

**Declaration of Cooperation
Among Core Partners
of the
Oregon Coast Regional STEM Hub**

This is an agreement among and between the signatory partners, who form the Oregon Coast Regional STEM Hub, hereinafter called the STEM Hub.

Vision Statement

The STEM Hub engages K-14 educators and students along the Oregon Coast in world-class Science, Technology, Engineering, and Mathematics (STEM) experiences, inspiring and preparing students to be highly skilled employees and educated citizens, capable of making informed decisions about global and regional issues.

Mission Statement

The STEM Hub supports K-14 STEM education along the Oregon Coast by collaborating with diverse partners, leveraging local and regional resources, to produce college and career-ready students who are equipped to meet current and future societal challenges. By utilizing evidence-based instructional practices, connecting in and out-of-school learning, facilitating effective communication amongst stakeholders, and mentoring students and educators, we seek to improve STEM educational opportunities for ALL students in our region.

Guiding Principles

The STEM Hub is guided by the following beliefs:

1. Student achievement can be improved through the integration of STEM disciplines and by contextualizing learning through connections to the world beyond school.
2. A collaborative STEM Hub, with a broad range of public and private support, will provide teachers and students with increased access to effective STEM teaching and learning resources and opportunities.
3. Strong connections with colleges, universities, businesses and community partners will provide sustained enrichment in STEM teaching practices, provide students with advanced educational experiences, increased STEM career exposure and mentorship opportunities.
4. Equal opportunity and access to STEM resources should be made available for all students regardless of race, ethnicity, English language proficiency, socioeconomic status, gender, and geographic location.

Goals and Expected Outcomes

The STEM Hub will help establish a coherent, rigorous, and equitable system of K-14 STEM

education for all students along the Oregon Coast. In addition, the Hub will help excite youth and parents about STEM education and STEM-related careers; link educators, parents and students to STEM-related educational opportunities; support the sharing of lessons learned and best practices among both formal and informal educators; and identify and create opportunities for industry and community partners to engage with teachers and students.

The long-term goals of the STEM Hub are that:

1. Students have the knowledge, skills, experience, and motivation needed to enter post-secondary education and high paying, in-demand careers in STEM-related fields.
2. Oregon businesses and industries have access to an Oregon-educated STEM talent pool that is highly skilled and globally competitive.
3. Oregon Coast schools and educators have the tools and support needed to deliver world-class STEM instruction.
4. Coastal Oregonians have the scientific literacy and technological knowledge needed to make informed decisions in their personal lives and as citizens to address increasingly complex and interconnected local, regional, and global issues.

Expected outcomes include:

1. Increased STEM interest, participation, retention, and achievement for all K-14 coastal students including those from typically under-represented populations in STEM fields (ethnic minorities, females, English Language Learners, and economically disadvantaged).
2. Oregon Coast students' 21st Century skills including critical thinking, communication and collaboration, are improved.
3. Oregon Coast teachers' ability to deliver integrated STEM instruction and student experiences that incorporate Inquiry, Project/Problem, and Field-Based Learning is enhanced.
4. Increased high school graduation rates and college readiness of Oregon Coast students.

Purpose & Scope

This Declaration of Cooperation is an expression of intent among participants to build a Collective Impact Partnership, hereafter referred to as the Oregon Coast Regional STEM Hub, which aligns and facilitates the efforts of Partner organizations for the purpose of transforming Science, Technology, Engineering, and Mathematics (STEM) learning and teaching for K-14 students along the Oregon Coast. The Partners will document the results of the networked activities to achieve measurable increases in STEM college and career readiness among regional students. An emphasis will be placed on equity and inclusion in STEM, in an effort to reach under-represented populations in our region, including economically disadvantaged, Hispanic/Latinos, Native Americans, and female students. The STEM Hub will align work, as

appropriate, with Common Core State Standards (CCSS) and the Next Generation Science Standards (NGSS). The Partners will work together to identify proven methods to help teachers implement effective STEM practices that influence and shape the academic and career aspirations of Oregon Coast students.

