Fly Me to the Moon...

Astronomy, space travel and technology, astrophotography and moon bases! All are topics teachers (and consequently their students) have explored through West Sound STEM Network's STEM Cafés, workshops and partnership programs. One of WSSN's newest partners, Blue Origin, carries postcards from students into space and back on their New Shepard rockets. The postcards, decorated with student's ideas, artwork and messages, are launched by the crew in a capsule that descends to Earth under parachutes after floating in space 100 kilometers above Earth. They recover the postcards, stamp them with "Flown to Space," and mail them back to students as keepsakes. WSSN coordinated participation in Blue Origin's Postcards to Space program for students from Discovery Elementary School in Peninsula School District, John Sedgwick Middle School in South Kitsap School District, and West Hills STEM Academy in Bremerton School District. The New Shepard NS-14 Mission carried more than 50,000 postcards to space from 13 countries, more than 350 schools in the U.S., and one from a British research station in Antarctica.

Another of the Network's newest members expanded the "outer space experience" for students and teachers by connecting with teachers in the Northwest Earth & Space Sciences Pipeline (NESSP) professional learning cohort. In NESSP sessions, Russ Glenn, Director of Education at Slooh, facilitates ongoing discussions to explore astronomy and the newest technology available for use with students. Launched in 2003, with four telescopes at the Institute of Astrophysics of the Canary Islands, Slooh now has a worldwide network of 15 robotic, mountaintop telescopes providing real-time viewing. All of which can be remotely viewed and controlled by users. WSSN school districts received grant-funded teacher memberships to Slooh so that our region's teachers can use the telescope network with their students in their classrooms and with remote learning.



WSSN Executive Board



Robert W. Andrade, Jr.
Market Director and
General Manager at
Johnson Controls, Inc.



Corinne Beach
STEM Coordinator,
Puget Sound Naval
Shipyard & IMF



Patricia Beathard
Superintendent,
Brinnon School
District



Dr. Marty Cavalluzzi
President, Olympic
College



Kathy Cocus
Business Development
Director, KEDA



Dr. Elizabeth Court
Director, Olympic
Workforce
Development Council



Lucy Dafoe
Principal,
Chief Kitsap Academy
Suquamish Tribe



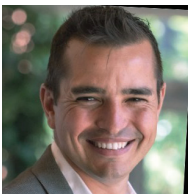
Karen Dove
Executive Director,
ANEW



Perry England
Vice President,
MacDonald-Miller
Facility Solutions



Sara Hatfield
Director, Great NW
Consortium of CTE
Directors



Kyle Johnson
Executive Director,
Jamestown S'Klallam
Tribe Economic
Development Authority



Dr. Deb Kelley
Professor, School of
Oceanography
University of
Washington



Dr. Gregory King
Executive Director,
Washington MESA



Dr. Tamara Meredith
Director,
Jefferson County
Library District



Jiquanda Nelson
Senior Director of
Community and
Culture, Concentrix



Dr. Erin Prince
Superintendent,
Central Kitsap
School District



Frank Rimkus
CEO,
Galaxy Theatres



Kody Russell
Executive Director,
Kitsap Strong



Russ Shiplet
CEO, Kitsap Builders
Association



**Dr. Jenée Myers
Twitchell**
Chief Impact Officer,
Washington STEM



Dr. Kareen Borders
Executive Director,
West Sound STEM Network



Tim Winter
Superintendent,
South Kitsap School District
Leader of WSSN backbone agency



Dr. Aaron Leavell
Superintendent,
Bremerton School District
Secondary Leadership Team Point of Contact



Non-Discrimination Statement

The South Kitsap School District provides equal educational and employment opportunity without regard to race, creed, religion, color, national origin, age, honorably-discharged veteran or military status, sex, sexual orientation – including gender expression or identity, marital status, or the presence of any sensory, mental, or physical disability, the use of a trained dog guide or service animal by a person with a disability. Equal access to activities, facilities and program is provided to the Boy Scouts of America and other designated youth groups. District procedure complies with all applicable state and federal laws.

The Title IX Officer and Section 504 Coordinator with the responsibility for monitoring, auditing and ensuring compliance with this policy are:

Compliance/ADA/Title IX Coordinator:
Dr. Mona Johnson, Executive Director of Wellness & Support

2689 Hoover Avenue SE, Port Orchard, WA 98366
360-874-7063 | johnsonmona@skschools.org

Section 504 Coordinator:
Dr. Andrew Cain, Principal

2689 Hoover Avenue SE, Port Orchard, WA 98366
360-874-6022 | cain@skschools.org



West Sound **STEM** Network

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Olympic College is a founding member of the West Sound STEM Network and we are active members in terms of leadership and implementation. Olympic College serves students across the entire Kitsap and Olympic region. We are looking forward to opportunities to augment, expand, and offer new programs that best serve our region's students and employers via the systemic career connected learning engine that West Sound STEM has already established and that it will continue to build. We benefit greatly from the connections, data-driven research, and relationships we have gained through being a member and leader within the West Sound STEM Network.

—Dr. Marty Cavalluzzi, President, Olympic College



Dr. Kareen Borders
Executive Director

www.westsoundstem.org

West Sound STEM Network | South Kitsap School District | 2689 Hoover Avenue SE | Port Orchard, WA 98366