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Washington Student Achievement Council

2019 STEM Education Report Card

WASHINGTON STATE
STEM EDUCATION INNOVATION ALLIANCE

2019
STEM Education
Report Card



More information about the STEM Education Innovation Alliance, including contact information and citation details, can be found on its website: <https://stem.wa.gov>.

Policy Recommendations

- **Expand career-connected learning opportunities in STEM**
- **Expand data and measurement capacity**
- **Broaden computer science education**
- **Enhance climate science education**
- **Fully fund the Washington College Promise Scholarship**
- **Continue support for the Opportunity Scholarship**
- **Extend broadband access to all rural communities**
- **Expand early learning math literacy programs**

The STEM Landscape: Progress in some areas but challenges remain

PROGRESS HIGHLIGHTS

- **STEM degree and long-term certificate completions have shown steady increases in recent years.**
- **2018 AP Exam pass rates for Washington students in a wide range of STEM subjects significantly exceed national averages.**
- **The number of high schools offering AP Computer Science has continued to grow – from 21 schools in 2011 to 130 schools in 2018.**

The STEM Landscape: Progress in some areas but challenges remain

CHALLENGES:

- **Students from low-income and underserved minority families are disadvantaged at all stages in the STEM pipeline.**
- **A gender imbalance in STEM achievement tends to widen as students move through the pipeline.**
- **Rapidly growing workforce demand is still outpacing STEM degree production in key areas occupational areas.**

THE STEM EDUCATION INNOVATION ALLIANCE'S IMPACT

A History of Successful Advocacy for STEM Education in Washington

- In collaboration with its partners, the STEM Alliance has helped secure key legislation and funding to drive STEM Advancement in Washington State
- A proposed motto or guiding statement of purpose:

“Advocating for Future-Ready STEM Education”



Maud Daudon
Executive Leader
Career Connect Washington

Career Connect Washington Updates

Career Connect Washington: Strategic Plan

January 27, 2019



CAREER CONNECT WASHINGTON

STEM networks are vital to the success of Career Connect Washington

Thank you for your continued support of CCW

We've made a lot of progress across multiple fronts:

- Legislation voted out of policy committees, current focus on fiscal committees
- \$110M operating and capital budget request from Gov. Inslee
- Robust media outreach with multiple op-eds / editorials throughout the state
- Secured bridge funding through philanthropic partners and WIOA grants to assist programs already in-development

Multiple workstreams underway:

- Endorsement process & RFP design
- Marketing & communications
- Data & learning
- Equity supports
- Student directory creation

We can't let up now – we need your continued and vocal advocacy to pass this bill!

Recent updates: CCW bill moved to fiscal committees in House and Senate

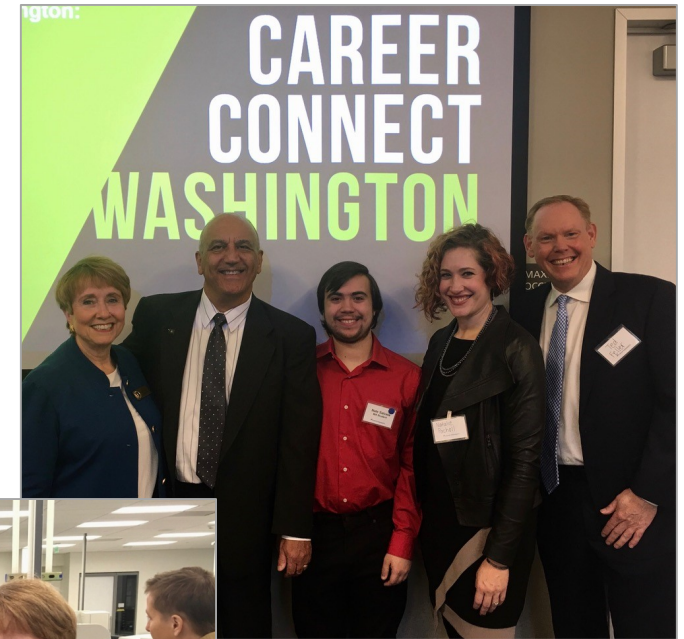
Bill¹ championed by Sen. Wellman (Mercer Island) and Rep. Slatter (Bellevue)

CCW advanced through policy committees unanimously with bipartisan support

- Bill passed through both policy committees
- Senate ways & means hearing last week – strong support from across sectors and stakeholder groups
- House appropriations hearing today

Strong backing from legislators

- 15 senate co-sponsors
- 16 house co-sponsors



1. SB 5327 and HB 1336; <https://app.leg.wa.gov/billsummary?BillNumber=5327&Chamber=Senate&Year=2019>

Recent updates: Budget request of \$110M includes grants for regional networks and program creation



BUILDING STRONG CAREER CONNECTED PROGRAMS – \$33 MILLION

High-quality, career-connected learning programs that support the needs of business and industry across Washington give young adults multiple pathways to a great career. The Career Connect Washington proposal sets up a competitive grant program to create new career-connected learning programs to expose students to and prepare them for high-demand jobs.



SCALING STUDENT ENROLLMENTS AND SUPPORTS – \$30 MILLION

To expand career-connected learning programs, the proposal includes funding for K-12 and higher education partners to support student enrollment in dual credit and career and technical education courses, registered apprenticeships, and state work study and career launch programs.



BETTER EQUIPPING CAREER AND TECHNICAL EDUCATION – \$18 MILLION

Students need access to the latest tools and equipment to prepare for the careers of today and the future. The governor's capital budget includes a competitive grant program for high schools, skill centers and community colleges to purchase and install equipment for career-connected learning programs.



SUPPORTING WORKFORCE INITIATIVES – \$16 MILLION

The proposal includes funding for customized worker training for current and future employees and creates new apprenticeship opportunities in health care, information technology, aerospace and construction trades.



STRENGTHENING SYSTEM INFRASTRUCTURE – \$13 MILLION

A coordinated approach across state agencies and education systems is key to successfully offering career-connected learning opportunities, as are student recruitment campaigns and robust data systems. The proposal funds credit equivalencies and portability for career-connected programs. It also funds marketing and communications to students, families and educators, and data systems to measure and report on student outcomes.

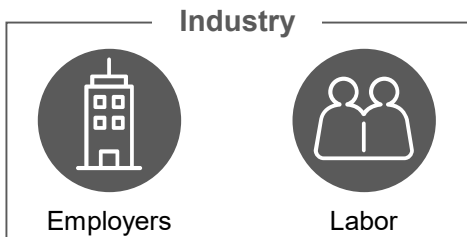
Connected pathways require a connected system; budget dollars fill gaps

Employment



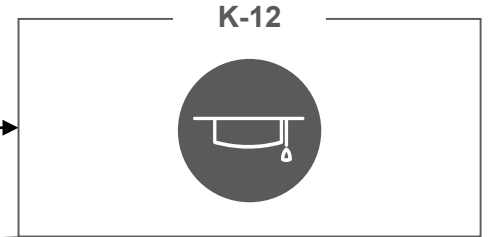
- Data enclave
- Marketing & communications
- Career Launch directory
- Implementation workgroup
- CCW leadership
- Apprenticeship expansion*

*L&I Funded

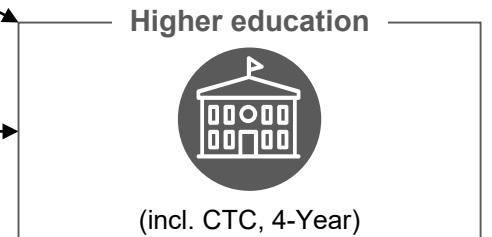


- Student wages
- Training
- Supervision

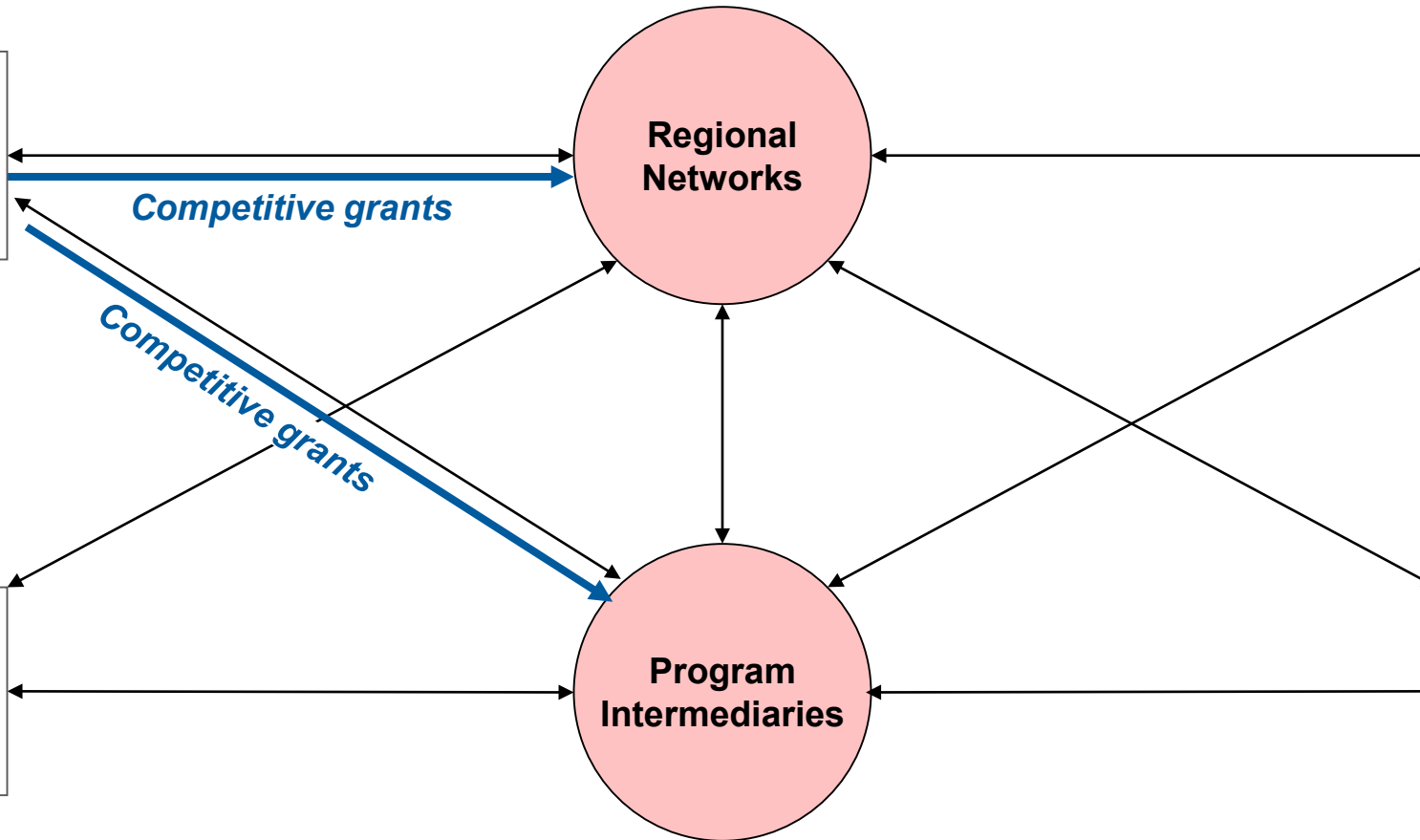
Education



- CTE FTE expansion
- Dual credit fee support
- Equivalency & articulation agreements
- + Capital equipment funding



- Tuition waivers
- Career Launch enrollment funding
- Work study support
- Career Launch coordinators
- + Capital equipment funding



- Apprenti*
- Health care apprenticeships*

*L&I Funded

Strong support from media and partners throughout the state

Tri-City Herald

Vocational education is worth Inslee's
\$110 million request



Editorial: How to fill 740,000
job openings in the state

The Seattle Times

Opinion

**'Yes, it's possible': The time is now for the
Legislature to better fund higher education**

Originally published November 30, 2018 at 3:21 pm

Early CCW editorial support from:

- Tri-City Herald
- Everett Herald
- The (Vancouver) Columbian

Advocacy from CCW partners:

- Seattle Times:
 - Ana Mari Cauce (UW President)
 - Kirk Schulz (WSU President)
 - Jan Yoshiwara (SBCTC)
- Wenatchee World:
 - Denis Conger, Wenatchee SD CTE Director

Other recent coverage:

- Columbia Basin Herald
- Kirkland Reporter

We are seeking more support to expand career-connected learning

How you can continue to support CCW:

- Contact your legislators to let them know you support fully funding CCW – encourage employers and educators you know to do the same
- Continue advocating for Career Connect Washington across your regions
- Begin assembling regional stakeholders for a future grant application

Context: Career Connect Washington System Design

In May 2017, Governor Inslee created the CCW Task Force (composed of leaders from business, labor, government, nonprofits, and education). The taskforce:

- Concluded that while WA has many excellent CCL programs, it lacked systemic supports to achieve the scale needed to have a transformative impact
- Recommended an inclusive planning process to develop a strategic plan including policy recommendations to overcome the barriers to scale and expansion with quality
- CCW system design effort builds off NGA work-based learning policy academy and 11 regional pilots (launched in May 2017)

CCW scope includes:

- Young adults up to age 29
- CCL opportunities in K-12, postsecondary (2 and 4-year)
- Registered Apprenticeships and other high-quality CCL programs

CCW plan was built with input from students, parents and many other key stakeholders

Budget and associated legislation was released in December 2018 and January 2019, respectively, with goal to seek legislative approval during 2019 legislative session.

The Problem: Students lack sufficient pathways to great careers

What people think^{1,2}...



believe that an **education beyond high school is necessary** today



believe **schools alone do not do enough to prepare students** for the real world

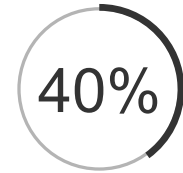


believe **Career Connected Learning programs** should be expanded

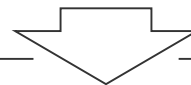
...and they're right



New jobs to be created by 2021 in Washington – most **needing a credential beyond high school**



Total of Washington students **gaining a credential or degree beyond high school**



...students and parents want more pathways

*"I like the idea of giving young people an opportunity to get their hands dirty. **You can only learn so much in a classroom.**"*

*"I'm not the kind of person who can sit down and study a textbook and memorize its contents. **I learn better when I have problems in front of me to get done.**"*

Goal: Connect young people to great careers while advancing their education

Finding a Solution: Plan was built with the help of thousands of our citizens

Education

- Students & Parents
- Teachers & Counselors
- Superintendents
- 4-Year and Community College Presidents

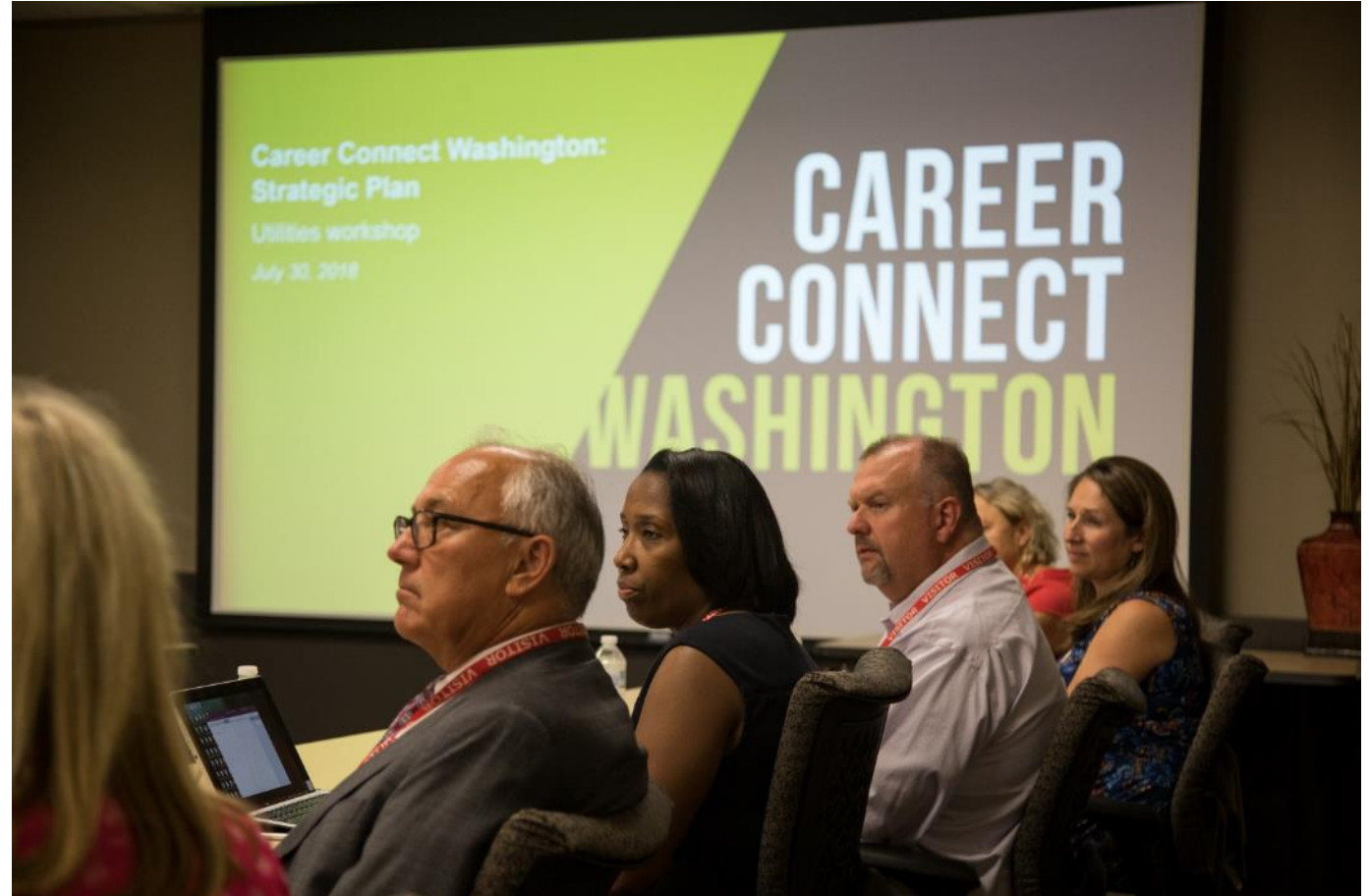
Business & Industry Leaders

Government/State Agency Staff

Labor Leaders

Community Leaders and Nonprofits

Regional Leaders



The Reality Today: Disconnected pathways between education and employment



Education
(K-12 and Postsecondary)