Term of Agreement

This Declaration of Cooperation is for an initial period of one year, and may be extended, modified or amended, through the mutual written agreement of the parties, to clarify and formalize roles, responsibilities, timelines, and assurances regarding the scope of work. It is understood by all Partners that the goals and outcomes of this STEM Hub will only be fully realized through effective leveraging of existing resources, and additional in-kind or financial support from each partner to fulfill its commitments, as stated in this agreement.

Definition of STEM

The STEM Hub Partners agree to utilize the Oregon Department of Education's definition of STEM which defines STEM as "An approach to teaching and lifelong learning that emphasizes *the natural interconnectedness* of the four separate STEM disciplines. The connections are made explicit through collaboration between educators resulting in real and appropriate context built into instruction, curriculum, and assessment. The common element of problem solving is emphasized across all STEM disciplines allowing students to discover, explore and apply critical thinking skills as they learn."

Common Practices

The STEM Hub Partners agree to engage in a STEM education collaboration that includes common practices that will increase STEM college and career readiness for students. The common practices include: project-based learning, student mentoring and inquiry, the design process or scientific process, trans-disciplinary instruction (integrating in and outside school experiences), technological literacy, and ways to bridge STEM education with the workplace.

STEM Hub Partnership Plan

Additional information on the Oregon Coast Regional STEM Hub structure, governance, and proposed activities can be found in the Partnership Plan on the STEM Hub website at <http://oregoncoaststem.oregonstate.edu/>.

Collective Responsibilities of Every Partner

All signatory partners approve the use of their name and logo for partnership marketing purposes. Each partner will designate a representative to participate in STEM Center events and planning meetings when applicable, and to communicate with their respective institutions about the opportunities and benefits of the partnership, including professional development, access to resources and outreach activities.

In addition, each participating education partner commits to increasing the effectiveness of instruction in STEM and will identify a point person for collaborating with other partners. All education partners agree to share baseline data about STEM achievement that is available under existing data collection systems, to determine if the partnership is providing value

to students in their districts, consistent with any applicable laws relating to the collection and use of such data.

In performing their respective duties under this agreement, each of the parties will be operating as an independent entity. Nothing contained in this agreement will in any way constitute a legal partnership or joint venture between the parties, or be construed as evidence of a contractual relationship.

Additional STEM Hub Partner Commitments

Oregon State University/Hatfield Marine Science Center agrees to:

- Provide space, telephone service, internet connection, and limited administrative assistance for a STEM Hub office located at the Hatfield Marine Science Center to support STEM Hub activities
- Assist in connecting researchers and OSU student mentors with K-14 teachers and students
- Host the STEM Hub website for dissemination of STEM curriculum, relevant resources, and best practices that support effective STEM education
- Provide space and logistical assistance to conduct professional development workshops, meetings, and student events throughout the year

Oregon Sea Grant (OSG) agrees to:

- Provide staff to serve as Project Manager (.6 FTE), Communications Coordinator (.4 FTE), and to advise on evaluation and sustainability plans
- Assist in publicizing STEM Hub activities through associated networks and connect to community partners through Extension staff contacts
- Connect Sea Grant researchers with students and teachers
- Provide expertise in marine-related STEM PD and access to OSG developed STEM curriculum
- Work with partners to secure additional funding to support new and existing STEM opportunities for teachers and students

Oregon Coast School District Commitments

All partner school districts agree to:

- Assist in the identification of STEM Mentor Teachers who will act as liaisons with the STEM Hub
- Share Best Practices in STEM Education
- Collaborate with partners to provide resources and professional development (PD) opportunities to support effective STEM Education
- Host STEM-related student, family and community events; educator trainings, and meetings as time and space allows
- Assist in the establishment of student and teacher baseline data and the collection of data

for longitudinal studies as consistent with current policy and laws

In addition, Lincoln County School District agrees to:

