Apple STEM Network
Year-End Report
August 1, 2017 - June 30, 2018

Prepared by Apple STEM Network Directors
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Annual Activities for Reporting Period

Significant Outcomes

The Apple STEM Network has outlined a strategic plan to support efforts in 5 key areas: (1) increase stem awareness and support, (2) promote & increase participation career connected learning, (3) fortify transitions from the K-12 system to higher education, (4) support stem educators, and (5) seek industry & community input to promote regional economic development. In addition to these, the Apple STEM Network has committed to support Washington STEM and our sister networks in furthering the statewide efforts in Educational Policy and Computer Science. The collaborative efforts detailed below directly correspond to these objectives.

Apple STEM Network Hosted the Washington STEM Summer Meeting and featured a STEM Learning Tour (1, 5) - August 3-4, 2017, More than 40 STEM Ambassadors spent the day visiting the Fire Science Program at Mission Ridge, heard about the Chelan PUD STEM Academy, and got a behind the scenes tour of the Rocky Reach Dam alongside the engineers. In addition, the 70 attendees going to the Washington STEM Summer Meeting enjoyed GWATA’s Annual Summer Social where they connected with the NCW Business Community and created cross-state relationships. Partners: Apple STEM Network, Wenatchee Valley Museum and Cultural Center, GWATA, Chelan PUD, Rocky Reach Dam, and Washington STEM.

NCESD STEM Summit (4) August 14-18, 2017, Wenatchee Convention Center
The four day summit featured 54 sessions including a Keynote address from Washington teacher of the year Camille Jones, and a panel talk from STEM Industry professionals in computer science, agricultural research, robotics and engineering. More than 220 STEM educators took part in the four day summit. Partners: North central Educational Service District, GWATA, Apple STEM Network, and Wenatchee Valley College.

Wenatchee Mini Maker Faire (1-5) - October 21, 2017, Wenatchee Convention Center
The student-organized Wenatchee Mini Maker Faire captured the entire valley's innovative spirit in an exciting, one day event. Artists, engineers, inventors, performers, musicians, tinkers, students and educators presented their creations in an environment that celebrates creative, fun, and experimental thinking. The GWATA staff and volunteer board mentored a group of Wenatchee High School students in leading the event. More than 1,700 people visited the Mini Maker’s Faire. Sponsored by GWATA, Apple STEM Network, OATH, Chelan Douglas School Retirees Association, GigaWatt, Wenatchee Valley Museum and Cultural Center, and Molina Healthcare.

NCW College and Career Expo (2,3,5) - November 6, 2017, Wenatchee Valley College
Nearly 3,000 students from nineteen school districts from around Central Washington and over 100 employers and colleges flooded the Wenatchee Valley College campus for a full day of career exploration. Businesses and post secondary recruiters showcased career and educational pathways through hands-on interactive exhibits. STEM educators and industry partners were identified as such by the Apple STEM logo on their name tags. Soft skills like professional dress, greetings, and maintaining a professional profile on social media were featured by local businesses. The Apple STEM Network and GWATA co-hosted a booth on “Digging that Digital Profile” and did a quick training/awareness for

**Washington STEM Summit** - November 28, 2017, Microsoft Campus, Redmond
Nine representatives for the Apple STEM Network attended the Summit and made invaluable connections to several other network partners across the state and across the country.

**WSOS Champions Workshop (1, 3)** - December 7, 2017, Confluence Technology Center
Twenty-seven attendees from 21 school districts attended a workshop presentation by Joanna Moznette to champion and assist students in their applications for the Washington State Opportunity Scholarship. Several of the educators present had not previously heard about the scholarship until the training. Sponsored by WSOS, GWATA, North central Educational Service District and Washington STEM.


**Careers After School - Chelan County PUD (1, 2, 5)**- January 30, 2018, Fiber Optics Career Exploration. Middle and high school students were invited to explore careers in fiber optics and learn about the amazing technology that delivers high speed internet using light. Featured jobs included: Communications lineman, communications specialist and senior telecom engineer. Partners: Wenatchee Learns Connect, Wenatchee Valley Chamber of Commerce, Chelan County PUD

**STEM Meeting in Olympia (Policy)** - January 31- Feb 1, 2018, Olympia
The Apple STEM Network policy team met with each of our regional representative in district 12 and district 13: Representatives: Matt Manweller, Tom Dent, Cary Condotta, and Mike Steele, and Senators Brad Hawkins and Judy Warnick as planned.

**Soft Skills Summit (2, 5)** - February 8, 2018, Wenatchee Valley Convention Center
In partnership with the Wenatchee Valley Chamber of Commerce and SkillSource Wenatchee, the first Soft Skills summit hosted 150 attendees for a total of 18 sessions around customer service, career readiness and soft skills.