Employment

Consequences for students

- One dominant way to learn; few “hands-on” opportunities
- 70% of WA jobs require a credential post high school, but only 40% of WA students achieve this
- High youth unemployment (14%), worse among underserved groups

Consequences for employers

- Employers not finding talent that meets their needs (jobs going unfilled)
- Employers forced to hire many from out of state (costing them time and money)
- Employers have trouble finding diverse candidates

The Solution: Career Connect Learning is a braided pathway that connects students to the career opportunities around them, starting early in their schooling



Employment



Education

(K-12 and Postsecondary)



Benefits for students

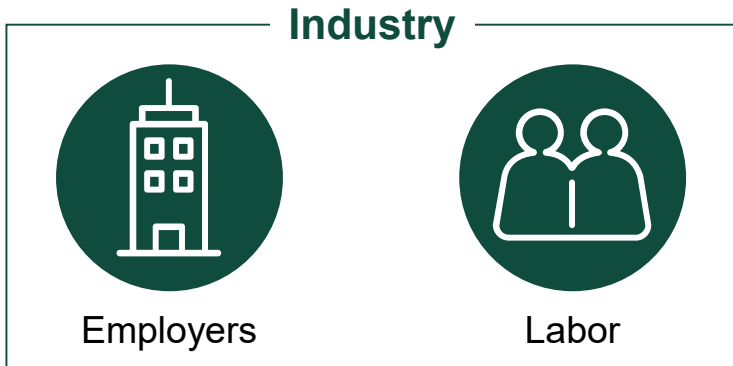
- Applied, hands-on, learning opportunity
- Provides real life, paid, work experience
- Earn post-high school credit and credentials
- Supports equitable access jobs for all students

Benefits for employers

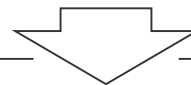
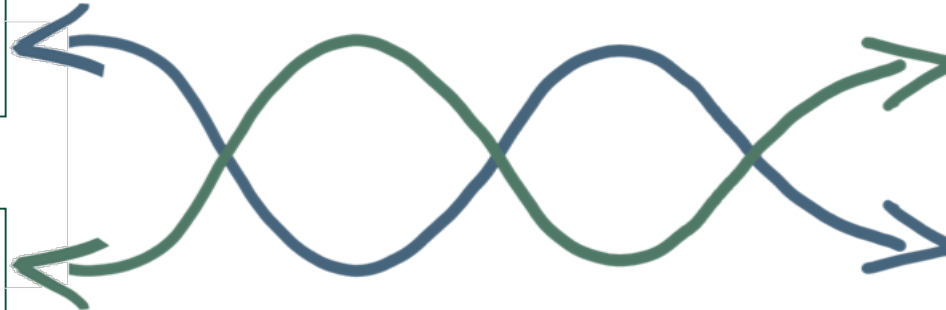
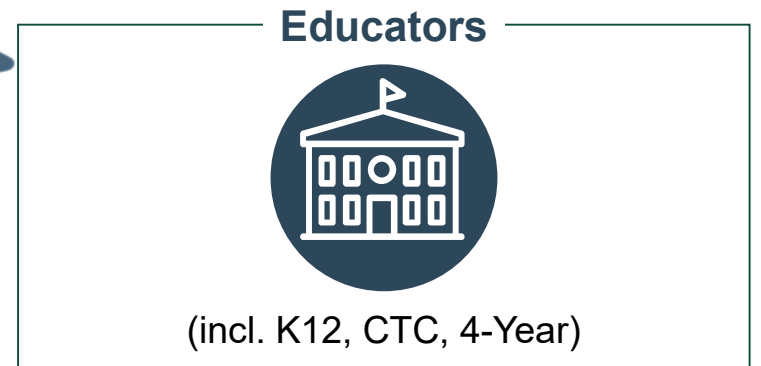
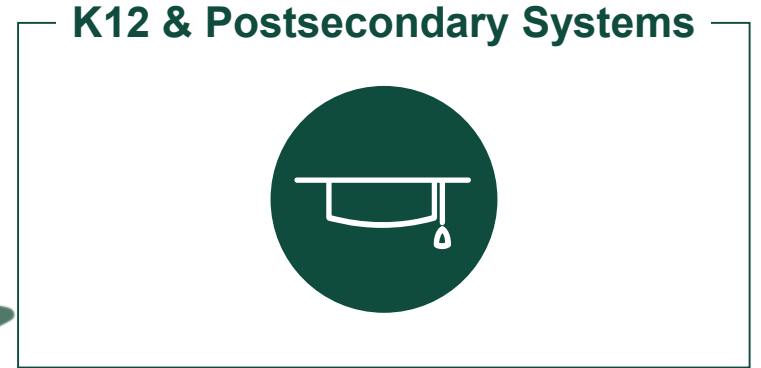
- Develops robust talent pipeline
- Reduces hiring costs
- Increases retention through strong student connections
- Adds diversity to candidate pool

The Solution: Connected pathways require a connected system

Employment

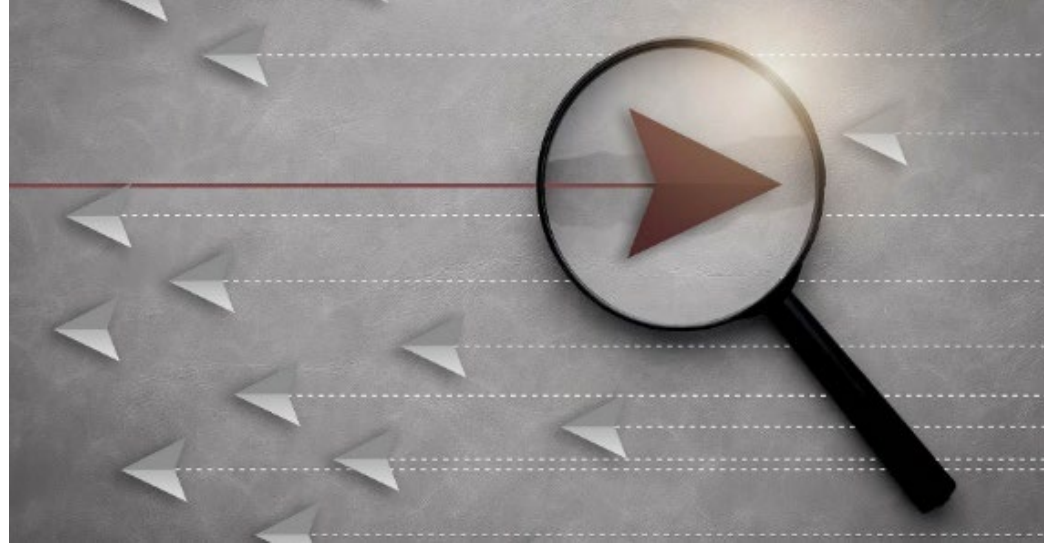


Education



CCW can provide the connective tissue to grow CCL programs statewide

Vision for career connected learning in Washington

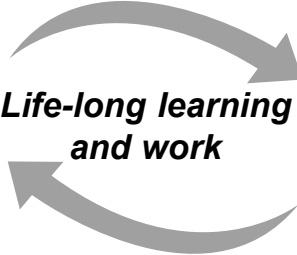


Every young adult in Washington will have **multiple pathways toward economic self-sufficiency and fulfillment**, strengthened by a **comprehensive state-wide system for career connected learning**

Each type of CCL continuum is essential to launching students into their careers and ongoing education

What are the offerings that bring these experiences to life?

Life-long learning and work



Destination

Postsecondary credential, paid work experience, career connection

Career Launch

Registered Apprenticeships

Credential beyond HS only

Youth Registered Apprenticeships

HS diploma and cred. beyond HS

CTC programs with required work-based learning

CTE that meets credential and work-based learning req's

4 year programs with required work-based learning

Other Career Launch programs

Comprehensive Internship

Pre-apprenticeship

90 hour on-site internship

Cooperative worksite learning

CTE concentrators

CTC programs without required work-based learning

Other Career Preparation

Career Preparation

Academic credit, career connection

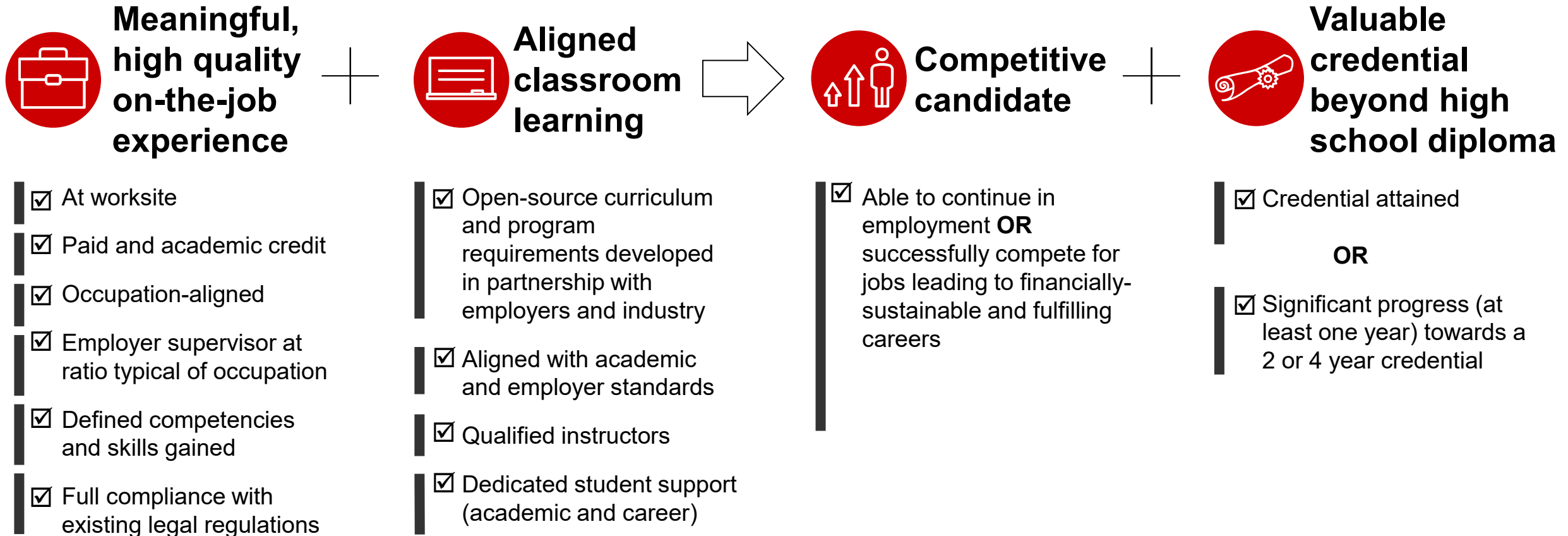
- Career fairs
- Worksite tours
- Career Presentations
- Work based problem solving
- Job shadowing / preparation events
- Networking events

Career Awareness & Exploration

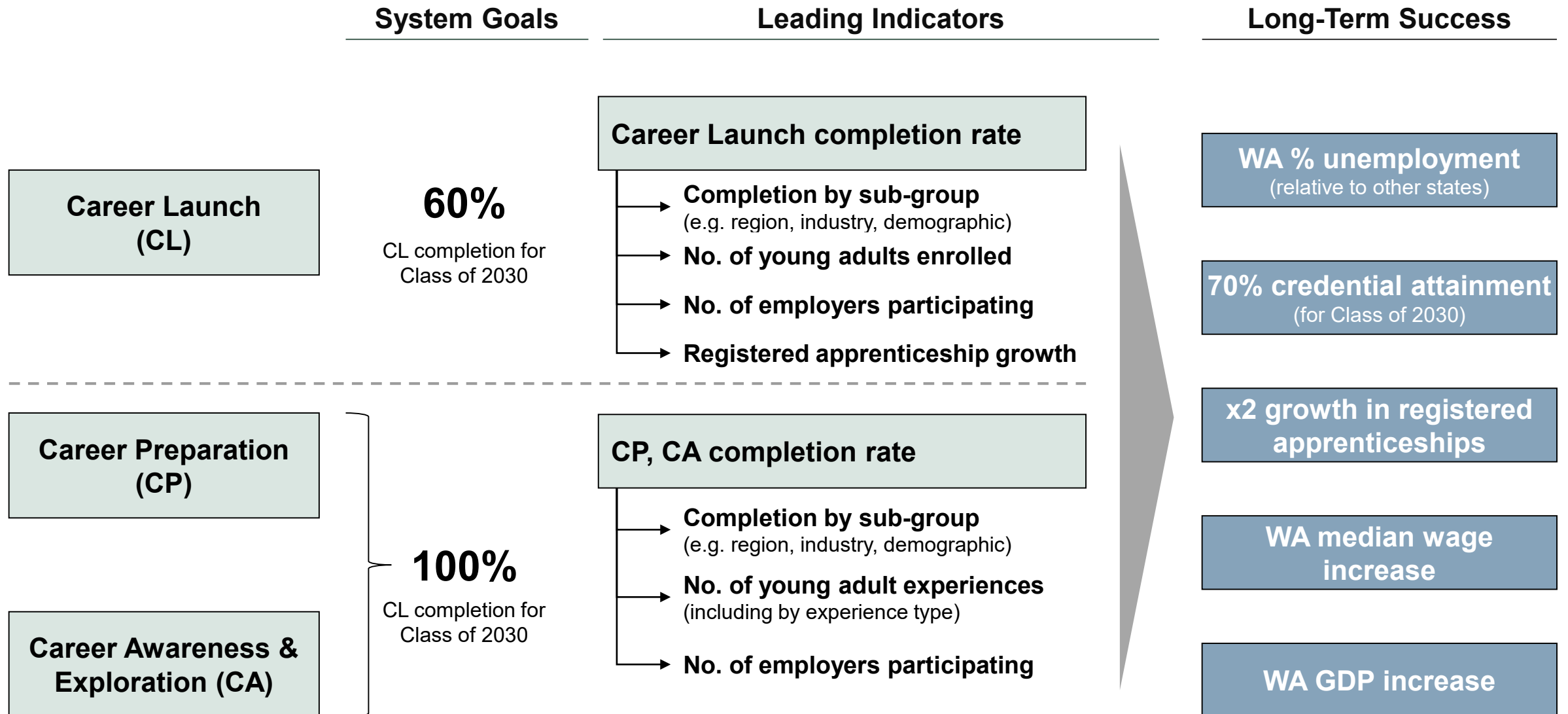
Early exposure to careers and career options

Career Launch can come in many forms, but satisfies these criteria

Career Launch Programs: Positioning young adults for promising careers



Ambition: Enable all WA young adults to experience career connected learning

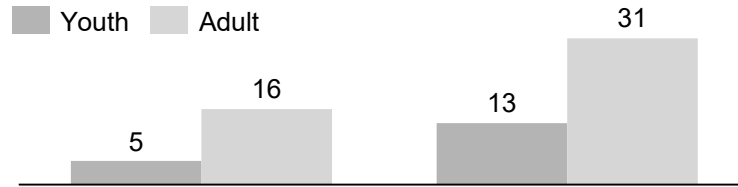


CCW pilots launched in 2018 point to success

CCW pilot details:

- Goals:
 - Create CCL opportunities for **15,000 WA youth**
 - Of which, **1,500 comprehensive employer internships** or **youth reg. apprenticeships**
- Pilot funding from 2014 WIOA

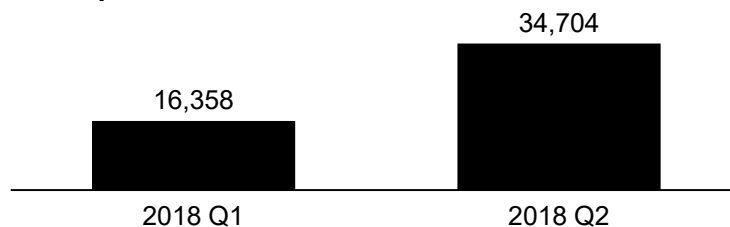
Registered Apprenticeships



Comprehensive Internships



CCL Experiences



Sample CCW pilot programs (non-exhaustive)**

North & South Central Career Connect



Central Washington partnerships

- Expanded advanced manufacturing Reg. Youth Apprenticeship to include Magic Metals in partnership with West Valley High (Yakima)
- Wenatchee SD partnership to develop standards for Computer Technology Reg. Youth Apprenticeship

Career Connect Northwest



New maritime and construction industry programs

- New standards developed for Marine Quality Assurance Tester Reg. Apprenticeship w/ Nichols Brothers
- 365 students in hands-on apprenticeship / vocational exploration activities

Career Connect Southwest



Opportunity Youth Job Fair

- 50+ national companies
- 1,200 youth in attendance
- 209 interviews and 103 job offers

Seattle King Career Connect



Expansion, founding of new King County CCL programs

- AJAC – Renton SD partnership for product tech Reg. Youth Apprenticeship
- FareStart partnership to create new Reg. Apprenticeship standards for Sous Chef and Café Manager occupations

Approach: Career Connect Washington will build a system from many strong but disconnected programs



This is not a “one size fits all” approach: Regional networks are the key

Key roles

Develop regional plans to grow CCL that fit the unique needs of the region

Serve as CCL navigators for region (to industry, educators, counselors)

Work with educators and industry to develop and scale programs

Consolidate regional data and report key learnings to state-level

Convene regional players including employers, labor, education, workforce council, intermediaries, relevant non-profit organizations