- Act as fiscal agent for the STEM Hub
- Provide Community Resources Liaison (.3 FTE) to help provide PD and coordinate STEM efforts
- Support staff participation in the Coastal Learning Symposium, a two-day PD event for K-12 teachers held in October

In addition, Tillamook School District agrees to:

- Provide staff (.20 FTE) to act as PD facilitator for the STEM Hub
- Promote Tillamook School District Natural Resources Program as a model program, sharing resources and projects with STEM Hub partners and students

In addition, Astoria School District agrees to:

- Provide space for North Coast STEM Hub Coordinator
- Provide staff (.20 FTE) to act as North Coast Coordinator for the STEM Hub
- Promote the Aquatic Sciences program as a potential career pathway model, providing tours of facilities for STEM Hub partners and students

In addition, Coos Bay School District agrees to:

- Provide space for South Coast STEM Hub Coordinator
- Provide staff (.20 FTE) to act as South Coast Coordinator for the STEM Hub

Community College Roles and Responsibilities

All four coastal community colleges that are partners in the Oregon Coast STEM Hub have selected Birgitte Ryslinge to represent the community colleges on the Steering Committee. In addition, all community college partners agree to:

- Share Best Practices in STEM Education
- Continue and pursue the expansion, where applicable, of Dual Credit offerings for high school students in their service area, specifically in STEM related subjects
- Collaborate with STEM Hub to host and/or support STEM student activities and educator Professional Development in their areas
- Share expertise of STEM instructors
- Assist secondary school educators with alignment of curriculum and learning outcomes to increase the number of college ready students
- Encourage faculty and student involvement as mentors in K-12 classrooms

In addition, Clatsop Community College agrees to:

- Continue to support community college student participation in the Oregon Regional MATE ROV program
- Promote the MERTS program as a potential career pathway model, providing tours of

facilities for STEM Hub partners and students

- Continue to facilitate TRIO programs, working with STEM Hub to incorporate STEM experiences for participants

In addition, Tillamook Community College agrees to:

- Provide facilities and/or technical support for teacher professional learning and project activities
- Collaboratively work with Tillamook School District to design STEM curriculum and implement STEM courses

In addition, Oregon Coast Community College agrees to:

- Promote the Aquarium Sciences program as a potential career pathway model, providing tours of facilities for STEM Hub partners and students

In addition, Southwestern Oregon Community College agrees to:

- Facilitate the use of SWOCC's mobile welding lab with local high schools for use in STEM-related projects, as applicable
- Continue to facilitate Upward Bound programs, working with STEM Hub to incorporate STEM experiences for participants

Community Partners/NGOs Individual Commitments

The Oregon Coast Aquarium agrees to:

- Provide staff (.20 FTE) to act as PD facilitator for the STEM Hub
- Act as a liaison to connect STEM Hub with the Oregon Environmental Literacy Plan regional efforts
- Continue to coordinate the Coastal Learning Symposium, a two-day teacher PD opportunity that connects educators with learning experts and resources focused on forestry, watersheds, and marine resources
- Provide space for STEM Hub meetings and educator PD
- Collaborate with other partners in seeking additional funds to support STEM Hub activities
- Provide hands-on labs and support student field experiences

The Tillamook County Pioneer Museum agrees to:

- Include STEM concepts in publically available educational resources
- Provide job shadows and internships to high school students
- Provide staff as judges for local STEM competition events
- Host onsite educational tours

The Columbia River Maritime Museum agrees to:

- Serve on the STEM Hub Steering Committee
- Provide space for PD and/or meetings
- Provide fieldtrips for students that highlight STEM in maritime careers

- Incorporate STEM activities into outreach programs and new on-site programs

Oregon Museum of Science and Industry (OMSI) agrees to:

- Advise in the development of STEM programs for girls and underrepresented audiences
- Continue developing and piloting “Designing Our World” project aimed at engaging girls in engineering which will be implemented on the Oregon Coast in 2015-2016
- Participate in coastal community STEM events when possible

