

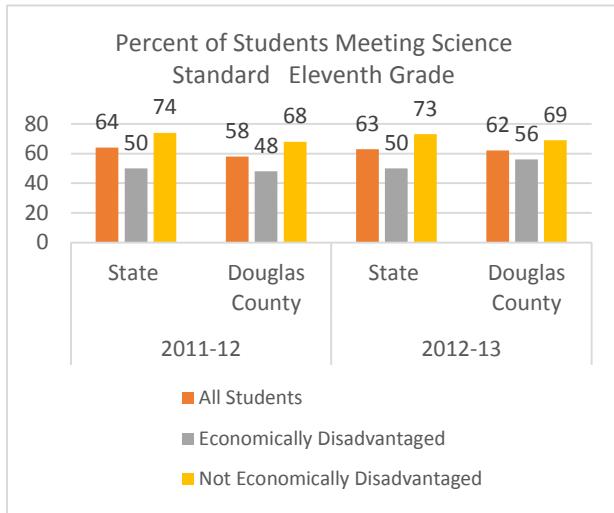
#### **IV. Application Narrative**

##### **(A) Vision and Purpose (No more than two pages in length.)**

The creation of the Umpqua Valley Regional (UVR) STEAM Hub emerged from the visioning of Douglas County Partners for Student Success (DCPSS), a group of county-wide leaders representing education, government, non-profits, business, the faith community, economic development, parents and students. DCPSS has been particularly concerned with identifying strategies that position our kids to envision bright, successful personally rewarding futures with an emphasis on access to post-secondary education. Their futures require engaging, impactful experiences and critical adult mentoring during their formative years so that meaningful plans can be developed and pursued. Douglas County is economically dependent on STEAM related industries and careers including those in the natural resources and health fields. Developing engaging, real-life, project-based experiences in the STEAM environments through mentorships, internships, job shadows and before/after school and summer programming with links to learning in school will expose students to future opportunities in STEAM-related careers they would not otherwise be familiar with and provide a relevant context for the development of essential life skills. Students will be led to appropriate coursework in high school and post-secondary education, preparing them for future careers.

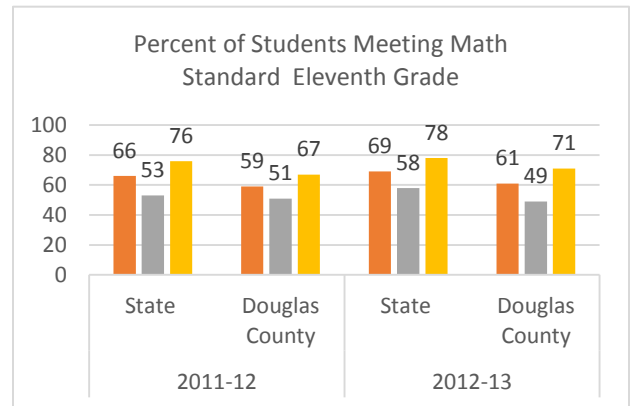
Douglas County kids live in crisis. Douglas County earned the classification of super rural, isolated, and economically distressed under the Medicare/Medicaid categorization in September 2011. Data from the Oregon Department of Education as reported in the 2012-13 report cards indicates that 60% of all students enrolled in our schools were identified as economically disadvantaged. 30.7% of children in Douglas County live in poverty, a startling number (Children First for Oregon, 2012). The unemployment rate remains at a critical

9.7% (almost 3% higher than the national average) after peaking at 17.6% in 2009 (Oregon Employment Department).

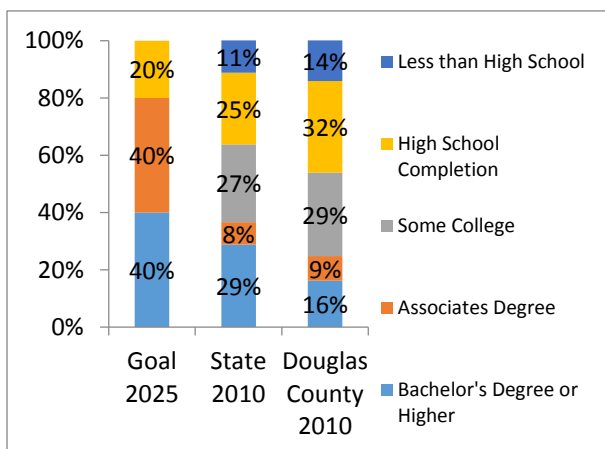


Two years of state achievement data in math and science illustrates two significant challenges. Our students as a whole perform lower than state counterparts, and our achievement gap resides between students who are economically disadvantaged and those who are not. Douglas County is not home to a large