Support

Policy proposal will include requests for regional resources and support

- Fund network director
- Fund career navigators
- Support for equipment costs (CTE, CTC)
- Support for Centers of Excellence

Leadership

Regional network leads can take many forms including:

- Regional Workforce Boards
- Local STEM networks
- Chambers of Commerce
- Educational Service Districts
- Economic Development Councils

Approach: Program intermediaries will bridge connections between industry and educators and help create and scale programs

Key roles

- Convene industry and educators to define CCL opportunities and align on needs
- Facilitate creation of curriculum to meet industry and educator requirements
- Generate demand with young adults and families



Support

CCW policy proposal will include financial support for program intermediaries

- Design grants to develop curriculum to create high quality new and scale existing CCL programs

Many can play this role

Program intermediaries can take many forms including:

- Industry associations
- Joint Labor Management Councils
- Centers of Excellence
- Chambers of Commerce
- STEM organizations
- Non-profit organizations
- Others

Strategies to grow access to high-quality Career Connected Learning



Activate Industry

1

Ensuring industry is central to, has resources to support, and is co-investor in a high-quality Career Launch programs



Ensure High-Quality

2

Rigorous standards for Career Launch and an Educator and Industry-validated endorsement process



Provide Equitable Access

3

Reducing barriers to ensure all students have access to high-quality Career Connected Learning



Spread the Word

4

Communicate the vision to legislators and influencers, then connect with students, parents, and educators



Scale and connect the system

5

System changes needed to grow Career Launch and expand student access to Career Connected Learning (including regional and intermediary supports)

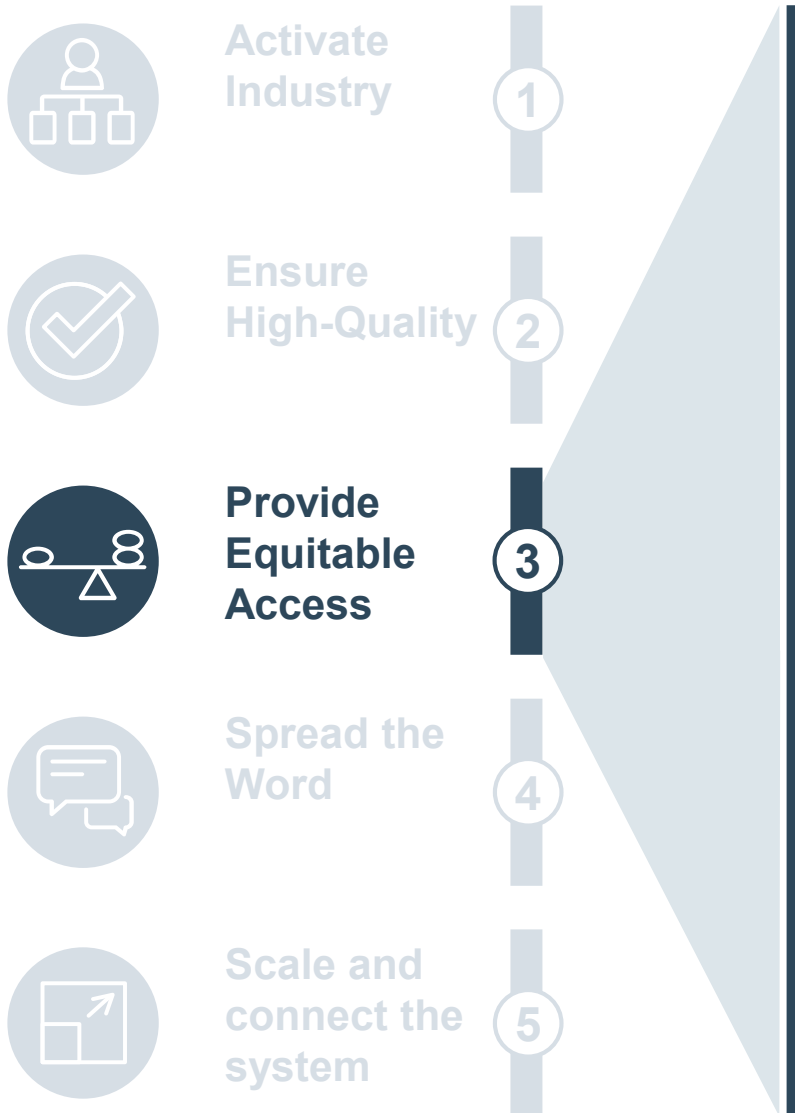


Industry: several CCL programs in-development or ready to scale across multiple high growth industries

Industry	Innovative programs to scale	Innovative programs in development
	 <p>WACMAC Medical Assistant Reg. Apprenticeship (Career Launch)</p>	 <p>Healthcare Consortium / SEIU training fund reg. apprenticeships</p>
	 <p>Apprenti (Career Launch)</p>	 <p>Tech Academy (P-TECH or similar)</p>
	 <p>SEH IWL Internship (Career Preparation)</p>	 <p>SEH Advanced Manufacturing Career Launch</p>
	 <p>Energy Pathways (Avista) (Career Preparation)</p>	<p>Regional partnership for recruiting and training apprentices</p>
	<p><i>In decision making; ideas for all 3 types of CCL</i></p>	 <p>AGC Biologics Career Launch</p>
	<p>Pre-Apprenticeship Afterschool Programs (modeled after Heavy Highway program) (Career Preparation)</p>	 <p>Youth & Associate Controls Reg. Apprenticeships (MacDonald-Miller) (Career Launch)</p>
	<p><i>Workshop Upcoming</i></p>	<p><i>Workshop Upcoming</i></p>
	 <p>4H and FFA (Career Awareness and Exploration)</p>	<p>Joint communications and pipeline development effort</p>
	 <p>CorePlus Marketing (Career Preparation)</p>	<p>Aircraft Maintenance Technician Career Launch program</p>
	<p><i>Details forthcoming</i></p>	<p><i>Details forthcoming</i></p>

Data analyst (Career Launch)

Equity: Career Connected Learning can be a powerful vehicle to create opportunity for underserved young adults



Context

- **Historical Perception:** Career-focused Ed often used to “track” students perceived as not fit for higher education
- **New Challenge:** As programs have been “rebooted”, many states struggle with ensuring that traditionally underserved students have access to high-quality programs

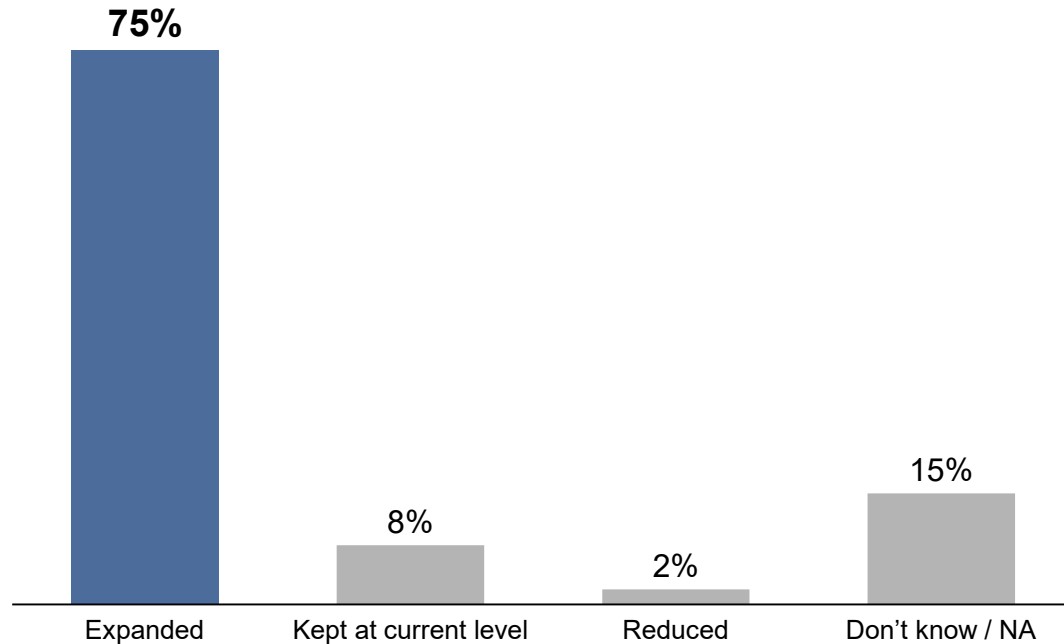
CCW Approach

- **Supports:** Ensure students/communities have resources they need to participate in CCL (e.g. transportation support, fee waivers, rural broadband, reasonable accommodations, tutoring/counseling)
- **Data:** CCW “gap analysis” of existing programs to support equitable access to CCL (immediate next step) and create student-facing director; disaggregate outcome data
- **Grant Process:** Criteria for program intermediaries and regions will include plans and demonstrated history of promoting equitable access to CCL

Join WA students & families to support expanded Career Connected Learning opportunities and realize a new vision for our state

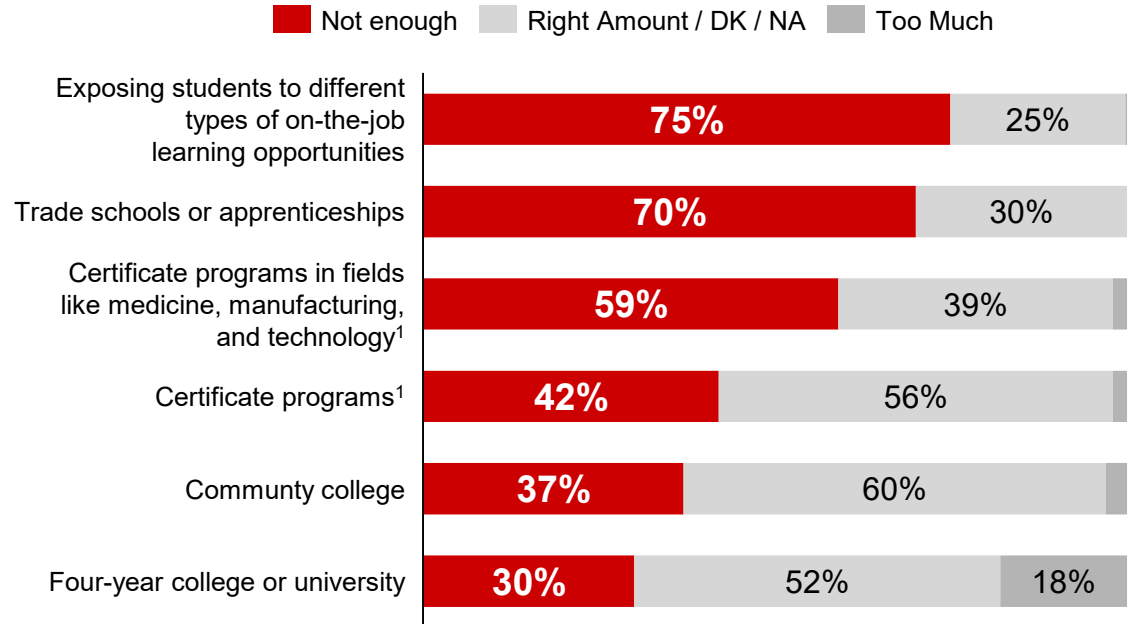
Voters say CCL programs should be expanded...

Do you think Career Connected Learning programs in Washington should be expanded, kept at their current level, or reduced?



...with strong majorities saying not enough being done today

I am going to read you a list of types of educational experiences students can have after high school. I'd like you to tell me whether too much is being done, not enough is being done, or the right amount is being done to make these opportunities available in Washington state.



Voter attitudes shared across political parties², regions, genders, income-levels, and demographics

Thank you for your support throughout the system design process!



www.CareerConnectWA.org

Policy appendix

Career Connect Washington Policy and Funding recommendations

Detailed Recommendations

Priority 1: Statewide System Development

- a) Formally authorize and endorse the Career Connected Learning vision including codifying clear definitions for Career Launch and Registered Youth Apprenticeship
- b) Authorize and fund a set of priority activities to be carried out by a Career Connect Washington Implementation Team under the guidance of the Governor's Office including coordinating cross sector leadership and implementing a cohesive marketing and communications agenda
- c) Fund dedicated and seconded staff capacity to support Career Connect Washington Implementation Team efforts, including seconded agency staff
- d) Fund data capacity to support regular reporting, timely research and analysis
- e) Direct the Washington Student Achievement Council to identify and align existing supports to promote equitable participation in Career Connected Learning

Priority 2: Funding to Education Partners for Student Enrollment in Career Launch

- a) Support the K-12 system and the Office of the Superintendent of Public Instruction to increase and streamline funding for student participation including increasing CTE funding and strengthening dual-credit programs to ensure equitable access
- b) Support Community and Technical Colleges and other higher education institutions to address postsecondary funding challenges for young adults participating in programs post-high school including CTC enrollment, CL/RA tuition waivers and backfill, and work study for CCL
- c) Promote innovation in equivalency and credentialing within endorsed CL and RA programs

Career Connect Washington Policy and Funding Recommendations

Detailed Recommendations

Priority 3: Regional Leadership and Program Intermediaries

- a) Support regional leadership to expand participation in Career Connected Learning including the funding of regional networks, career navigators, and equipment costs
- b) Direct support for innovative program design and expansion of Registered Youth Apprenticeship and endorsed Career Launch programs including providing grants for program design and expansion

Aligned Career Connect Washington Policy Priorities

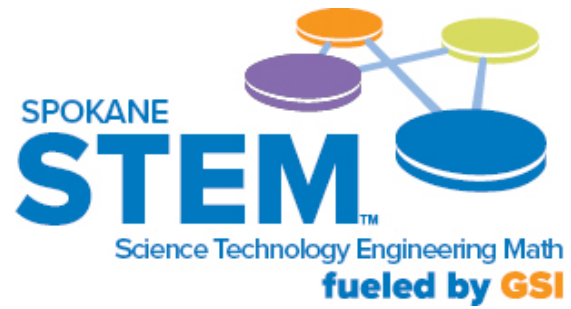
- State Need Grant Expansion: Support expanded, sustainable, and reliable funding of SNG
- High School and Beyond Plan: Support proposals to promote a robust, technology-enabled, and dynamic (i.e. frequently revisited) HSBP that links to Career Connect Washington Plan
- Guided Pathways: Support for existing proposals to grow guided pathways and college to career advising in 2-year and 4-year institutions that link to Career Launch opportunities
- Support for New Market Airplane: Support for added workforce capability, aligned with the Career Connect Washington plan, proposed in the strategy to attract the new market airplane
- State Broadband Expansion: Rural communities need connectivity to participate in educational opportunities otherwise unavailable to them, including career connected learning



Kareen Borders
Network Director
West Sound STEM Network

Meg Lindsay
Network Director
Spokane STEM Network

Career Connect Washington Updates



REGIONAL STEM NETWORKS

Supporting STEM education across the state from cradle to career



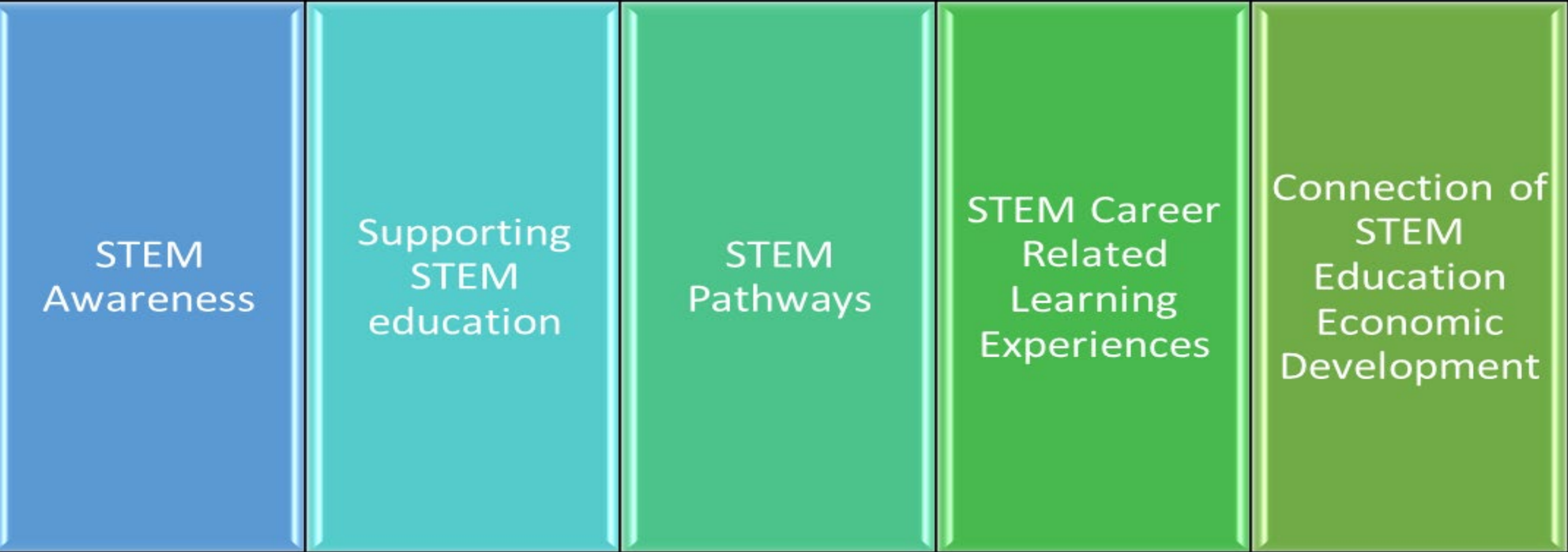
- **Apple** STEM Network
- **Capital** STEAM Network
- **Skagit** STEM Network
- **Mid-Columbia** STEM Network
- **Snohomish** STEM Network
- **South Central Washington** STEM Network
- **Southwest Washington** STEM Network
- **Spokane** STEM Network
- **Tacoma** STEAM Network
- **West Sound** STEM Network