**Science in Our Valley (1, 4, 5)** - The Apple STEM Network received a grant through Our Valley Our Future to coordinate a weekly regional research seminar series. There were 235 attendees at the 10 seminars presented in the fall of 2017. An additional 10 seminars is planned for the spring series. Coleads for this project include: Washington State University - TFRC, USDA, WVC, and NCESD.
Digital Challenge - Year-round, Orchard Middle School
More than 100 students in 5th and 6th grade iPad classrooms have voluntarily taken tests to further demonstrate their iPad skills and knowledge. Students become ninjas by studying for and passing tests about how to use their iPad for learning and teaching others. There are four different levels of increasingly harder tests starting with Novice and Apprentice and finally Ninja and Master. The goal of the program is not just to allow students to show off how much they know, but to ease the burden teachers face to have to teach important tech skills. Video Clip

The Flywheel Investment Conference (1, 2, 5) - April 19, 2018, Wenatchee Convention Center
The Flywheel Investment Conference brought over 250 attendees from the PNW to downtown Wenatchee. Attendees included: entrepreneurs, investors, startups, professional service provider, students, and community members. The goal of the conference was to develop resources and capital for building companies, create a talent pipeline, and to attract businesses to our region. The conference was a full-day event and includes educational seminars, speaker panels, a $100k investment competition, and networking. The Apple STEM Network worked with 3 school districts and WVC to send eight students to the conference to learn and network with the entrepreneurs and investors. Sponsors: GWATA, Microsoft, Confluence Health, Moss Adams, Ogden Murphy Wallace, Port of Chelan County, Port of Douglas County, North 40 Productions, City of Wenatchee, Washington State Department of Commerce, Native Network, Karr Tuttle Campbell, Salcido Enterprises, The Wenatchee World, LocalTel Communications, Cafe Columbia, Cascade Subaru, Wenatchee Valley Chamber of Commerce, The Thai Restaurant, JP Portrait Studio, North Cascades Bank, Davis Furniture, CFT, and PetHub.

Guys & Guts / Pizza, Pop, and Power Tools (1, 2) - May 8, 2018, Wenatchee Valley College
Guys and Guts was a hands-on career exploration experience for 305 8th-grade boys in the Wenatchee School District to discover careers in healthcare. The goal of Guys and Guts is to expose boys to the exciting career opportunities available in this growing sector and to also promote non-traditional career pathways for men in areas such as nursing. Boys had the opportunity to test drive a variety of careers in healthcare fields as they travel through interactive stations in the following areas: Veterinary Science, Medical Lab Technology, Coroner Science, Medical Assisting, Nursing, and EMT/Paramedic.

The 4th annual Pizza, Pop and Power Tools event hosted 278 Wenatchee School District 8th-grade girls. The goal of the event is to help girls explore a variety of non-traditional careers for women. Through the involvement of female role models and skilled professional, students participated in an experience that could inspire them to enroll in a high school career and technical education class such as construction trades and welding or pursue post secondary vocational training or an apprenticeship program. Girls got to weld, operate heavy equipment, power tools and machining equipment, participate in a tire tire rotation rodeo, try on fire fighting turnout gear and scale a 30’ power pole with Chelan PUD.

NCW Tech & STEM Showcase (1, 2, 4, 5) - May 19, 2018, Pybus Market
The NCW Tech & STEM Showcase is a community event where teachers, educators, and students
have the opportunity to show their classroom projects. Focused on technology and STEM -this event featured 16 interactive displays which included: drones, video game programming, robotics, app design, & even a mariachi band! More than 100 students and teachers from five school districts participated (coming from four different counties: Chelan County, Douglas County, Grant County and Okanogan County) . The event was open to the public and drew more than 1200 visitors. **Sponsors:** Giga Watt, GWATA, Microsoft, Wenatchee School District, North Central ESD, OATH, and Chelan Douglas School Retirees.

**GWATA Code DOJO (1, 2, 5) - May 26, 2018, North Central Regional Library**
GWATA hosted the first GWATA Coders Event. The North Central Regional Library volunteered their space, staff, and computer to the program and mentors from the GWATA Board and GWATA Business Partners volunteered to provide mentors for 24 youth. Event registrations filled to capacity for this event in less than a week and we are really looking forward to beginning again in the fall. **Sponsors:** Giga Watt, GWATA, and North Central Regional Library.

**New Collaborations**

**Career Connect Washington in North Central Washington:** The Apple STEM Network is featured as a co-lead, alongside the Workforce Development Council and with a myriad of regional partners in an effort that spaces 5 counties. The North Central Career Connect proposal was awarded $854,000 in WIOA funds to create opportunities for 350+ youth in Chelan, Douglas, Grant, Adams and Okanogan counties to receive a 3-part package consisting of comprehensive career plan, adult mentor, and a worksite learning experience like an internship, pre-apprenticeship or youth apprenticeship. This collective work created new partnerships with WorkSource, Big Bend Community College, WACMHC, and AJAC, among others.