population of ethnic minorities, but poverty creates our disparities. In Douglas County, only 15.5% of adults have received a bachelor's degree or higher, compared to 28.6% in all of Oregon. (U.S. Census) Many rural, impoverished youth have limited scope of understanding of possibilities for their future. They have not been exposed to applied sciences and have never met a real scientist. College does not seem like a



possibility to them because no one in their family has ever been. Our work to meet Oregon's 40-



40-20 goal by 2025 will require extraordinary efforts. A regional STEAM Hub will significantly contribute towards impacting the college/post-secondary going culture and lead our children into thriving futures.

## **(B) History and Content**

Douglas County has many examples of collaborations to build on which illustrate the desire and passion of local leaders to provide STEAM related experiences for youth. It is our intent as a STEAM Hub to build on current success by strengthening what already exists and identifying ways to provide further access to opportunities by expanding the reach. It will also be important to become more intentional in building STEAM related skills, connecting the learnings to potential future careers and opening doors to post-secondary education. While each one of these collaborations are successes within themselves, leaders look forward to the establishment of a STEAM Hub as a vehicle to reach more students, coordinate efforts and resources and have a greater, collective impact on the community and the environment we live in. In addition, we look forward to thinking beyond more traditional educational offerings so that we are preparing our youth to be creative innovators and entrepreneurs in STEAM-related fields.

**Boys & Girls Clubs of the Umpqua Valley Summer Camp Program** - This summer, The Boys & Girls Clubs of the Umpqua Valley will be offering a second year of summer camps focused on STEAM educational experiences. Each day, for 6 weeks, from 7:30 to noon, kids 2<sup>nd</sup> through 9<sup>th</sup> grade will have opportunities to actively engage in projects led by trained staff, community volunteers and content area experts. Programming for this summer is still in development. The success of the club represents the collaboration and commitment of business and community members to provide a safe, healthy and educationally enriched location for youth activities through high school graduation. 47% (\$339,383) of last year's program budget came directly from local donations. A newly constructed Tween/Teen Center with a College and Career program focus will open up opportunities for expanded STEAM activities with a target of increasing progression to post-secondary training in STEAM-related areas. BGCUV is committed to developing and supporting program delivery models for our outlying areas.

**Area Health Education Center of Southwest Oregon (AHEC)** AHEC of Southwest Oregon provides several model immersion, exploratory and exposure programs in collaboration with our local medical community to students of Douglas County. An internship and volunteer program allows students to interact directly with day-to-day health care at multiple locations. Diagnosis Day has been a very successful exposure opportunity for students who witness different medical scenarios based on a trauma induced event such as a car accident. The design and implementation of these programs serve as essential models for other STEAM-related careers to be considered by the STEAM Hub for replication.

### **Douglas County School Forestry Tour**

The Douglas County Glide Educational Forest has been the site of the School Forestry Tour for many years. For four days, schools bring students to the site to increase their understanding of forestry growth and management. Teachers are provided with additional curriculum resources to use in their classrooms to support extended learning. Partners include our local school districts, Oregon Forest Resources Institute (transportation), Oregon State Extension Services (organization) and presenters from Oregon Department of Fish and Wildlife, Umpqua National Forest, Bureau of Land Management, Partnership for Umpqua Rivers, private timber companies, Douglas Fire and Protection Services, and the National Marine and Fisheries Service.

### **RockEd Educational Center <http://www.jmurf-rocked.org/>**

The ROCK-ED Outdoor Education Center is a new natural resources education facility located 22 miles east of Roseburg at the Oregon Department of Fish and Wildlife's Rock Creek Hatchery. Constructed as a cooperative non-profit project through the Joe Merchep Umpqua River Foundation, the 1300 square foot one room school house is open for the community to experience conservation and stewardship education directly from career scientists. It was built by the community for the community to learn from the community. RHS drafting students designed the structure, UCC construction students built it and multiple individuals, industries and

governmental agencies continue to contribute to its operation. The mission of the ROCK-ED is to help our community understand the relationship and values between our natural resources and our social and economic well-being and the interconnectedness between all natural resources including air, water, forests, fish and wildlife. The Umpqua Valley Regional STEM Hub will look to ROCK ED as a primary location of STEAM related experiences as we develop innovative ways to engage students in project-based learning in the natural resources.