Regional STEM Networks Collaboration- Statewide Approach

- Launch, coordinate and sustain STEM initiatives focused on improving the number of students ready for postsecondary STEM coursework and STEM career pathways
- Raise awareness and provide strategic vision for the region to ensure youth have access to high quality career pathways and are connected to regional workforce needs
- Catalyze collaborations between Network partners using regional data on labor needs and economic development to drive outcomes



Collective Impact: We align resources for STEM Education through leadership, systems change, and program development via:



West Sound STEM Network

Inspire Engage Educate Employ



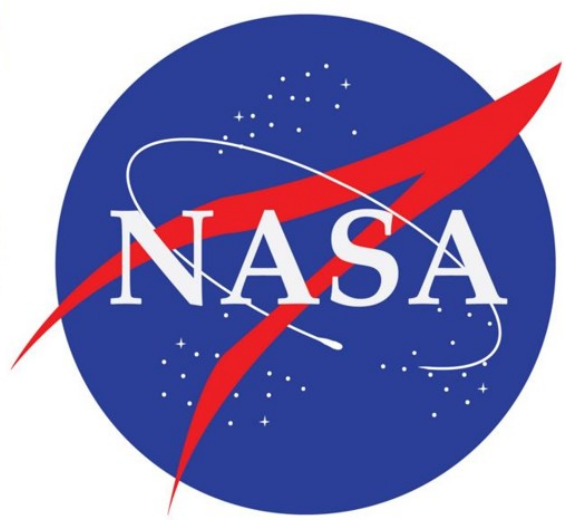
OLYMPIC COLLEGE

RICEfergusMILLER



SIEMENS





**CAREER
CONNECT**
STEM Alliance Meeting 2-27-2019
WASHINGTON





MacDonald-Miller
FACILITY SOLUTIONS®



West Sound STEM

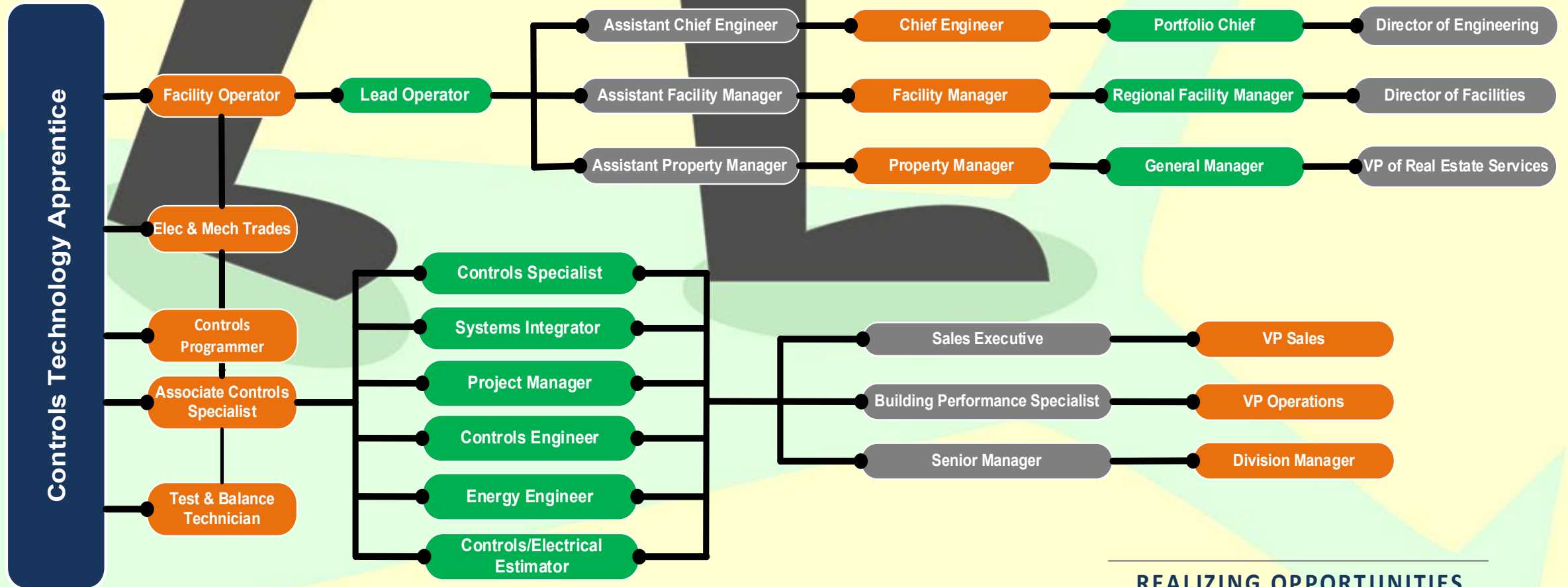


**CAREER
CONNECT**

STEM Alliance Meeting 2-17-2019
WASHINGTON



CAREER Pathways



REALIZING OPPORTUNITIES







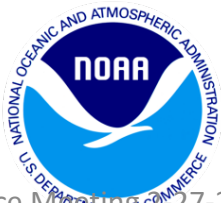


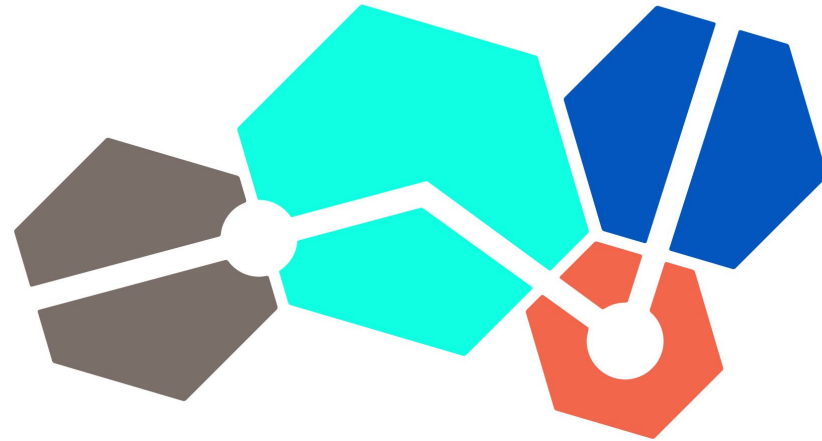
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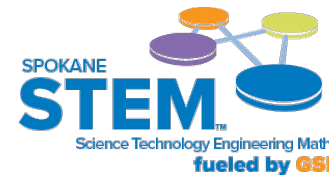
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Spokane STEM Network

Catalyze Convene the Community in STEM

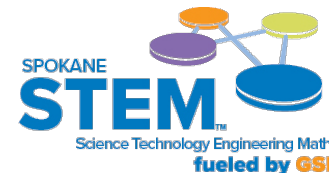
- Community Awareness
- Professional Development
- Early STEM-Early Math
- Post Secondary Access/Completion
- Advocacy
- Drive funding to region

Partnerships-Programs-Policy



CCW Spokane-Current

- A2E Platform Updates
- Career & College Navigator and Career Connected Learning Navigator for Out of School Youth and adults
- Apprenticeship Navigator-Out of school youth and adult focus
- MA Apprenticeship Pilot (Partnership with WACMHC)
- Apprenticeship Opportunity Awareness
- Passport to Career Success Updates & Analytics



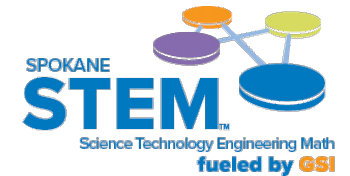
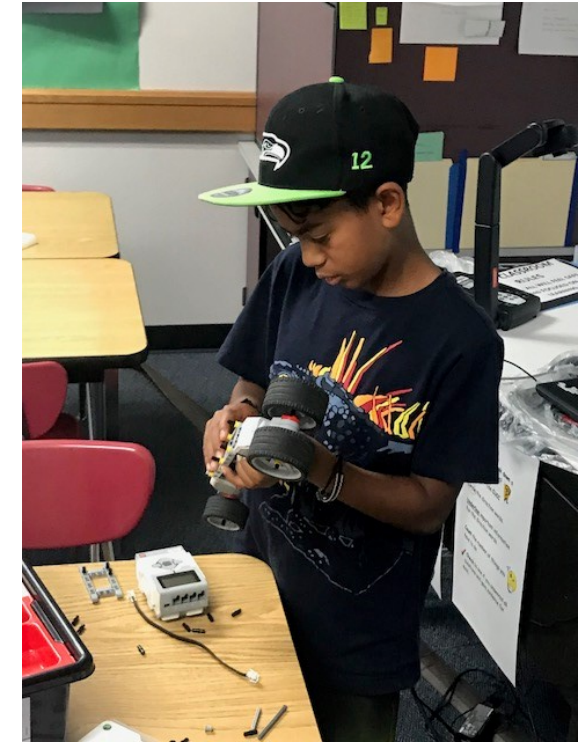
Talent Pathways

Business and Education Partnerships

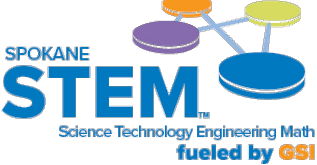
- Access2Experience
- Advocacy-STEM Capital Grants

Programs-Career awareness, exploration, **prep and launch**

- STEM Summer Camps
- Business AfterSchool Career Exploration
- Avista Energy Pathways
- Wagstaff Manufacturing Pathways
- Medical Assistance Apprenticeships
- Summer Construction Academy
- Access2Experience



Talent Pathways



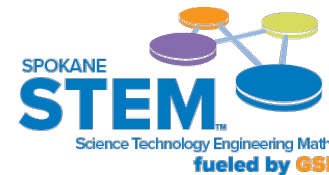
STEM Alliance Meeting 2-27-2019

Together We're Greater

Talent Forward

Developing Medical and Healthcare Pathways-WSU Elson S. Floyd College of Medicine

- Spokane Valley Tech-3 week health care “camp” –
- Dare to Dream Summer Academy-30 Yakima students Health Sciences Camp-interprofessional experience (UW will have 30 as well)
- WSU Honors College-internal opportunity for students on WSU Health Sciences Campus

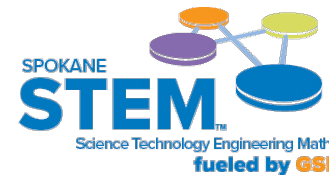


Thank You!

Questions?

Meg Lindsay

mlindsay@greaterspokane.org





Ellen Ebert

Science, Environmental and Sustainability
Director

Washington State Office of the
Superintendent of Public Instruction

Climate Science Updates

Climate Science Education in Washington State



Ellen K. Ebert, PhD

Director, Science and Environmental and Sustainability Education

Department of Learning and Teaching

February 27, 2019



CLIMETIME
CLIMATE SCIENCE LEARNING

Office of Superintendent of Public Instruction

Chris Reykdal, State Superintendent



Vision:

All students prepared for post-secondary pathways, careers, and civic engagement.

Mission:

Transform K–12 education to a system that is centered on closing opportunity gaps and is characterized by high expectations for all students and educators. We achieve this by developing equity-based policies and supports that empower educators, families, and communities.

Values:

- Ensuring Equity
- Collaboration and Service
- Achieving Excellence through Continuous Improvement
- Focus on the Whole Child



OSPI Equity Statement:

Each student, family, and community possesses strengths and cultural knowledge that benefit their peers, educators, and schools.

Ensuring educational equity:

- Goes beyond equality; it requires education leaders to examine the ways current policies and practices result in disparate outcomes for our students of color, students living in poverty, students receiving special education and English Learner services, students who identify as LGBTQ+, and highly mobile student populations.



Learning & Teaching Program

...provides leadership and support for educators to ensure engaged and effective teaching and learning for all students in Washington schools. Every aspect of our work focuses on learning standards development and professional learning, and content support for state assessment systems and K–12 education policies.

<http://www.k12.wa.us/CareerTechEd/Clusters/STEM.aspx>

Legislative Proviso

March 8, 2018



CLIMETIME
CLIMATE SCIENCE LEARNING



GEORGIA BOATMAN OCT 29, 2018 05:25PM

ESD 123: Earth Systems and Changes

Cohort 1

Teachers measure and map on a grid the flood deposits in which mammoth bones are embedded.



16
projects
are up
and
running
across
the state.

Project Name	Award Amount
Washington Green Schools	\$290,000
Pacific Education Institute	\$289,194
IslandWood	\$133,265
Nooksack Salmon Enhancement Association	\$70,000
Padilla Bay National Reserve	\$40,000
Snohomish Conservation District	\$26,000
Cascadia Conservation District	\$50,000
NEW ESD 101	\$295, 228
ESD 105	\$294, 500
ESD 112	\$304, 140
Capitol Region ESD 113	\$285, 831
Olympic ESD 114	\$285, 933
Puget Sound ESD 121	\$350, 617
ESD 123	\$290, 057
North Central ESD 171	\$289, 798
Northwest ESD 189	\$302, 898





CLIMETIME
CLIMATE SCIENCE LEARNING

Priority Focus – An Equity Lens

Priority focus is given to:

- Comprehensive and targeted comprehensive schools,
- Schools in communities historically underserved by science education.
- Rural areas.



Grant work began on July 1, 2018

Progress to date:

- Two day design institute for the 16 projects July 8-9
- Over 80 community based organizations in partnership with ESDs
- 3-dimensional Next Generation Science Standards learning to include formative assessment task development
- Partnerships with scientists—CBOs—ESDs
- Delivery of professional learning to teachers in their regions
- Multiple innovative and imaginative approaches to engaging communities, for example, including agricultural experts to discuss impacts to Washington's crop production in a changing climate.
- Technology and Climate Science – game based learning





Preliminary Results



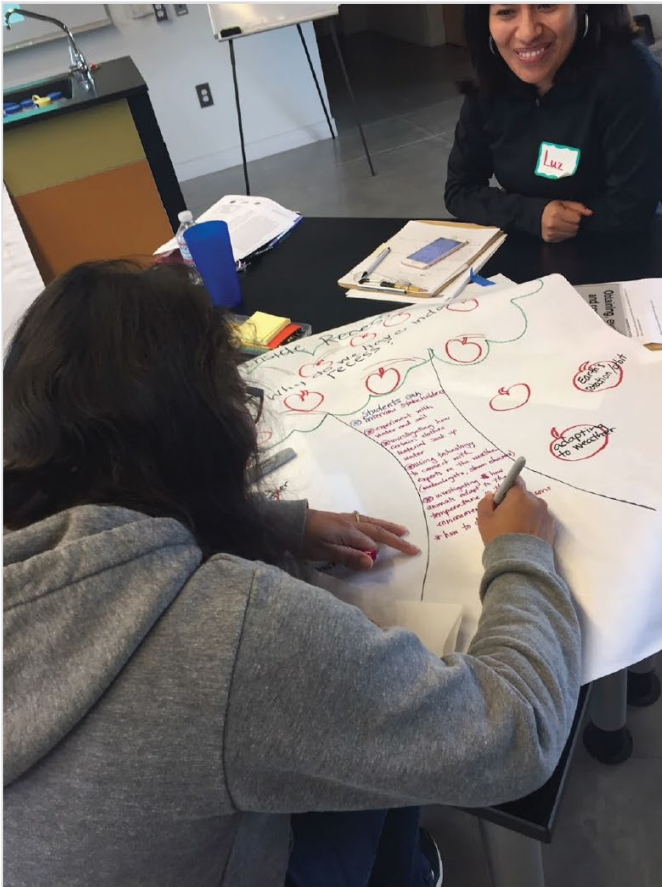
AESD ASSOCIATION OF
EDUCATIONAL
SERVICE DISTRICTS
Nine ESDs. One Network.
Supporting Washington's Schools and Communities.



CLIMETIME
CLIMATE SCIENCE LEARNING



Snapshots from the field!!!



MIKE BROWN DEC 11, 2018 10:47AM

ESD 105 K-5

In August and September, Master Trainers implemented new foundational training for Grade 1-5 units from the Smithsonian Institution aligned with the NGSS, including Climate Science standards. 111 Grade 1-5 teachers from 9 school districts received 6 hours of training.



EMMA PESIS DEC 13, 2018 03:15PM

IslandWood Teacher Professional Development in PSES

Community Mapping with Crosscutting Concepts



GEORGIA BOATMAN SEP 07, 2018 10:21AM

Educational Exploring Climate Science w/ VR



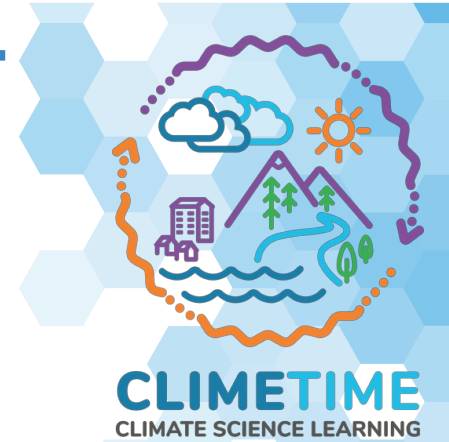
Science

Winter 2019 Professional Development

High School Science Leadership Network

*Investigating Climate Science
and Washington's Forests*

Voices from the field!!!



*K-5 STEM Leadership Network
Integrating Math and Science to Solve a Real
World Problem*

I am so pleased to be able to work with my regional community partners on climate science related topics. This spring I am partnering with Mt. Rainer Institute to present a workshop on Climate Science and Washington's forests.

We are thrilled for their expertise and to be working with field scientists.

We are also able to partner with the Yakima Area Arboretum to conduct a K-5 Integrated STEM workshop. Their field biologists will spend the day with us.



Thank you!