In July, the Career Connect Washington North Central Region will be awarded an additional $225,000 to support career connections in Grant and Adams counties. The North Central Educational Services District will use $175,000 to support a one-year, full-time position for career connected learning.

**Challenges**

**A New Phase:** As our work as a STEM Network has matured, we have seen the priorities in our efforts shift. When we began this work three years ago, we found that the majority of our community work was focused at growing awareness for STEM education, and recognition and identification of our STEM industries and business partner needs. While we continue to work on community awareness about “what STEM is” and “why it’s important”, we are also now deeply vested in community efforts around how students access STEM pathways through career connected learning, how to support and catalyze our economic development through supporting STEM businesses, and how to systematically create support for STEM educators. The Apple STEM Network is now entering a phase of development and facing new challenges like how to balance our workload, how to effectively tell our story to our diverse stakeholders, and how to manage the growing number of partnerships that bring tremendous value to our network.
Looking Ahead.
In looking ahead, briefly list any challenges you anticipate and ways you might address them. Do you foresee delays in completing your Network in the timeframe outlined in your proposal?

**The Career Connect Washington Stretch**
When the Apple STEM Network first came together, Career Connected Learning was identified as one of five priority objectives for our collective impact work; however, this year brought an opportunity to stretch and grow additional Career Connected Learning experiences for youth in our region. The Apple STEM Network is excited to support these efforts, but there is an exponentially increased amount of work involved in securing the right partnerships, facilitate communication, and coordinate events. This work is really valuable and in line with our priorities, but as it grows, it limits our capacity to support the four other defined priority areas of work outlined in our business plan. We are currently working with the core leadership team to examine this constraint.

We also reached out to solicit advice from our sister STEM Network directors, and found synergy in the Southwest STEM Network. Part of our Career Connect Washington work will focus on building career connected experiences for youth in Grant County. Grant County’s advanced manufacturing industry partners are actively seeking ways to build out their workforce and School Districts in Moses Lake and Quincy are actively looking to engage with these businesses. The new partners in these communities were not part of our original business plan. We are fortunate to have a relationship with the Southwest STEM Network which has expertise and has been invaluable council as we are building foundational relationships with our new partners. We envision this cross-network collaboration will be ongoing for the duration of the Career Connect Washington Work.

We are very excited about the a number of regional plans in the works for the coming months:

- **NCESD STEM Summit**  
  August 13-16th

- **Career Connected Learning Roundtable**  
  Aug 23, 2018

- **Science in Our Valley - Series Premiere**  
  September 26, 2018

- **GWATA Innovator’s Award Luncheon**  
  September 26, 2018

- **GWATA CoderDojo**  
  September 29, 2018

- **District 12 - STEM and CCL Legislative Forum**  
  October 23, 2018
District 13 - STEM and CCL Legislative Forum
October 25, 2018

Wenatchee Regional Qualifier - First Lego League Robotics Competition
December 8, 2018

Products, Tools, or Resources. Please describe any products, tools, or resources that were developed or discovered during this reporting period that could be shared with Washington STEM to help inform others doing similar work.

CoderDojo GWATA has been a partner with the The West Sound Technology Alliance (WSTA) who was formed around the same time as GWATA with a similar non-profit mission: to foster a vibrant local technology sector. Recognizing the fundamental need for Science, Technology, Engineering, Art, and Math (STEAM) talent in their community, WSTA began hosting West Sound CoderDojo events in 2015. CoderDojo is an international open source coding club for kids ages 7-18 with a goal of sparking their interest in computer programming along with teaching them problem-solving, computational thinking, leadership, collaborative peer-to-peer learning. The success that WSTA has seen in their CoderDojo events has inspired the GWATA Board to roll out their own coding club for kids in North Central Washington. The Apple STEM Network brought partners together in December 2017 and January 2018 to outline a development plan for this program. The North Central Regional Library volunteered their space, staff, and computer to the program and mentors from the GWATA Board and GWATA Business Partners volunteered to provide mentors. The Apple STEM Network will travel to the West Sound CoderDojo in February to watch their coding club in action, learn from their years of leading a coderdojo and finish plans for the start of GWATA CoderDojo which begins on May 26, 2018.

Success Stories. Include 1-3 success stories or specific accomplishments that deserve special mention on the Washington STEM website.

TEALS Connections - Over the last year, the Apple STEM NEtwork, in partnership with NCESD, GWATA and Microsoft did strategic outreach to expand opportunities for computer science education to rural school districts in North Central Washington. The Microsoft TEALS program uses technology to connect students and educators remotely to a computer engineer, who teaches the course and provides support to the classroom teacher. The model also offers students real world skills and connections to industry professionals. The outreach plan was extremely successful and the number of schools partnering with Microsoft to offer TEALS next year increased from 11 to 18 high schools. The students at the Wenatchee Skills Center in Kim Anderson’s class will be one of the newest TEALS classrooms, and to make sure this program gets off to a great start, our partners at GWATA then extended an invitation to local technology experts and successfully matched the students with a local computer science professional, CEO of PetHub, Tom Arnold.