### **Learn, Earn and Serve Collaborative**

Phoenix Youth Corp and the /UCC/Umpqua Watershed Council/US Forest Service/Bureau of Land Management/Partnership for the Umpqua Rivers have joined together to create a learning community of scientists and youth. Students earn science and elective credits as they learn ecosystem management in the classroom and out in the field. Participation includes volunteerism, cooperative work experience and paid restoration activities. As they progress through the curriculum to become project researchers, planners and crew leaders. Coursework includes earning college credit as part of the Natural Resources program and Umpqua Community College. <http://www.roseburgphoenix.com/Programs/CTE/NatResource.php> and <http://www.umpqua-watersheds.org/education.htm>

### **Winston-Dillard School District Partnerships for STEM Education**

The Winston-Dillard School District partners with multiple entities to create STEAM-related experiences for their students. Growing Healthy Kids creates learning gardens and wildlife habitat areas at Brockway and McGovern Elementary schools and Winston Middle School. Mentoring opportunities abound while working alongside youth. Children involved with gardens benefit educationally in areas of the sciences, math, language arts and social studies. Umpqua Watersheds, local educators and career scientists provide STEAM-related experiences to sixth grade students on Fridays. Like many school districts in Douglas County, students formally attend school Monday through Thursday, so Friday offers an opportunity for community

enhanced education for students. <http://www.umpqua-watersheds.org/education.htm> Winston-Dillard School District also partners with Wildlife Safari to participate in job shadowing opportunities. <http://www.wildlifesafari.net/jobShadow.html>. Other educational opportunities are also offered linked to the Oregon Science Standards. <http://www.wildlifesafari.net/outreach.html>

### **Build Our Kids**

Since 2000, the Build Our Kids Coalition has been working to impact youth across our county by promoting *developmental or life assets* based on the research of the Search Institute ([www.search-institute.org](http://www.search-institute.org)). The partnership includes the Douglas County Commission on Children and Families, Roseburg Rotary, Phoenix School, Winston Area Community Partnership, and the communities of Riddle and Glide and many community volunteers and trainers. Current work is being initiated to expand its reach into more communities and schools. Through leadership and service learning opportunities, community gardens, homework clubs, peer mentor programs, stream enhancement and environmental studies have emerged. Parent involvement is also a key element of the work of Build Our Kids. Current funding for projects comes from The Ford Family Foundation. It is proposed that our mentor and internship strategies be built on another area of research from the Search-Institute – Developmental Relationships – to build on our understanding of the role developmental or life assets play in the success of youth. Asset-building is essentially accomplished through changes in adult behaviors through developing awareness, understanding, and skill sets. Through the Search Institute we have built a capacity for qualified volunteer trainers to promote and develop relationship building and life asset development. All of the service-learning activities are designed to promote positive youth development (STUDENT SUPPORT) and have an educational purpose (STEAM). Most partners already engaged in the Umpqua Valley Regional STEAM Hub have participated in Build Our Kids events. The wealth of well-developed community connections, partners,

curriculum, and resources already in place is a source of support that can be further expanded and built upon. One aspect of mentor training will include how to build developmental relationships using *The Mentor's Field Guide* by the former CEO of MENTOR, Gail Manza.

Resources to support current partnership activities come from a variety of sources including private donations, funding from generous local foundations through grants, governmental budgets (schools and county), business and industry in-kind donations of staff and materials, and in some cases, federal grants. Schools, libraries, churches, community centers and non-profits offer their facilities free of charge for student activities. It is envisioned that through the formation of a Hub, the planning and implementation of these various activities will allow us to be more efficient and directed in the use of the funds to promote targeted outcomes for our students. Through a collective impact approach, our efforts will be more laser-focused to meet the needs of more youth and in particular, our most at risk.