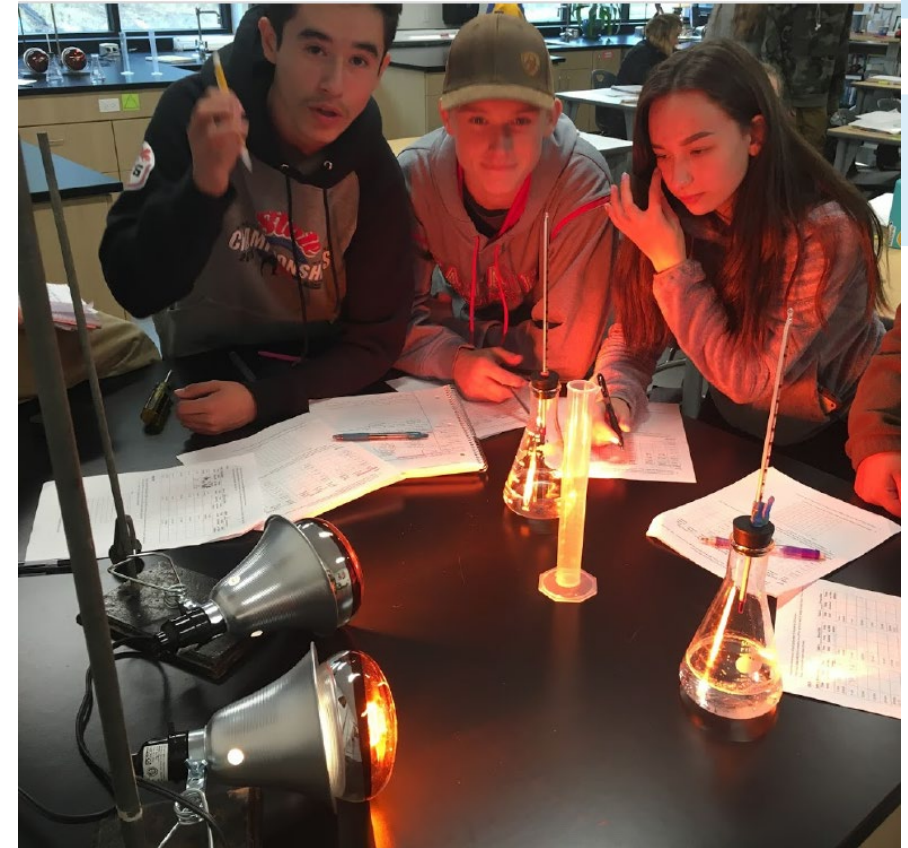


Early Learning Climate Science

10/15/2018. NWESD hosted our team of six P-2 teacher Designers who learned about NGSS and extrapolated from K-2 back to Pre to begin designing play-based activities around climate science.

ESD 171

10th grade students learn about the stressed pika and how less snow pack impacts them. Here they have developed their own investigation on how snow insulates the pika in Molly Ravitz's class at Cascade High School.





Kathryn Kurtz

Executive Director

Pacific Education Institute

*Climate Science Education
Updates*



PEI

PACIFIC
EDUCATION
INSTITUTE

Kathryn Kurtz, Executive Director
www.pacifieducationinstitute.org

STEM Innovation Alliance Meeting
February 27, 2019



Community Based Organizations (CBOs)

- 2017 Climate Science Collaborative
- November 2017 Meeting with the Governor





CLIMETIME
CLIMATE SCIENCE LEARNING

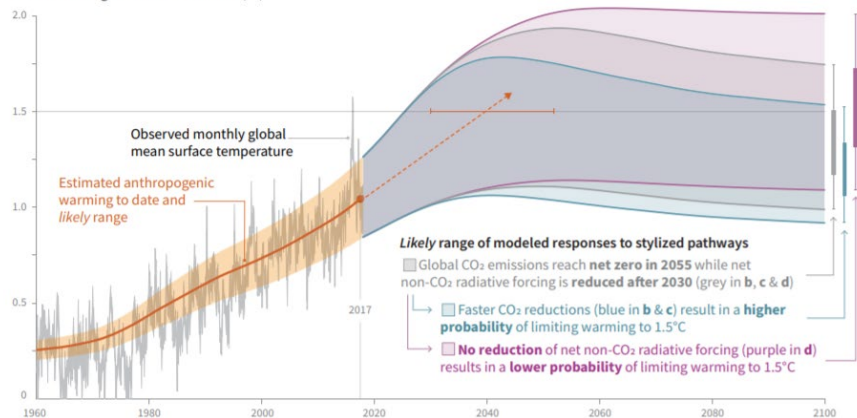
Why Climate Science?

December 2018

Cumulative emissions of CO₂ and future non-CO₂ radiative forcing determine the probability of limiting warming to 1.5°C

a) Observed global temperature change and modeled responses to stylized anthropogenic emission and forcing pathways

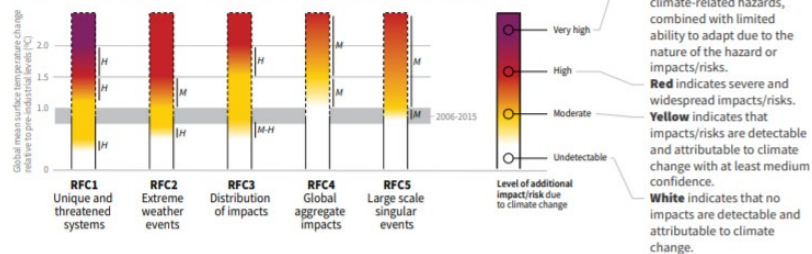
Global warming relative to 1850-1900 (°C)



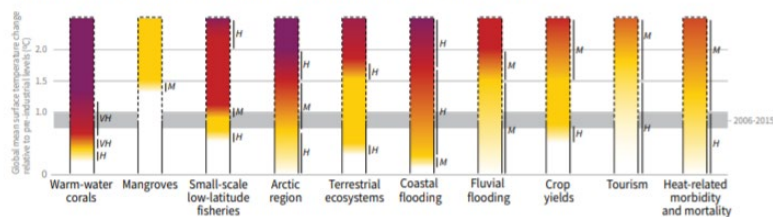
How the level of global warming affects impacts and/or risks associated with the Reasons for Concern (RFCs) and selected natural, managed and human systems

Five Reasons For Concern (RFCs) illustrate the impacts and risks of different levels of global warming for people, economies and ecosystems across sectors and regions.

Impacts and risks associated with the Reasons for Concern (RFCs)



Impacts and risks for selected natural, managed and human systems



IPCC, 2018: Summary for Policymakers



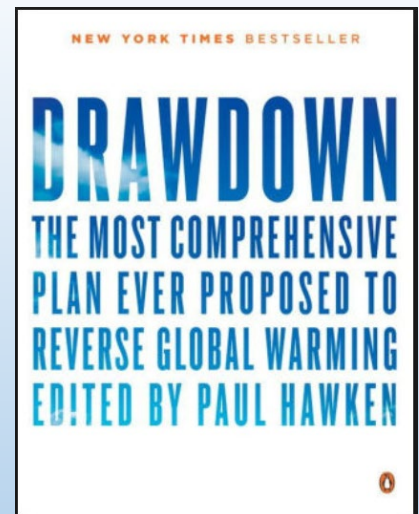
PEI PACIFIC
EDUCATION
INSTITUTE



Framing Climate Science

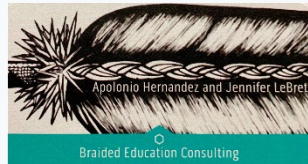
- Collaborative
- Focus on Formative Assessment
- 3-D NGSS Implementation
- Culturally Responsive
- Developmentally Appropriate

We have solutions!





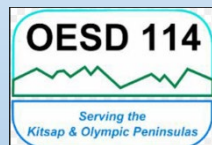
Locally Relevant 3-D Solutions Oriented Storylines



DRAWDOWN



- 1) Centered on indigenous ways of knowing,
- 2) Embedded 3-D NGSS assessment tools to demonstrate student growth and support strengthening teacher instruction for all learners,
- 3) Locally relevant, place-based
- 4) Calculating and implementing solutions to drawdown greenhouse gases, and
- 5) Elevating student voice



Locally Relevant 3-D Solutions Oriented Storylines

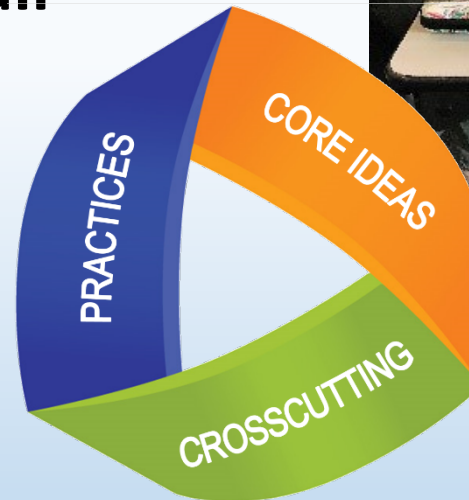
1) Centered on indigenous ways of knowing





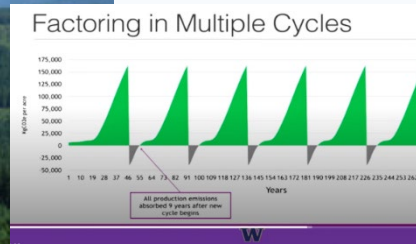
Locally Relevant 3-D Solutions Oriented Storylines

**2) Embedded 3-D NGSS
assessment tools to
demonstrate student growth
and support strengthening
teacher instruction for all
learners**



Locally Relevant 3-D Solutions Oriented Storylines

3) locally relevant, place-based



The role of working forests in the carbon equation



The role of food waste in the carbon equation

Locally Relevant 3-D Solutions Oriented Storylines

4) Calculating greenhouse contributions and implementing solutions to drawdown greenhouse gases

One Lunch	Grains	Beef	Veggies	Fruit	Milk	Beans and Pulses	Total
Kg CO₂e (which translates to)	1	8	0	1	1	0	11
Value of food wasted based on nationwide meal cost	\$3.00	\$1.00	\$1.00	\$2.00	\$3.00	\$1.00	\$11.00
Liters of H₂O used in production	5,015	3,464	879	1,658	1,010	2,714	14,740
Carbon footprint equivalency of driving a vehicle miles	2 miles	19 miles	1 mile	1 mile	2 miles	0 miles	25 miles

1 Student: .61 kg CO₂e / .61 cents / 819 liters or 216 gal. water / 1.39 miles (carbon)
 332 Students at Gess Elementary: 203 kg CO₂e / \$202.52 / 271,871 liters or 71,712 gal. of water / 461 miles (carbon)



Locally Relevant 3-D Solutions Oriented Storylines

5) Elevating student voice



Bill Taylor, Taylor Shellfish, presenting to the Governor and the Governor's STEM Innovation Alliance with Shelton 4th grade teachers Bree West and Diane Graham and four students.



Candy Kristovich, Teacher at Chewelah Alternative School and 5 5th grade students present at the North American Association for Environmental Education in October 2018

Locally Relevant 3-D Solutions Oriented Storylines

5) elevating student voice



Shelton 4th grade students and teachers Bree West and Diane Graham present to the Mason County Chamber of Commerce.

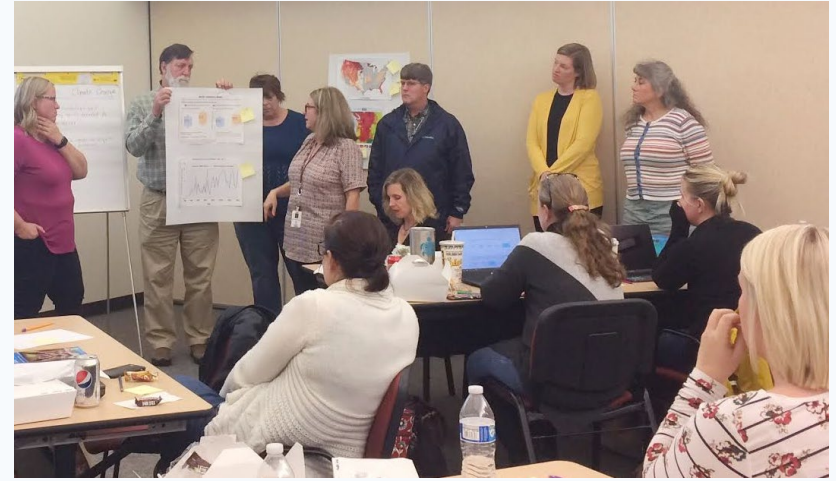


Colton High School student Jackson Meyer shares his project “Soil Health Benefits of Cover Crops and Grazing Cover Crops” with Governor Inslee (above) and presents with Jason Selwitz, Energy Systems Technology faculty lead at Walla Walla Community College, Alan Hardcastle, Sr. Research Associate at WSU’s Energy Program, and, at the North American Association for Environmental Education (NAAEE) 2018 conference.

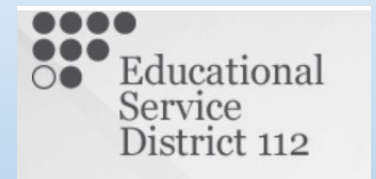
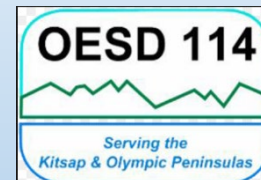


CLIMETIME
CLIMATE SCIENCE LEARNING

16 projects with Similar Deep Dives



Washington Green Schools with ESD 112, ESD 113, and ESD 114 using local phenomena of forest fires to analyze data and draw conclusions. Teachers heard from a local scientist about local impacts



CBO's Leverage Existing Work Shelton's FieldSTEM Model

Shelton School District Overview of 6th Field Experiences

Grade	Field Experience	Field Site	Site Description	Targeted NGSS Performance Expectation	Targeted ELA Performance Task	Targeted Science Kit
6	1- Forest Benefits	Mason Lake Forest	Forest products (including lumber) feed the economy.	5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment	Forests Benefits	Living Systems Earth Systems
6	2- Forest Field Day	Mason Lake Forest	Forest products (including lumber) feed the economy.	5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment	Forest Management	Living Systems Earth Systems
6	3- Multiple Beaches on Oakland Bay	Oakland Bay	Beach structures are different.	MS-LS2-1 Data on organisms and populations MS-LS2-2 Predicting patterns MS-LS 2-3 Cycles of matter and energy flows	Pollution	Ecosystems



GRADE	Field Experience	FOSS Life Science Kit	ELA Performance Task	Targeted NGSS Performance Expectation	Question to be investigated	Overview of Field Experience	Partners
5	Mason Lake Forest 1-Forest Benefits	Living Systems Earth Systems	Forests Benefits	5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment	Is it possible for people to use Earth's resources and maintain a healthy environment?	Gathering information about forest benefits i.e. forest products, recreation, healthy habitats, and water.	Mason Conservation Green Diamond
6	2-Forest Field Day Multiple Beaches on Oakland Bay	Ecosystems	Pollution	MS-LS2-1 Data on organisms and populations MS-LS2-2 Predicting patterns MS-LS 2-3 Cycles of matter and energy flows	Why are beach structures different? What beaches support what organisms and why? What factors support various organisms?	Different groups of students visit different beaches and create both a beach transect and profile. Results are then shared between groups.	Capitol Land Trust





CLIMETIME
CLIMATE SCIENCE LEARNING

SB 5576 Climate Literacy Act

SB 5576 Climate Literacy Act (Sen. C. Wilson, Harris)

- Importance of integrated learning, environmental and sustainability education broadly
 - Funding Science and ESE at OSPI
- Implementation of Next Generation Science Standards – emphasis on climate science
 - Funding continued climate science proviso at 4 million per year, 1 million for CBOs to partner





Tammie Schrader

Regional Science Coordinator

Northwest Washington Educational Service
District 101

Climate Science Education Updates

Climate Science

Northeast Washington ESD 101

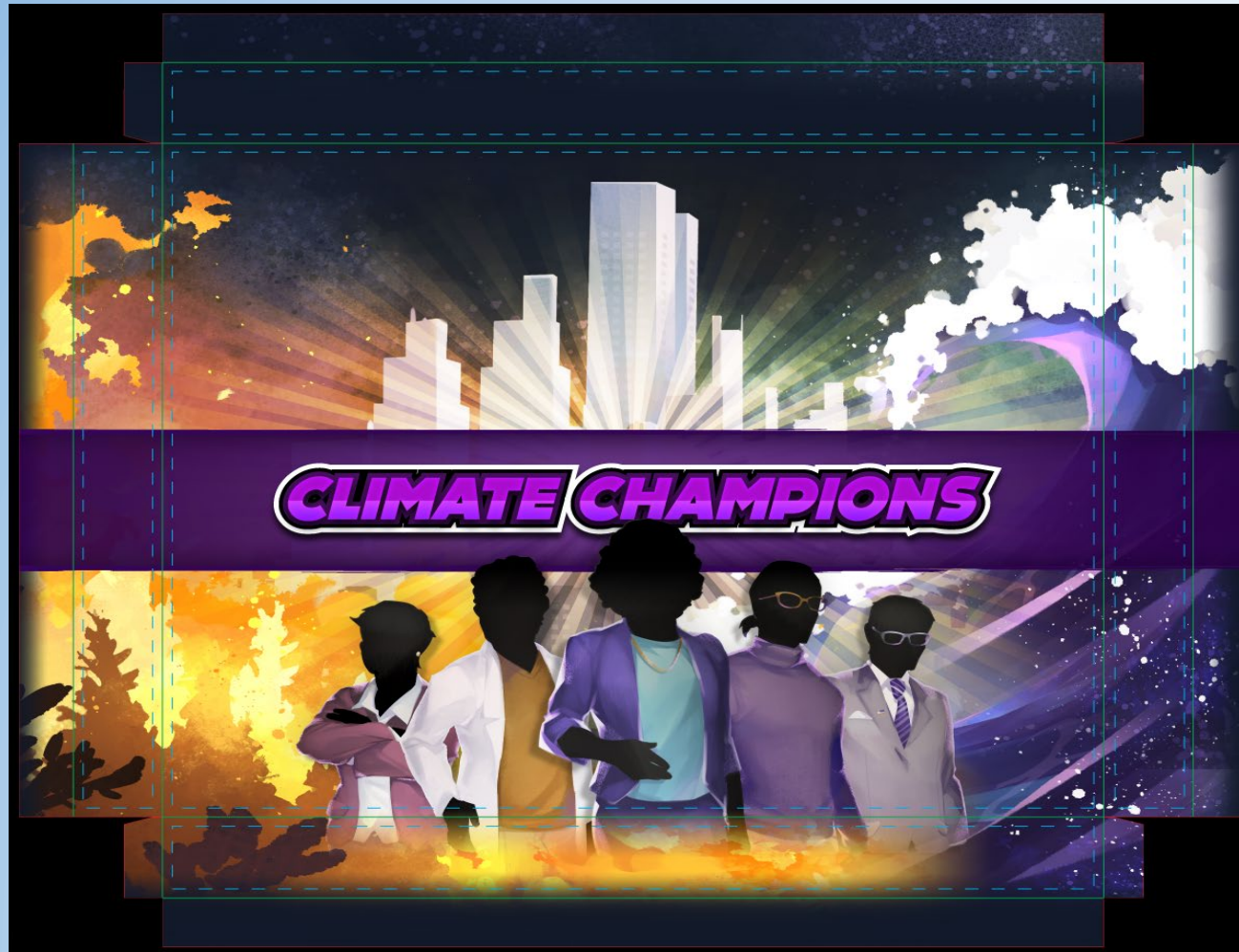
Tammie Schrader
Science Coordinator, NEWESD 101, Spokane
February 27, 2019