Lower Columbia Estuary Partnership agrees to:

- Share STEM related outreach activities
- Organize and lead student watershed field experiences and classroom lessons
- Create and provide STEM-related field experiences for teachers and students
- Participate in educator PD opportunities as appropriate
- Serve on the STEM Hub Steering Committee

Tillamook Estuaries Partnership agrees to:

- Serve on the STEM Hub Steering Committee
- Create and provide STEM-related field experiences for teachers and students
- Make available STEM educational kits for K-12 educators
- Provide mini-grants, as funding allows, for STEM projects/field experiences
- Assist with the development and implementation of STEM-related teacher PD
- Share STEM related outreach activities
- Incorporate STEM into its environmental education program
- Continue its partnership with the Tillamook Branch of the American Association of University Women’s 8th Grade STEM Camp and utilize partners of this agreement in its implementation
- Act as liaison between the STEM Hub and the Environmental Literacy Council

Friends of Netarts Bay (WEBS) agrees to:

- Provide technical assistance to STEM teachers
- Host educational tours and field experiences

Salmon Drift Creek Watershed Council agrees to:

- Provide watershed field experiences for students involving restoration monitoring, engineering and art
- Provide internships
- Provide staff expertise to assist with designing and implementing teacher PD and curriculum development about watershed science

Central Oregon Coast Chapter of National Organization for Women agrees to:

- Assist with recruiting and coordinating volunteers for community and student events
- Support STEM activities for girls through sponsorships, robotic kit underwriting, and/or scholarships

Northwest Aquatic and Marine Educators (NAME) agrees to:

- Coordinate activities and events to include K-14 educators and students
- Provide min-grants in support of STEM education
- Participate in educator PD opportunities as appropriate

KidWind agrees to:

- Assist in the planning and running of teacher workshops on the Oregon Coast focusing on renewable energy
- Work with STEM Hub staff to plan and coordinate the 2015 Oregon Coast Renewable Energy Challenge student competition

American Association of University Women-Tillamook agree to:

- Support the Tech Trek summer camp for girls
- Recognize achievements of young women in high school in the STEM fields
- Recruit mentors to work with students, with a particular focus on females

Industry/Business Partners' Commitments

Near Space Corporation agrees to:

- Provide field site and/or classroom support as needed to students and teachers working on STEM Hub projects
- Provide facilities and technical support for educator PD
- Serve as STEM project mentors
- Serve on the STEM Hub Steering Committee

Tillamook County Creamery Association agrees to:

- Continue to support monitoring and restoration projects implemented by TSD educators and students, and by conducting educational tours

Advanced Research Corporation agrees to:

- Provide mentors to work with students and serve as judges in engineering competitions
- Provide STEM internship opportunities for high school and college students
- Work with partners to secure additional funding to support new and existing STEM opportunities for teachers and students

Georgia Pacific agrees to:

- Provide onsite tours of waste water treatment and paper making facilities
- Provide access to community grants that fund educational programs
- Encourage staff to serve as mentors and judges for STEM events and activities

Central Lincoln PUD agrees to:

- Host regional Math Counts competition
- Encourage staff opportunities to serve as guest speakers in the classroom and as judges at

engineering competitions

Marine Technology Society, Oregon Chapter, agrees to:

- Assist in recruiting mentors for teacher workshops and judges for engineering competitions
- Represent the Marine Technology sector, advising the STEM Hub on current and emerging industry needs

Point 97 agrees to:

- Assist in recruiting mentors for teacher workshops and judges for engineering competitions
- Provide mentors and expertise to assist students and teachers with STEM Hub projects
- Serve on the STEM Hub Steering Committee

Government Agency Partners' Commitments

National Oceanic and Atmospheric Administration agrees to:

- Provide speakers and mentors to work with teachers and students
- Provide technical assistance for STEM projects, fieldwork, and citizen science projects involving coastal students
- Provide educational tours of research facilities and vessels as possible
- Provide internship opportunities to community college students
- Provide volunteer judges for student competitions

The US Bureau of Land Management agrees to:

- Provide job shadow and internship opportunities
- Provide online educational resources
- Provide sites for field experiences, including interactions with researchers and resource managers

The US Fish and Wildlife Service agrees to:

- Provide internship experiences to high school and college students
- Provide staff to lead and/or assist with student field experiences
- Provide access to National Wildlife Refuges for teacher PD and student activities

South Slough National Estuarine Research Reserve agrees to:

- Provide access to online curriculum resources
- Provide outreach to after school programs through Estuary Explorers
- Provide field site, equipment and expertise for teacher PD and student field experiences
- Provide internship opportunities for community college students
- Provide access to researchers, research facilities, and relevant scientific data and research

Oregon Department of Fish & Wildlife agrees to:

- Provide hands-on STEM-related classroom and field programs
- Provide volunteer and internship opportunities for students
- Provide expertise of staff for teacher PD and student projects
- Provide access to STAC mini-grants and equipment for student projects through the STEP program
- Provide tours of Oregon Hatchery Research Center facilities
- Provide space at OHRC for teacher PD and STEM Hub meetings

Oregon Department of Parks and Recreation agrees to:

- Provide access to field sites and STEM-related education programs
- Work with partners to develop and implement PD
- Serve on the STEM Hub Steering Committee

Institutes and Centers Roles and Responsibilities

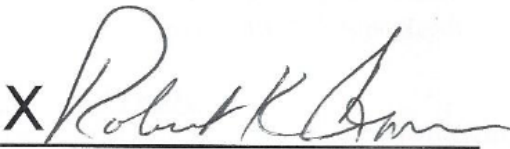
Oregon Forestry Resources Institute agrees to:

- Provide online educational materials and resources for STEM PD and student project development
- Facilitate educator PD focused on forestry issues
- Act as a resource for educators in designing and implementing STEM projects and curriculum

Marine Advanced Technology Education Center at Monterey Peninsula College agrees to:

- Continue to support the Oregon Regional MATE ROV program with limited funding for teacher PD and student competition, as well as online resources
- Offer at sea internship opportunities for college students

Oregon State University:

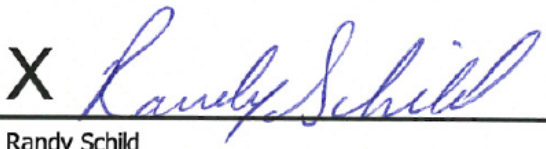
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Robert Cowen
Director, Hatfield Marine Science Center

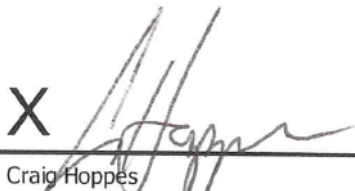
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Shelley Walker
Director, Oregon Sea Grant

Oregon School Districts:

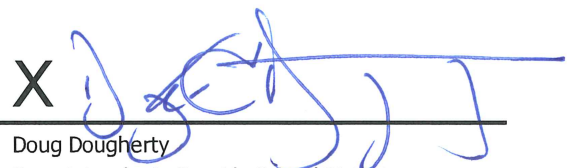
X 
Steven Boynton
Superintendent, Lincoln County School District

X Dawn Granger
Dawn Granger
Superintendent, Coos Bay School District


X 
Randy Schild
Superintendent, Tillamook School District

X 
Craig Hoppes
Superintendent, Astoria School District

X 
Mark Jeffery
Superintendent, Warrenton-Hammond SD

X 
Doug Dougherty
Superintendent, Seaside School District

X Paul Erlebach
Paul Erlebach
Superintendent, Neah-Kah-Nie School District

X 
Randy Wharton
Acting Superintendent, Nestucca School District

X *Ethel Angal*

Ethel Angal
Superintendent, Siuslaw School District

X

Dennis Friedrich
Dennis Friedrich
Superintendent, Reedsport School District

X *Christine Nichols*

Christine Nichols
Superintendent, Port Orford/Langlois SD

X *Diane Buche*

Diane Buche
Superintendent, Bandon School District

Community Colleges:

X *Birgitte Ryslinge*

Birgitte Ryslinge
President, Oregon Coast Community College

X *Connie Green*

Connie Green
President, Tillamook Bay Community College

X *Lawrence Galizio*

Lawrence Galizio
President, Clatsop Community College

Patty Scott

Patty Scott
President, SW Oregon Community College

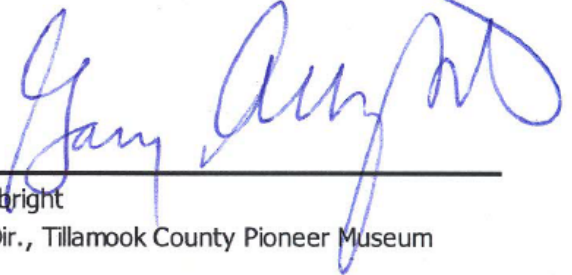
Community Partners/NGOs:

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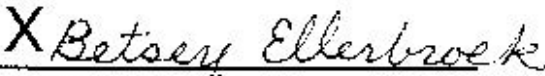
Carrie Lewis
President & CEO, Oregon Coast Aquarium

X



Gary Albright
Exec. Dir., Tillamook County Pioneer Museum

X



Betsy Ellerbroek
Educ. Dir., Columbia River Maritime Museum

X



Jamie Hurd
VP of Programs, OMSI

X



Debrah Marriott
Exec. Dir., Lower Columbia Estuary Partnership

X



Lisa Phipps
Exec. Dir., Tillamook Estuaries Partnership

X



Catherine Pruett
Exec. Dir., Salmon Drift Creek WC

X



Jenna Kulluson
Oregon Director, NAME

X



Jon Roschke
Pacific NW Programs Coordinator, KidWind

X



John Andersen
President, Friends of Netarts Bay / WEBS

X

Lisa Phipps
Assistant Tech Trek Camp Director, AAUW

X

Janice Eisele
Central Oregon Coast Chapter of NOW

Industry/Business Partners:

X

Kris Lachenmeier
CFO, Near Space Corporation

X

John Lavrakas
President, Advanced Research Corporation

X

Sharon Kanareff
Public Affairs Manager, Georgia Pacific

X

Debra Smith
General Manager, Central Lincoln PUD

X

Jeremy Childress
Chair, Oregon Chapter, MTS


X

Charles Steinback
Managing Director, Point 97

X

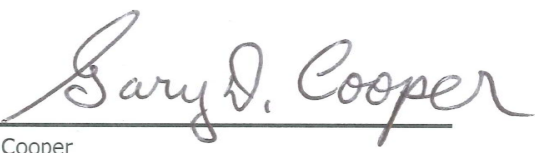
Jack Mulder
Tillamook County Creamery Association

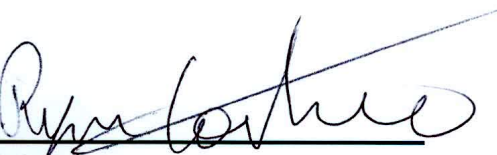
Government Agencies:


X 
Rick Brown
NOAA

X 
Jay Moeller
Chief Park Ranger, Yaquina Head ONA, BLM

X 
Dawn Harris
Visitor Services Manager, USFWS


X 
Gary Cooper
Manager, South Slough NERR

X 
Ryan Couture
Facility Manager, OHRC, ODFW

X 
Brian Fowler
Visitor Experience Coord., OPRD

Institutes and Centers:

X 
Paul Barnum
Exec. Dir., Oregon Forestry Resources Institute

X 
Deidre Sullivan
Director, MATE