We believe that the foundation work already accomplished by Douglas County Partners for Student Success as the initiating collaborator for the UVR STEAM Hub will enable this partnership to be successful. The primary purpose of DCPSS is to be the convening and support network (serving the backbone function in creating collective impact) to positively impact the educational and future lives of children, cradle to career, resulting in personal and community vitality. Our vision is large and requires a bold journey to create significant social change. A STEAM Hub would serve as a magnet to pull together entities already providing programming in Douglas County for youth and adults to create a sense of purpose for education and a roadmap for future plans beyond high school. The resulting community conversations of the partnership are intended to re- envision innovative possibilities and create more avenues for STEAM education in Douglas County. The energy of DCPSS has led to an active steering of committee of 25 leaders representing key players in our county. Many more have indicated a high level of interest in the vision of DCPSS.

Our announcement to pursue the formation of a regional STEAM Hub has generated a new surge of energy and involvement, as indicated by a strong attendance at our information meeting on January 15. In addition, we have active support of local funders including The Ford Family Foundation and The Oregon Community Foundation.

The most important stakeholders missing from our conversation to ensure long-term sustainability of our Regional STEAM Hub are the students and parents who will be most impacted by the Hub's work. During the community engagement phase of developing our partnership plan, they will be our most targeted audience. It is also acknowledged that the sustainability of the UVR STEAM Hub is dependent on the engagement and commitment of local STEAM related business to a greater extent than currently exists. Mercy Medical Center and Roseburg Forest Products are at the table along with Umpqua Training and Employment and the Umpqua Business Partnership. More business and industry must be added and will be a goal of efforts this winter. We will also deepen our relationship with educators in our school districts, with a particular emphasis on partnering with STEAM-related CTE programs.

The energy to form the UVR STEAM Hub emerged from the Douglas County Partners for Student Success (DCPSS), a backbone entity established in January, 2013 after nine months of data collection and gap analysis to study the current culture supporting preparation for and access to post-secondary education. DCPSS has been funded by The Oregon Community Foundation and The Ford Family Foundation. In August, 2013, DCPSS was invited to become one of the pilot Regional Achievement Collaboratives to support, at the local level, community engagement in the success of our youth, cradle to career. Partners of DCPSS also serve on the Early Learning Hub and work with Early Learning Education providers to introduce STEAM learning opportunities to our young children.



The community engagement process for bringing together additional essential partners to the UVR STEAM Hub has already begun through Douglas County Partners for Student Success. DCPSS is committed to a continuous expansion of partners who will work collectively to expand STEAM educational opportunities and outcomes for the students of Douglas County. A priority expressed by current partners is to develop strategies to ensure access to programs and support systems across the entire county. A significant barrier to overcome to meet this priority is the rural nature of our region with significant distances between communities. Coupled with minimal public transportation and a level of poverty that restricts personal travel, STEAM education opportunities must be largely designed to go to our outlying communities. With that commitment in mind, our community engagement process must be directed to the leaders and families of our 14 school districts and the towns they encompass.

The guidance provided in *The Do-It-Yourself Guide to STEM Community Engagement* (2012) aligns well with the practices of DCPSS which embrace the essential elements of achieving collective impact including the development of communities of practice. Drawing on the work of Paul Born (2012), our initial work will be to reach out to our communities and engage them in community conversations. Through these conversations, we will identify local leaders, map local assets, solicit areas of interest, share already available resources through the STEAM Hub, and develop local plans for access to STEAM educational opportunities. Most importantly, we will LISTEN!, to gain a corner on the obvious (Born, 2012) in our effort to build community through our conversations. The Partnership Plan for the STEAM Hub will emerge from these community conversations. Community visioning, innovation design and ultimately business planning and implementation for sustainability will follow community engagement. The plan will clearly identify our common agenda with mutually reinforcing activities. Data collection and accountability will be an essential element of the partnership plan. DCPSS will

provide support for data management. It will also consider adopting the practices of Developmental Evaluation as described in *The Developmental Evaluation Primer* (Gamble, 2008) along with the more objective logic model using the *W.K. Kellogg Foundation Logic Model Development Guide* (2004). Developmental evaluation will allow us to think through the relationships being built and the resulting behaviors that emerge as we learn to work together. Objective evaluation promoted by a logic model would miss this essential information needed for the success of the Hub.