CLIMETIME
CLIMATE SCIENCE LEARNING



Game Based Learning



Climate Champions

Filament Games



CLIMATE PHASE

1. INCREASE POLLUTION
2. RESET RESOURCES
3. LOSE RESOURCES
4. DRAW CLIMATE EVENTS
5. ADVANCE TIME
6. PASS FIRST PLAYER TOKEN

POLITICIAN

SENATOR AIYANA

CLIMATE CHAMPIONS

POLLUTION 1 2 2 3 3 4 5 6 7 8

POLITICIAN ACTIONS DISCARD

CLIMATE ACTIONS DISCARD

DISCARD **BUSINESS ACTIONS**

SUPPORT ACTIONS 2 3 3 4 4

RESOURCES PLACE UNSPENT RESOURCE TOKENS HERE

SPENT RESOURCES PLACE SPENT RESOURCE TOKENS HERE

RESEARCH (NOT FOR FIRST PLAY) UNSPENT RESEARCH TOKENS

INDUSTRY ACTIONS 2 3 3 4 4

TIME 1900 1920 1940 1960 1980 2000 2020 2040 2060

CLIMATE PHASE

1. INCREASE POLLUTION
2. RESET RESOURCES
3. LOSE RESOURCES
4. DRAW CLIMATE EVENTS
5. ADVANCE TIME
6. PASS FIRST PLAYER TOKEN

INDUSTRIALIST

DIRECTOR ALEX

FIRE

MASSIVE FOREST FIRE

2 RESOURCE

1 POLLUTION

Immersed Games



Break Out EDU Google Break Out Rooms



10 Reasons to Play BreakOutEdu

By @MariaGalanis @sylvia duckworth

- 1** It's fun for everyone!
 I LOVE THIS! ME TOO! ME THREE!
- 2** It is adaptable to any subject area
 MATH, PHYSICS, SOCIAL STUDIES, LANGUAGE, ARTS, SCIENCE, MUSIC, DRAMA, VISUAL ARTS
- 3** It promotes collaboration and team-building
 A group of five children holding hands in a circle.
- 4** It develops problem-solving & critical thinking skills
 Three interlocking gears in purple, green, and blue.
- 5** It enhances communication skills
 Two children, a girl and a boy, talking to each other.
- 6** It challenges players to persevere
 A group of children pushing a large purple ball up a ramp.
- 7** It builds inference skills
 A child thinking, with the text 'IF THIS... THEN THAT' above them.
- 8** Students learn to work under pressure
 A digital timer showing '00:45:00' with the word 'BREAKOUT' above it.
- 9** It's student-centered
 A child with red arrows pointing outwards from their head.
- 10** It's inquiry-based learning at its best
 A child with a lightbulb on their head and a speech bubble saying 'I THINK I GOT IT!'.

A collection of tools used in Breakout EDU: a blue door hanger, a green calculator, a pair of red pliers, a yellow padlock, and a red padlock.



Thank You



CLIMETIME
CLIMATE SCIENCE LEARNING

NEW
ESD₁₀₁
CELEBRATING **50**
1969-2019

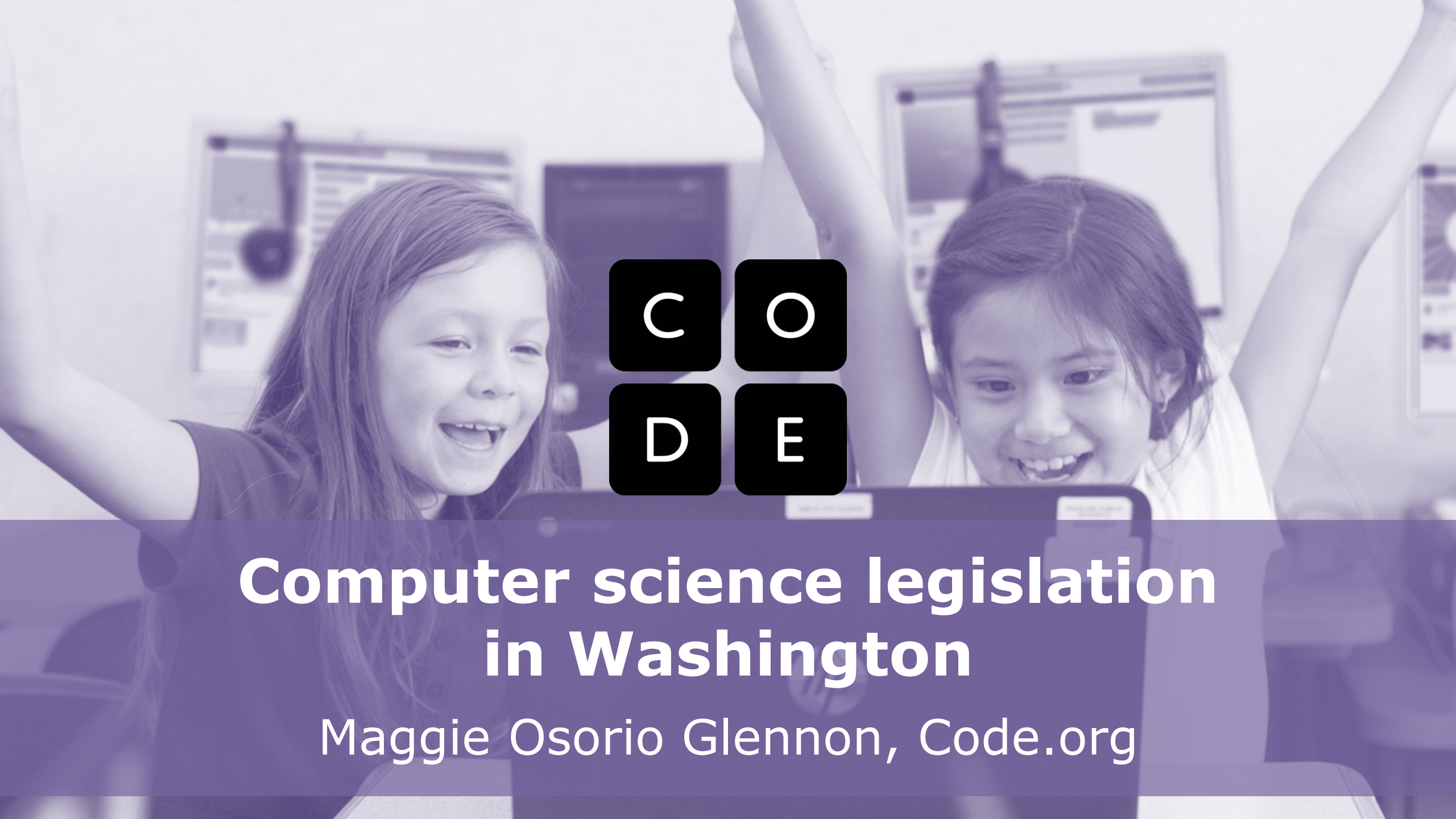


Maggie Osorio Glennon

Director of State Government Affairs

Code.org

Computer Science Updates



C O
D E

Computer science legislation in Washington

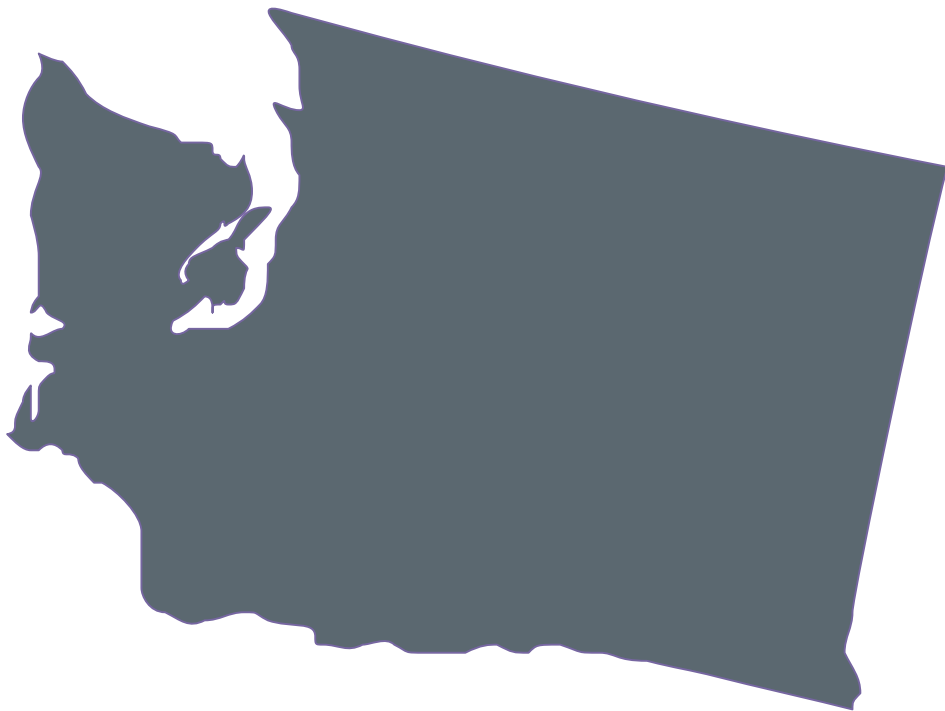
Maggie Osorio Glennon, Code.org

Our vision



**Every student
in every school
has the opportunity
to learn computer science**

Opportunity in WA state



18,228 open computing jobs

1,700 computer science graduates

3,002 AP Computer Science exams taken in 2018

27% female,
10% underrepresented minorities

Computer science in WA

2,915
schools in
Washington



43%
schools in WA
use Code.org
(estimated)

Since 2016, our Regional Partners prepared
**2,604 elementary, middle, and
high school teachers**

Where does WA stand?

Nine policies to make computer science fundamental

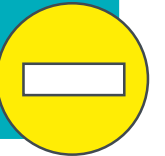
Create a state plan for K-12 computer science



Establish rigorous computer science standards



Fund teacher professional learning



Implement clear certification pathways



Create programs to offer CS to preservice teachers



Establish dedicated CS positions



Require all high schools offer computer science



Allow computer science to count towards graduation



Allow computer science to satisfy admission requirement



Where does WA stand?

Nine policies to make computer science fundamental

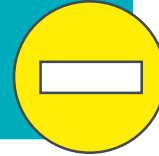
Create a state plan for K-12 computer science



Arkansas, Delaware, Hawaii, Idaho, Indiana, North Carolina, New Hampshire, Nevada, Rhode Island, Wyoming

In progress:
Alabama, California, Connecticut, Maryland

Fund teacher professional learning



Alabama, Arkansas, Arizona, Colorado, Georgia, Hawaii, Iowa, Idaho, Indiana, Massachusetts, Maryland, North Carolina, New Jersey, Nevada, New York, Pennsylvania, Rhode Island, Utah, Virginia

Require all high schools offer computer science



Arkansas, Delaware, Florida, Hawaii, Idaho, Indiana, Maryland, New Hampshire, New Jersey, Nevada, South Carolina, Texas, Virginia, West Virginia, Wyoming

2019 Legislation

Awarding credits for computer science

SB 5088

In Rules Committee

Each school district must provide an opportunity to access an elective computer science course that is available to all high school students.

Concerning K-12 computer science education data

HB 1577 / SB 5574

In Rules Committees

Report computer science student and teacher participation data to the Office of the Superintendent of Public Instruction.

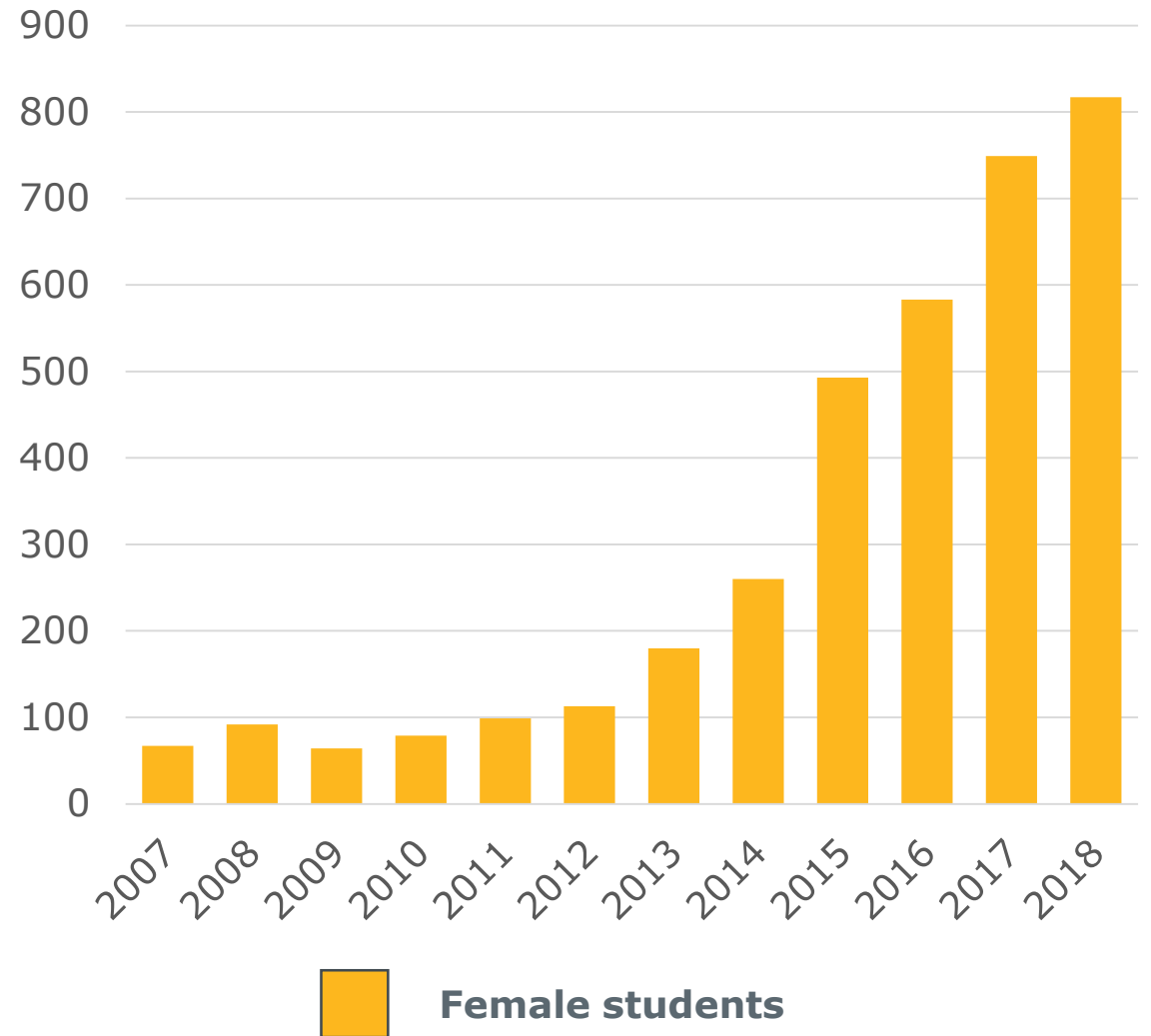
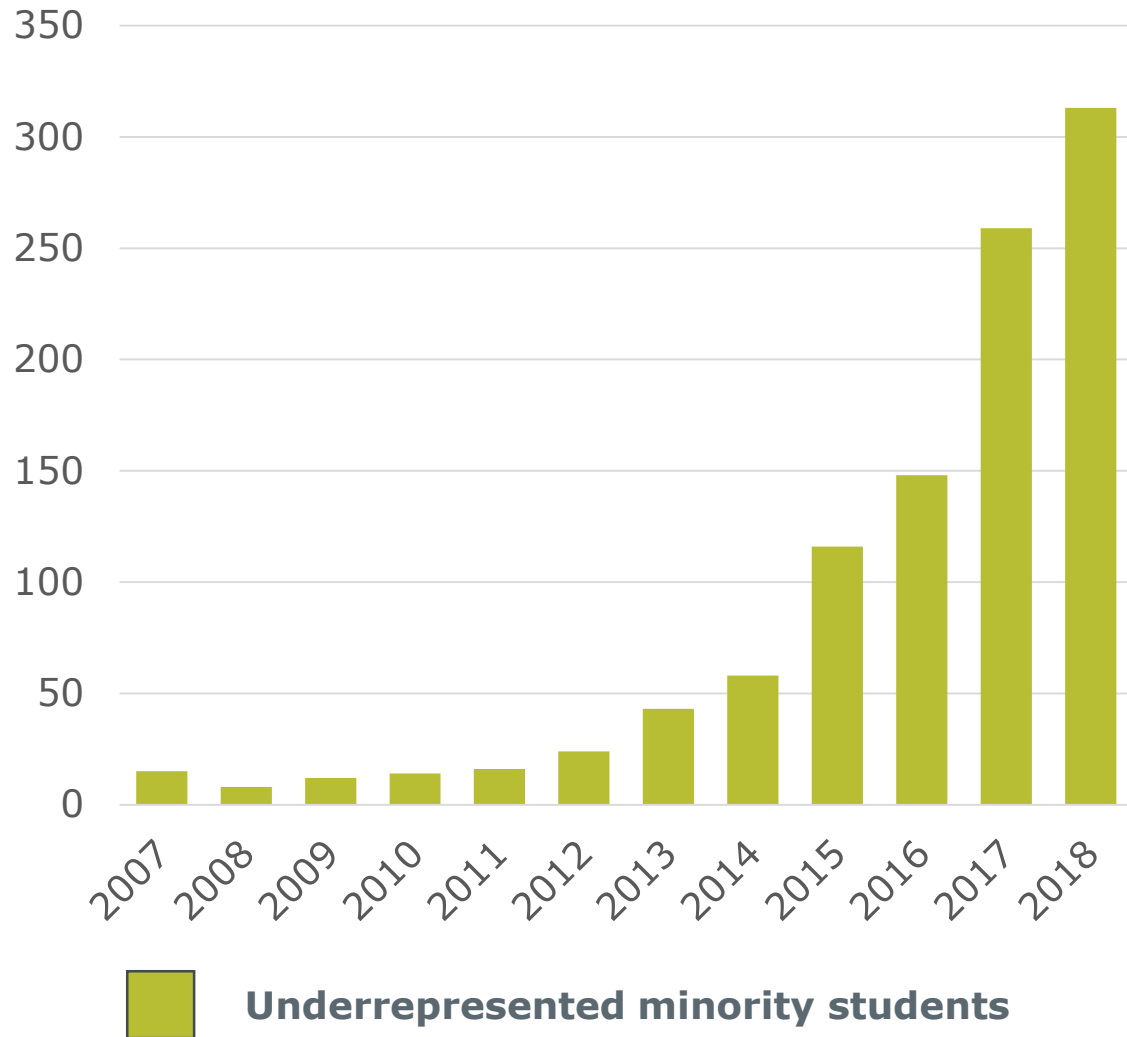
Funding for CS professional development