Feedback. Please include any comments or feedback as to how Washington STEM staff can improve its relationship with Networks and provide the needed assistance to help Networks succeed.

Keep The Conversation Going: We are grateful for the opportunity to provide feedback to
Washington STEM about our relationship. As we look to the next year, there will be collective work around Career Connected Learning and STEM education, but it it extremely challenging at this point in time to predict with certainty what the year will look like as it unfolds. We deeply value the collaborative nature of the partnership between Washington STEM and the other regional networks, and we ask that Washington STEM continue to solicit our feedback and support the regional networks in communication that allows us to co-create the next steps together as partners.

**Use the Regional Expertise:** We are also really grateful to Washington STEM for the outreach to loop us in when a regional resource is needed, like an advanced manufacturing or agricultural representative for the CC-WA work groups, or policy committee. We appreciate the opportunity to weigh in and make suggestions about who would be a regional resource for these efforts. This kind of outreach through the network adds value and intentionality to the STEM Network locally, and reinforces the great working relationships we have with our partners. It also allows us to be sensitive to not max out a partner with too many asks and consider local investments as well as statewide needs that support our collective efforts. We hope this will continue as we move forward.

**Be Mindful About the Timing of Asks:** We know sometimes this can’t be avoided, but to the extent possible, it’s important to be mindful about all the other obligations, expectations, and timelines that we have on our plate.

**Financials.** Present an actual budget of grant expenditures for the reporting period alongside the approved budget (see Attachment D). Include a brief narrative explaining line item variances (over/under 10%) from the approved budget and any consultants paid for services. If you have any underspend, please also provide an updated budget and narrative for how those funds will be used to support the work of the Network. Any substantive changes should include an explanatory note. Please also list additional funding sources (secured and prospected) that would support the ongoing efforts of this Network.

**Attachments.** Include relevant materials, evaluations, and/or media stories directly related to your STEM Network.

- **Press Releases:**
  - Science in our Valley
    - Weekly Event Details
    - Koho Radio interview
  - Wenatchee Mini Maker Faire
  - WSOS Open Applications
    - WSOS Koho Radio Interview
  - Transition to NCESD
  - Flywheel Investment Conference
    - GWATA ANNOUNCES PLANS FOR THE FLYWHEEL INVESTMENT CONFERENCE
    - FEATURED SPEAKERS AT FLYWHEEL
    - SIX FINALISTS COMPETING FOR $100,000
    - CARTOGRAM WINS $100,000 INVESTMENT AT FLYWHEEL 2018
  - Tech & STEM Showcase
    - NCW TECH & STEM SHOWCASE
GIGA WATT PRESENTS NCW TECH & STEM SHOWCASE
10 SCHOOLS PRESENTING AT 2018 NCW TECH & STEM SHOWCASE

- Wenatchee World Articles on the Apple STEM Network and/or partners:
  - 9-7-17 Introducing the 'Science in Our Valley' seminar series
  - 9-25-17 Documentary and panel focus on female entrepreneurs
  - 9-28-17 She Started It
  - 10-2-17 WVC lands new program to support math, science students
  - 10-7-17 Study shows more STEM skills needed to meet job demand
  - 10-18-17 Community Connections | More than 50 ex...Mini Maker Faire
  - 10-21-17 Wenatchee Mini Maker Faire
  - 11-6-17 Handshake tips added to career fair
  - 12-11-17 Hour of Code | Students, parents build computer confidence
  - 12-11-17 Battle of the 'bots | LEGO teams descend...Robotics tournament
  - 12-19-17 WVC names Vega-Villa, Johnson to lead MESA program
  - 12-19-17 Grant opens door for more student work experiences | The Wenatchee World
  - 1-18-18 Flones honored for 'going the extra mile' | The Wenatchee World
  - 2-5-18 Spring Science seminar series off Wednesday| The Wenatchee World
  - 2-7-18 Flywheel Conference helps spin startup ideas into reality | The Wenatchee World
  - 3-13-18 Flywheel Conference to feature noted No... 'fireside chat' | The Wenatchee World
  - 4-5-18 Six finalists named for Flywheel competition | The Wenatchee World
  - 4-23-18 Navigation service wins $100,000 investment at Flywheel | The Wenatchee World
  - 5-14-18 Students awarded over $1 million in STEM scholarships
  - 5-25-18 Space still available in Saturday's GWATA Coders workshop | The Wenatchee World
  - 5-25-18 Giga Watt sponsorship fuels more GWATA events | The Wenatchee World