<b>Formation of a STEAM Hub – Partnership Plan Timeline</b>			
<b>Key Action Steps</b>	<b>Timeline</b>	<b>Expected Outcome</b>	<b>Person/Area Responsible</b>
<b>Creation of STEM Hub</b>			
Initiate work group for STEM Hub development	January 15, 2014	Seek partners	Project Facilitator
Solicit Statement of Commitment from Lead Partners	January 17	Signed Statements of Commitment	Project Facilitator
Submit STEM Hub Phase I grant to Oregon Department of Education	January 21, 2014		Project Facilitator UCC Grant Writer
<b>Development of Partnership Plan</b>			
Expand Partner Group Identify Strengths and Resources Determine Common Agenda, Shared Measurements, Mutually Reinforcing Activities	February – June 2014	Declaration of Collaboration Action Plan Resource Inventory	Project Facilitator STEM Hub Leaders
<b>Implementation of Out of School Activities with STEM focus</b>			
Identify current youth organizations Connect STEM Hub partners to Out-of school youth organizations Implement activities in multiple sites	February, 2014 – June 2015  ongoing	Increased engagement of youth in out-of-school activities with a focus on STEAM	Project Facilitator STEM Hub Leaders
<b>High Quality Internship and Mentorship System</b>			
Using the AHEC, ODOT and RFP models, scale up internship and mentorship opportunities across the county in partnership with schools and out-of-school youth organizations	February, 2014 – June 2015  ongoing	Increased engagement of business	Project Facilitator  AHEC, ODOT and RFP Leadership
<b>Summer Institutes for Youth and Youth Serving Adults</b>			
Assess needs from youth and youth-serving adults Identify learning opportunities and seek instructors Plan 2013 Summer Institutes	February, 2014 – June 2015	Increased knowledge by youth of STEAM related areas of study and careers; Increased knowledge by youth-serving adults of ways to instruct STEAM-skills	Project Facilitator and Planning Team

Quality Evaluation and Monitoring of Success			
Complete ODE STEM Hub Evaluation	June 30, 2015	Evaluation Report	DCPSS Data Team
Sustainability Plan			
Identify funding sources through STEM partners and outside funders	ongoing	Sustainable Support	Project Facilitator

**(D) Programmatic Strategies**

Programmatic strategies to ensure the goals and needs of the UVR STEAM Hub are met function at two levels: The Care and Feeding of the Partnership and the Delivery of STEAM

Opportunities to Our Children. The Care and Feeding of the Partnership will occur through the backbone functions of DCPSS. Over half of the 25 member steering committee of DCPSS attended the Collective Impact Institute held in Canyonville in November, 2013 presented by TAMARACK – An Institute for Community Engagement. We continue to be students of practices that lead to collective impact and community change and will use strategies from our learnings to support the effective functioning of the HUB. The initial conversations of the partnership regarding the delivery of STEAM opportunities to our children have surfaced the following strategies to research and incorporate into our Plan. **MENTORING, INTERNSHIPS AND APPRENTICESHIPS** – Developing a formalized mentoring program supporting STEAM education and career development has been identified as a priority. Resources found at [www.mentoring.org](http://www.mentoring.org) will be used to guide our planning. STEAM related businesses have indicated an interest in establishing an internship program linked to our local high schools, community college and CTE programs. Two models currently exist in our community through AHEC of Southwest Oregon <http://www.healthyorregon.com/high-school-students> and Umpqua Watersheds partnering with the BLM and US Forest Serve through their Learn, Earn and Serve program <http://www.umpqua-watersheds.org/education/pondsurvey.html> . Our goal is to consider how these models can be scaled-up and formalized into the region’s STEAM efforts.