HB 1109 / SB 5153

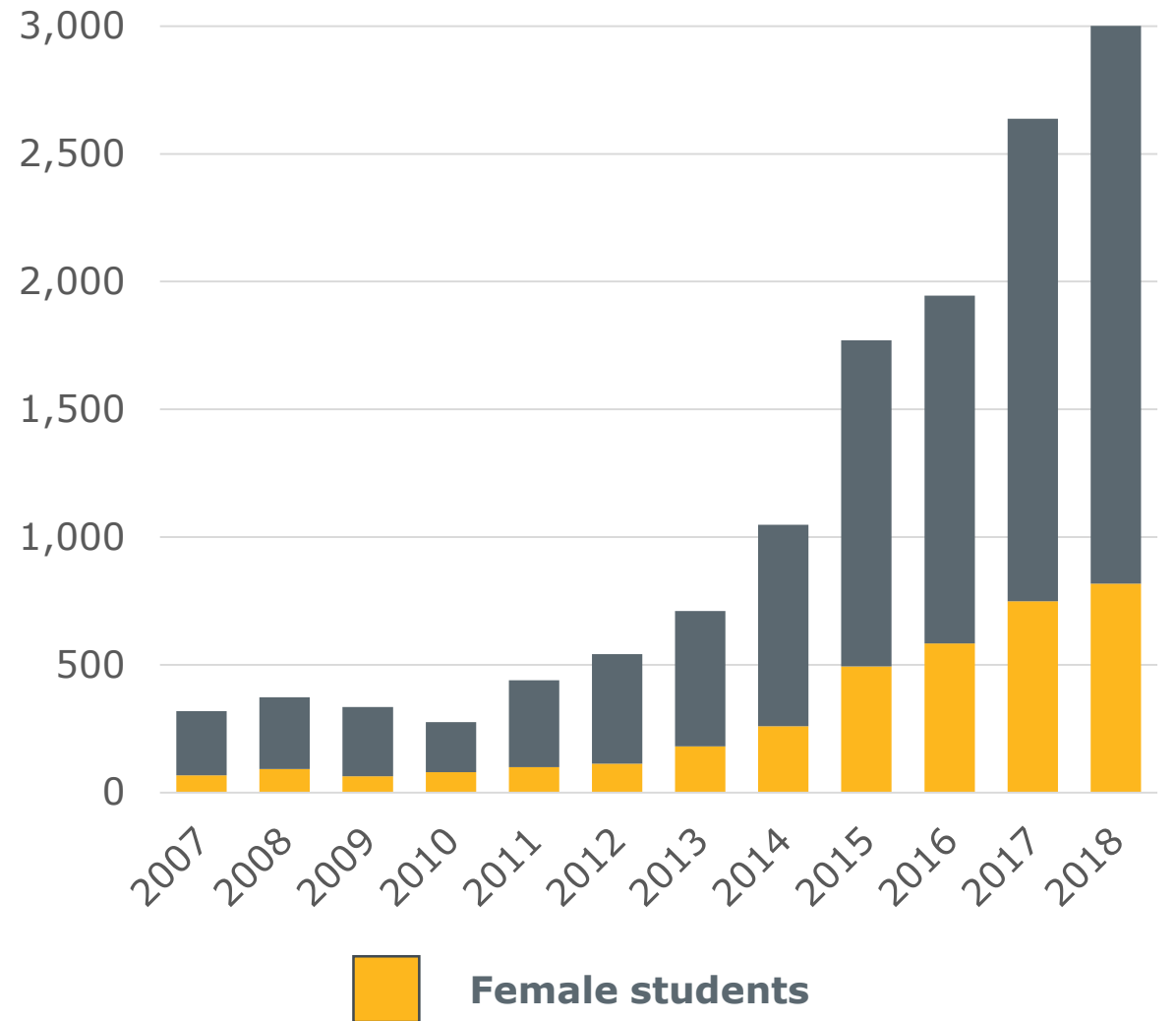
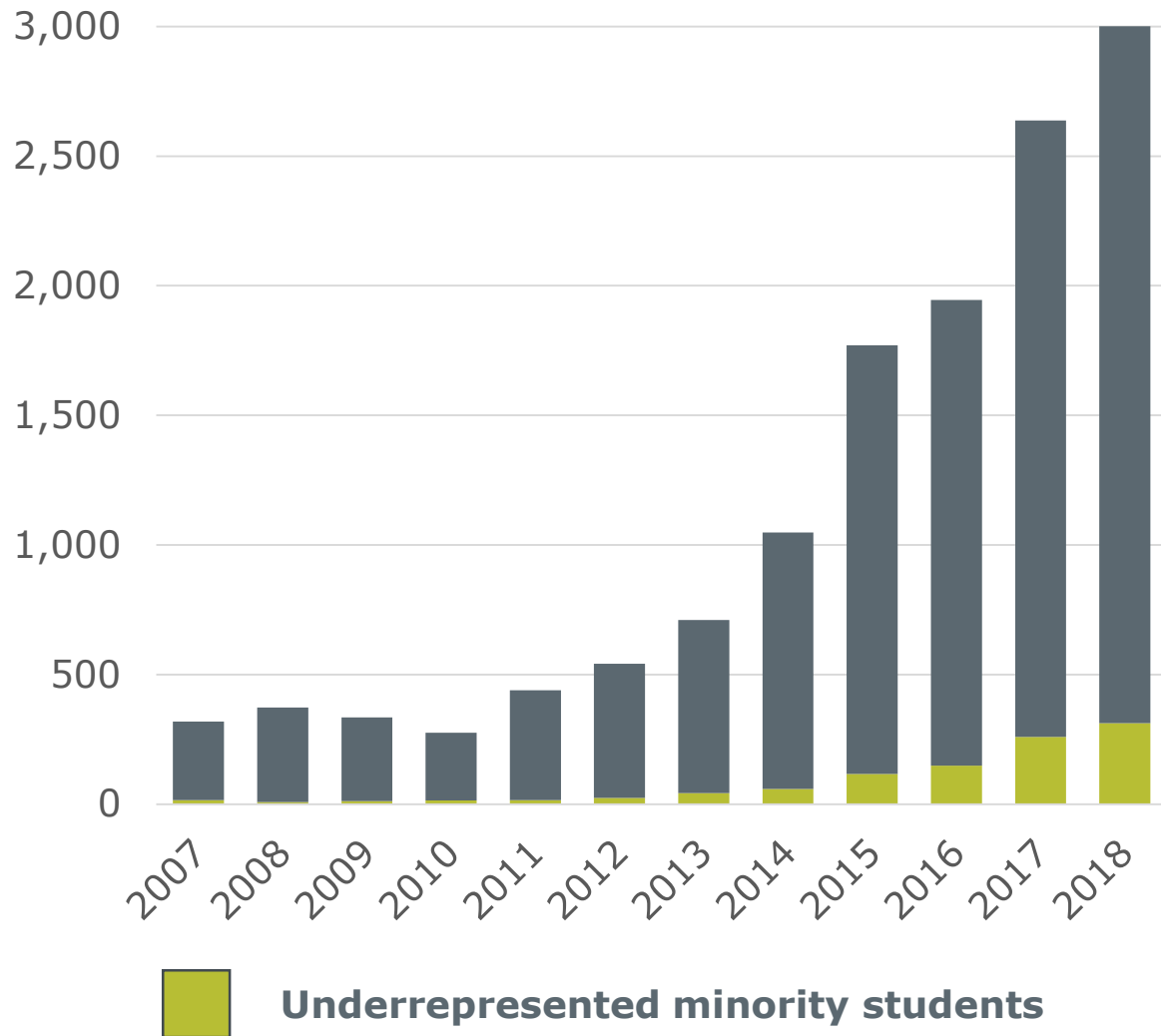
In development

Increase funding to the Computer Science Education Initiative so \$3M each year is allocated for teacher PD.

WA should lead in CS




WA should lead in CS



WA coalition for CS





C O
D E

Maggie Osorio Glennon
Code.org



Andy Shouse
Chief Program Officer

Washington STEM

Computer Science Updates



We ought to be proud of what we're doing, and Washington STEM is at the forefront. And we know we've got more work to do so that every single student can look at STEM as part of their vision for the future.
- Jay Inslee, Governor

BUILDING A SYSTEM THAT DRIVES COMPUTER SCIENCE EDUCATION



OUR VISION & GOAL

By 2030, Washington students will be career- and future-ready.

- **70%** of Washington youth will earn credentials by age 26.
- The **number of students** of color, students from low-income and rural families, and young women **who are on track** to earn high-demand credentials and thrive in our innovation economy **will triple**.



2019 LEGISLATIVE PRIORITIES

Expand Career Pathways HB 1336 & SB 5327

Washington students, particularly students from underserved communities, will benefit from access to career connected learning programs that prepare them for high-demand, family-sustaining careers.

Expand Statewide Data and Measurement Capacity

Support transparent, timely, and clear data collection, connection, and sharing about the Washington education system and workforce in order to measure impact, effectiveness, and student outcomes.

Support STEM Education Infrastructure



WHAT WE DO: OUR THEORY OF CHANGE

PLATFORM FOR IMPACT

Building on our distinctive capabilities

Trusted thought leader

Innovation catalyst

Independent advocate

KEY ACTIVITIES

We conduct high-impact activities

- Use data to identify STEM pipeline bottlenecks
- Collect and synthesize our partners' on-the-ground challenges and solutions
- Convene communities of practice to implement high-impact solutions
- Disseminate playbooks, best practices, and case studies
- Scale best practices through Networks
- Educate leaders and policymakers
- Advocate for change

DIRECT IMPACT

To influence policy and practice

Grassroots: broader uptake of best practices

Grasstops: funding and policies at the regional and state level enable best practices

ULTIMATE GOALS

Enabling young people to thrive in our community

Students of color, students from low-income and/or rural backgrounds, and young women have the competencies needed to enter high-demand, family-wage careers in the state

Washington youth are prepared to thrive in the economy and community

Direct impact

Ultimate Goals





Shannon Thissen

Computer Science Program Supervisor

Washington State Office of Superintendent
of Public Instruction

Computer Science Update



COMPUTER SCIENCE

UPDATE

Office of Superintendent of Public Instruction

Shannon Thissen, Computer Science Program Supervisor

Computer Science education initiatives in the schools

- ❖ Washington Association of Educational Service Districts (AESD)
- ❖ Sumner School District
- ❖ Vancouver Public Schools Special Education Department
- ❖ New Opportunities

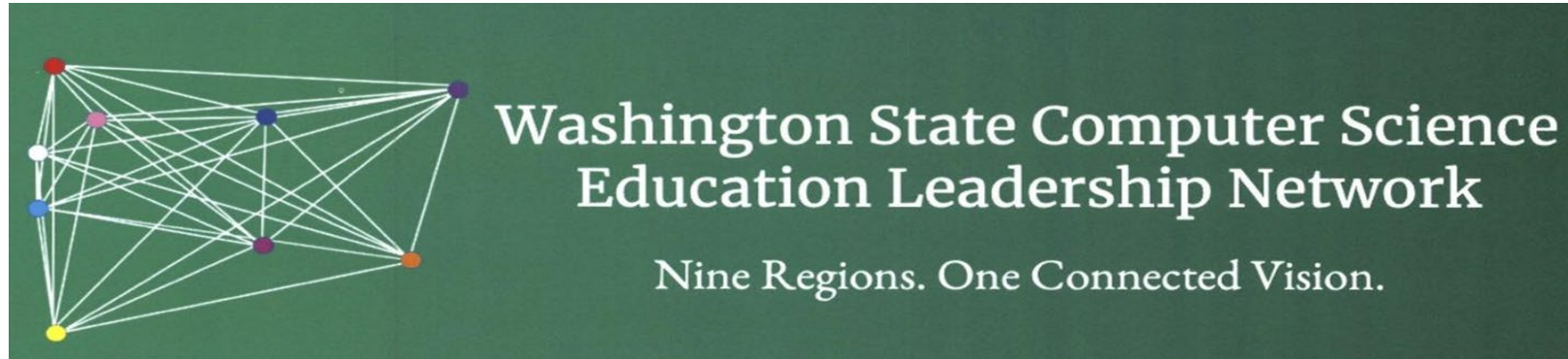


Washington Association of Educational Service Districts (AESD)

- Teacher Leader Cadre
- District level administrators
 - Increase the number of district level administrators with computer science education awareness
 - Increase the number of districts with a computer science education strategic plan that creates computer science pathways for Washington students across all grade levels
- Training for the integration of computer science
- Supporting equitable computer science education for underrepresented groups



Let's Get Connected: ESD Leadership Network Collaboration on our New Workplace Account



- Continued Collaboration
- Event Sharing
- Networking
- Resource Sharing
- Updates
- Community Questions
- Sharing Success and Growth Opportunities



SCRIPT workshops

What is the most effective way to make computer science a part of everyday curriculum?

- ❖ SCRIPT workshops help school and community leaders make those decisions by bringing together teams from school districts to engage in a process of self-reflection and goal setting.
- ❖ In the workshop, district develop goals by assessing the district's CS education in its current state, create a plan, and the next steps to bringing CS education to the district.
- ❖ The rubrics are design to help in the development of goals to move districts through the levels of implementation going forward.



Computational Thinking {and Coding} for Every Student Book Study

Logistics:

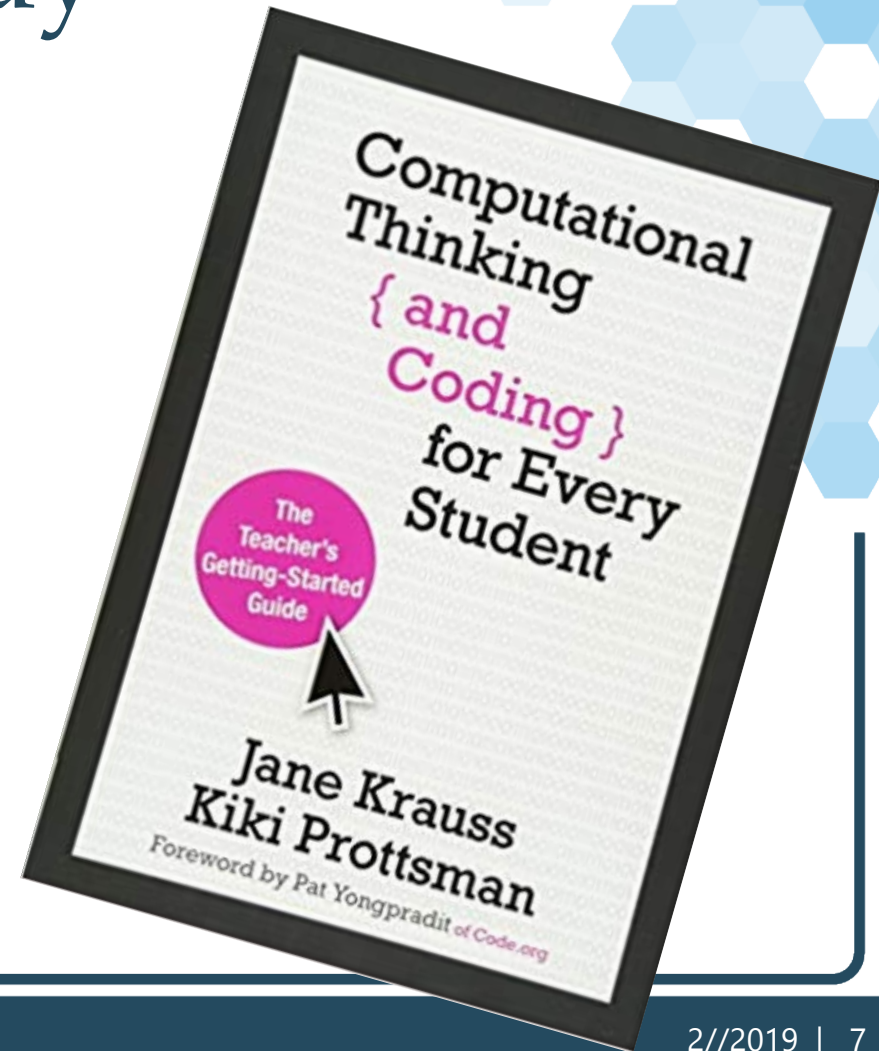
- CS Leads Book Study

Times:

- 7:30am-8:30am
(Each Date)

Dates:

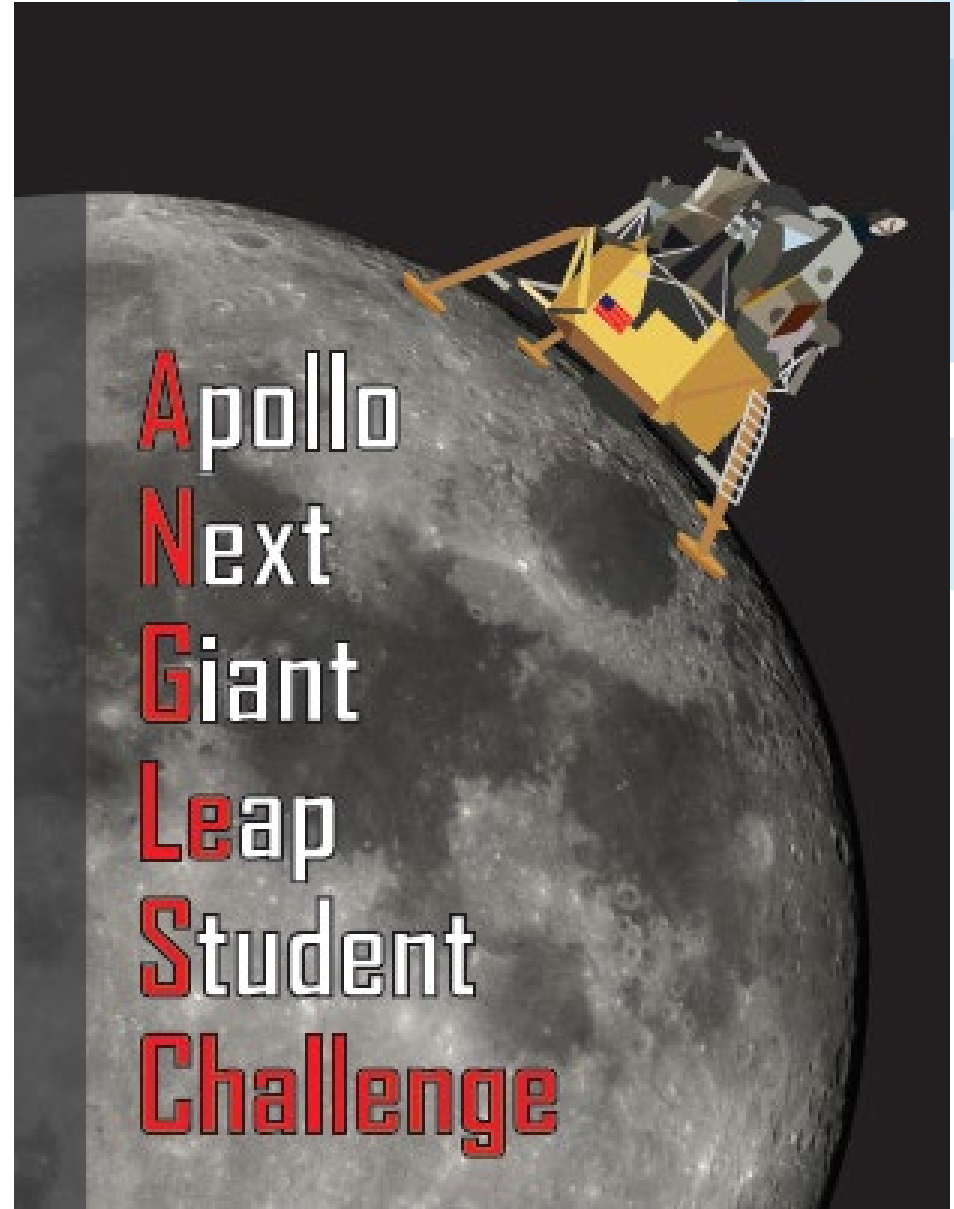
- February 8th
- February 15th
- February 22nd
- March 1st
- March 8th
- March 15th
- March 22nd





- ❖ Apollo Next Giant Leap Student Challenge — the ANGLeS Challenge.
- ❖ Open to students in grades 5-12 across
- ❖ Challenges student teams to recreate the Apollo 11 moon landing using a drone and a LEGO Mindstorm robot.

<https://tinyurl.com/y9da869a>



Sumner School District

Computer science as a medium for creativity, communication, problem solving, and fun!



Exposure (Elementary Students) Learning about computational thinking, problem solving, programming concepts and digital citizenship.

Exploration (Middle School Electives) Empower students to create authentic artifacts by engaging in programming, app design, web development, robotics, animation, physical computing and data analytics

Experience (High School Electives) Prepare students interested in pursuing post-secondary experiences or careers in Computer Science

Teacher Professional Learning



Sumner School District K-12 Pathways

CS Goal 1

All elementary students have access to a guaranteed and viable computer science curriculum during the 18-19 school year.

CS Goal 2

By June 2025, all teachers will integrate Computational Thinking throughout content areas

CS Goal 3

By September 2022, girls will represent 50% of secondary students enrolled in CS electives and student population represent the racial/ethnic demographics of the overall student population.



Vancouver School District

Emphasis on Special Education Population

- ❖ Access to general education curriculum
- ❖ Safe environment
- ❖ Self-esteem
- ❖ Problem-solving and collaboration skills
- ❖ Connection to SEL



Coding in Special Education Classrooms: Inclusion and Access to Computational Thinking

The Why

Approximately 3,000 students in VPS receiving special education services, a number of students for various reasons, are not able to access general education environments regularly.

Stories

*Student was asked to talk about coding in a general education class.

*Parents recognize the pilot's impact



The Unexpected



Rachele Nulph

This program is amazing, my daughter is Katie, the amount of patience she has now is amazing! She use to get so frustrate to new things and now through her work at learning coding she is trying new things. Every thing from trying new foods to being willing to learn to try to learn to ride a bike. I am super proud of her hard work. Thank coding it has changed her life!



The Unexpected



Williams sees coding as a natural way to expand the school district's focus on social emotional learning—helping students develop traits such as self- and social awareness, decision making and interpersonal skills.

“Our special education teachers are some of the greatest social emotional learning experts we have, and this program is supplemental to the incredible work they are already doing,” she said.



New Opportunities

- ❖ Expanding Computing Education Pathways (ECEP) Alliance
 - ❖ NSF Broadening Participation in Computing Alliance
 - ❖ 23-state alliance for sharing pathways to success
 - ❖ Resources and services to expand computing education

Dr. Andy Ko, University of Washington



Computer Science Leadership



Contact Information:

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Greg Bianchi

Senior Program Officer

Patrick O'Steen

Regional Lead, TEALS Pacific Northwest

Microsoft Philanthropies

Computer Science Education Updates



Our Opportunity

Greg Bianchi and Patrick O'Steen
Microsoft Philanthropies



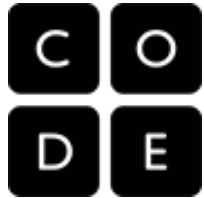
A grayscale photograph of three young men in a classroom or office setting. They are gathered around a laptop on a desk, looking intently at the screen. The man on the left is wearing a white t-shirt with a logo that includes the word 'mowing'. The man in the middle is wearing glasses and a dark shirt. The man on the right is wearing a dark button-down shirt and is leaning over the laptop, with his hands on the keyboard. In the background, there is a whiteboard with the USAID logo and some text. The overall scene suggests a collaborative learning or work environment.

Our Challenge

We must move technology and our economy forward **without leaving people behind**

Our Approach

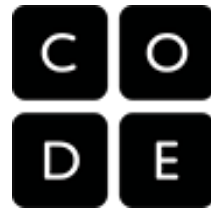
Interest & Belonging



BOYS & GIRLS CLUBS
OF AMERICA



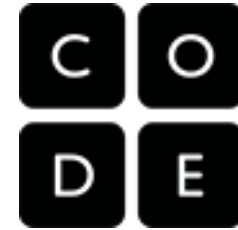
Capacity



WASHINGTON STATE
OPPORTUNITY
SCHOLARSHIP



Systemic Change



Build Capacity



Bring CS to your school

Every teacher can teach computer science with the right support. Learn how to train teachers and unlock a world of opportunity for students.

[Download the guide >](#)



Increase diversity in CS classes

Help support teachers and schools in bringing more gender diversity into CS classes.

[Get the toolkit >](#)



Computer science professional development guide

How education leaders can build teacher, school counselor and administrator capacity to support equitable computer science education



SCRIPT

The SCRIPT: Strategic Planning Tool for School Districts



March 27
Meydenbauer Center
Bellevue, WA

Microsoft Philanthropies TEALS Program

Year-round in class teacher professional development from trained industry professionals

Industry volunteers support classroom teachers and build CS teaching capacity

A ten-year track record with hundreds of teachers and schools



Our impact together this year

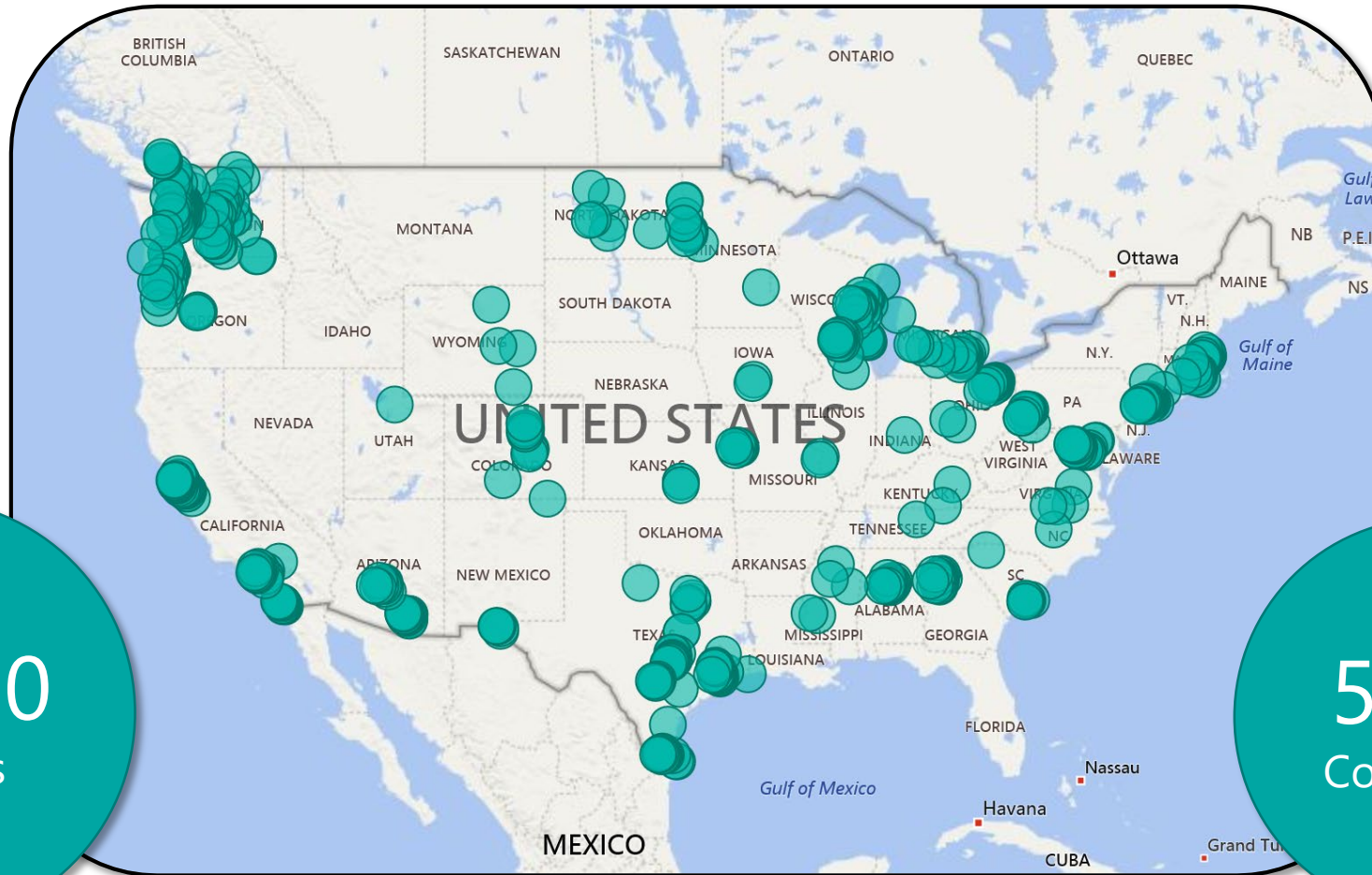
500
Schools

27
States +
BC

18,000
students

1,500
Volunteers

500+
Companies



TEALS in Washington

2018-2019 TEALS Partner Schools:

101 schools in WA

30% identify as rural (up from 16% in 2015-16)

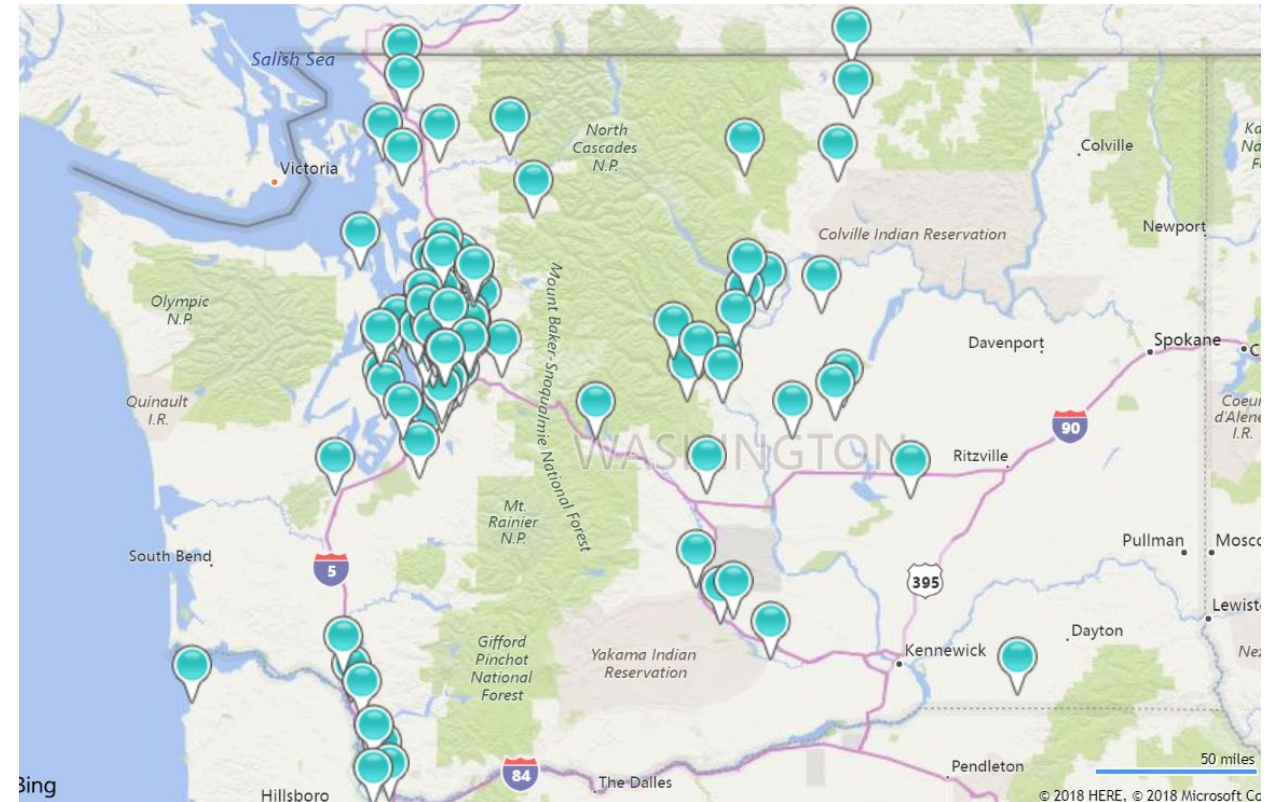
380 volunteers from 100+ companies

55% of AP CS A exams taken in 2018 were from TEALS supported classes (46% of all AP CS exams in WA)

2019-2020 TEALS Goals/Projections:

120 partner schools in WA, **35%** rural

450+ volunteers in WA



Remote Teaching Classes

TEALS' **Rural and Distance program** reaches students that have the least access to expertise in computer science.

What Types of Schools

Rural Schools

Schools outside of an area where tech professionals could commute twice per week



2019 TEALS Computer Science Fair



Wednesday, March 27th

Meydenbauer Center – Bellevue, WA

~2,400 attendees expected (1,900 – 2,000 students)

40+ booths (college & career opportunities)

Presentations, panels, hands-on workshops



2018 WA CS Fair Highlights



# of Attendees	2,055
Students	1,632
Teachers/Chaperones	187
Exhibitors	200
Presenters/Panelists	32
Guests	4



From event post-surveys:

- **100%** of booth leaders said they want their organization to participate next year
- **100%** of teachers said they want their school to return next year
- **98.5%** of students said they want their school to return next year