Finally, our JATC partner has been identified as an essential link to expanding our communities understanding of apprenticeship opportunities to connect to our CTE programs and support students to in entering STEAM careers. **INTEGRATION BETWEEN IN-SCHOOL AND OUT-OF-SCHOOL TIME** – Several locations around our county have been identified as sites for after school and summer programming including schools, community centers, public libraries the Boys & Girls Clubs of the Umpqua Valley and the YMCA. Faith- based facilities are also potential locations. Proposed programming includes a traveling STEAM lab sponsored by Umpqua Community College, STEAM summer camps modeled after previous programming at BGCUV, Oregon State SMILE Clubs and mobile engineering lab, Wildlife Safari programs, ROCK-ED Education Opportunities, Oregon State Extension Service: 4-H and the Douglas County Library STEAM Reading Program. The BGCUV currently employs school to club liaisons to support integration of learning from school to out-of-school learning. The Partnership is looking to support the implementation of this model across the county. **SUMMER STEAM PROFESSIONAL DEVELOPMENT INSTITUTES FOR YOUTH-SERVING ADULTS** – Professional Development of the adults working with our youth is essential. The STEAM Hub envisions establishing a summer institute for youth serving adults and educators that supports skill development in inquiry-based learning, cognitively guided instruction, project-based learning and mentorship through the lens of building developmental relationships based on the research of The Search Institute <http://www.search-institute.org/research/developmental-relationships> . Youth-serving adults will also participate in learning opportunities to help them understand the availability of STEAM related resources locally and the full continuum of post-secondary opportunities available to all students. UCC would be the host and coordinate the availability of graduate credit and professional development units. **SUMMER STEAM INSTITUTE FOR YOUTH** – Current partners have identified the need for a STEAM summer

institute that bring together youth and adults in community-based learnings. Themes of the Institute would be identified in collaboration with area high schools, STEAM related business and students. UCC would be the host and offer college credit to participating youth. Learnings would occur both on and off campus.

Fundamental to the planning of all STEAM educational activities will be the alignment with the Common Core Standards and the Oregon Science Standards (or the New Generation Science Standards should they be adopted by Oregon) and adherence to the Equity Lens. It is proposed that the Hub employ a staff member whose responsibility would be to formalize the documentation of all units of instruction used by Hub partners across the county so that they can be made available for use at multiple sites. The documentation would include a mapping of alignment to the standards. In Douglas County, the Equity Lens is best applied to our priority practice of ensuring access to resources and support to all students in our many communities. The STEAM Hub partnership is critical to Douglas County for a variety of reasons. Our economic data and community education data illustrates a county that struggles with providing family living wage jobs for a large portion of our citizens and yet local employers cite high-wage job openings that are filled with applicants from outside of the county. The achievement gap is clearly connected to social economic status with our students who are economically disadvantaged performing significantly below those who are not. Many of the STEAM partnerships are already targeted at disenfranchised, underperforming and at-risk students as evidenced at Phoenix School, the Opportunity Center in Winston, the Boys & Girls Club in Roseburg and the Riddle Education Center. Our partnership with Umpqua Training and Employment opens doors to work with our youth ages 15-21 who have dropped out of school and are unemployed. Our commitment to community engagement includes strategies to bring

parents and students into the conversation so that they feel invited to be part of the process as leaders and that our collective efforts meets their needs directly.

**(E) Application Process**

The steering committee of Douglas County Partners for Student Success has been meeting monthly since January of 2013. During the initial months, data was reviewed, and consensus was built around intended impact, goals and priority strategies. *We envision a future where:* Each child in Douglas County will receive effective *and* meaningful support to achieve economic and social success by graduating high school, completing post-secondary education and/or entering a career. *We are committed to these goals: Each child:* Is Healthy and Ready for Kindergarten; Has Supports In and Out of School to be Successful; Leaves High School Ready for Post-Secondary Education and/or Career; Completes a Post-Secondary Degree, Career Credential or training needed for personal well-being. In July of 2013, collaborative resource teams began meeting around three priority strategies: Championing Education, Positive Youth Development, and Preparation and Transition to Post-Secondary Education. The collaboratives recommended to the steering committee in December to pursue establishing a Regional STEAM Hub. We believe that a STEAM Hub would serve as a magnet to pull together entities already providing programming in Douglas County for youth and adults to create a sense of purpose for education and a roadmap for future plans beyond high school. In addition, the STEAM Hub would serve to further connect our community to CTE programming present in our school districts and community college. Opportunities to provide input to the grant has occurred through electronic communication, phone calls and direct face-to-face meetings with initial and potential partners. The convening partners met for planning on January 10 and an informational and planning meeting was held for all current and potential partners on January 15. The partners meeting include those identified on the attached chart.