**SMS STEM Partnership**

**Proposed Regional STEM Hub Grant Proposal**

December 16, 2013

**I. Background**

The Oregon Department of Education has issued a request for proposals to provide Regional STEM Hubs. The Regional STEM Hub Grants are intended to develop, expand and combine collaborative efforts established by local partnerships to increase students’ proficiency, interest, and attainment of post-secondary credentials and degrees in STEM or STEAM or CTE. Regional STEM Hubs must focus on these five key elements for sustained success: 1) common agenda, 2) shared measurement systems, 3) mutually reinforcing activities, 4) continuous communication, and 5) backbone support organization. Regional STEM Hubs must also incorporate and adopt the principles of the OEIB Equity Lens. Applicants can request Phase 1 funding (to develop a framework of partnerships) or Phase 2 funding – to advance implementation of developed Regional STEM Hubs.

Grant funding will begin on February 10, 2014 and end on June 30, 2015. Between $100,000 and $750,000 will be available per application. Matching funds equivalent to 50% of the grant award must be secured by the grantee.

**II. Proposed Activities**

The SMS STEM Partnership is proposing to submit a Phase 2 application, requesting $750,000 to implement the STEM Hub, including initial implementation of the three primary partnership strategies: STEM NETwork, STEM Learning Community, and STEM Accelerated Credit.

Questions for Work Groups: Are these the activities and impacts that our partnership can deliver during the 15-month grant period?

| **Potential activities during 15 month grant period** | **# of teachers and students impacted** |
| --- | --- |
| **Overall STEM Hub – building engagement and resources** |  |
| Hire STEM Hub Executive Director to build STEM Hub Backbone organizationComplete updated strategic business planConduct ongoing communications with all partnersWrite grant proposals and develop private resourcesCollect and evaluate dataDevelop evaluation planUtilize Multnomah County Equity Lens to provide training for all partnersAdd more community partners focused on underserved populationsAdd more active business partners | *Overall system building – no direct impact on students and teachers* |
| **Strategy 1:** **STEM Network of industry and community resources for schools** |  |
| By June 2015: Design and test electronic platform to match volunteers with teachers—pilot in SMS STEM Region; By June 2016: disseminate to PDX and East County STEM Partnerships; By 2017: Launch as a statewide tool | How many teachers using?50 students impacted per teacher? |
| Build partnerships with TAO and other business organizations related to design and implementation of platform |  |
| Collaborate with STEM Learning Community on use and efficacy of tool: -- 50 teachers using tool by June 2015? | 50 teachers? |
| Collaborate with BEC, Saturday Academy, Oregon ASK, and PDX STEM to prepare volunteers for classroom experiences |  |
| **Strategy 2: Teacher Professional Development** |  |
| Develop ongoing STEM Learning Community plan and outcomes  |  |
| Conduct 5 STEM LC classes/ coaching sessions of 30 participants each | 150 teachers? |
| Conduct 35 Teacher Visitations to STEM business, community partner, post-secondary programs | 35 visitations x how many teachers? |
| Conduct 5 Learning Community Session with up to 70 participants (meetings/assignments/communications)  | 350 teachers? 50 students per teacher? |
| Conduct Teacher STEM Tour for 35 teachers | 35 teachers, 50 students per teacher? |
| Conduct STEM leadership training by June 2015, leading to STEM plans for each district | Number of teachers impacted per district? |
| Incorporate STEM Network into learning community process |  |
| Utilize STEM Network Director to build support and use of the tool |  |
| **Strategy 3: Accelerated STEM college credit through expanded school, college, university collaborations** |
| Add 30 dual credit options/courses in all 15 school districts | # of students? |
| By June 2015: increase dual credits by 30%? | # of students? |
| Increase in number of HS students earning college credits by 10% | # of students? |
| Increase in number of teachers qualified to teach dual credit by 10% | # of students? |
| Complete a “Core to College” system assessment for high school math classes.  |  |
| Conduct 10 HS collaborative outreach sessions for students and families, led by post-secondary partners | # of students? |
| Develop marketing materials about the value of accelerated credits |  |
| Report on overcoming barriers to accelerated credit and core to college for dissemination to other STEM Hubs |  |
| By June 2015: Add in MHCC to expand reach of practices to East County |  |

**III. Questions for All Partners**

1. If you have not already submitted your baseline data, please do so ASAP.

2. What has the SMS STEM Partnership accomplished in your district/college in the last year and a half that impacts teachers and/or students?

* Have you put STEM plans in place?
* Any curriculum adopted or shared practices?

3. Can you document and commit to cost sharing between March 2014 and June 2015? How much will you provide in ongoing support and data for your teachers and staff? Can each district, college, university, business, and community at least $5,000 in match – is that feasible?

4. Can you commit any financial resources or cost sharing that has happened in the past 18 months, for the SMS STEM Partnership in areas such as professional development, dual credit, contextualized learning, etc.?

5. We need to provide the evidence base for the strategies. Do you have studies you can share regarding the evidence base for:

1. the learning community as a model for changing teaching practice
2. STEM NETwork as a way to bring contextualized learning into the classroom and/or linking out of school and in school activities
3. accelerated credit / advanced college credit for increasing college going success

6. How do the 3 SMS STEM strategies/approaches complement implementation of Common Core Standards and Oregon state science standards and/or NGSS?

7. What are our specific activities to recruit, encourage, engage, and provide opportunities to underserved and underrepresented students and/or educators?

8. We need to present the evaluation questions that we will answer in order to support our theory of change. We have reframed the SMS STEM Partnership Guiding Principles as questions. Will answering these evaluation questions support our theory of change?

1. Will student achievement for all demographic groups improve when teachers are provided with a professional learning community that changes instructional practice to be more contextualized by connections to the world beyond school?
2. Does having a professional learning community support schools developing STEM plans?
3. Will teachers and community partners utilize a STEM NETwork platform to integrate contextualized STEM teaching and learning resources into classroom instruction, with alignment to the Common Core and NGSS?
4. Will expansion of advanced credit and increased bonds to colleges, universities, businesses and community partners result in increased college going persistence?

9. What advocacy and policy issues could support the long-term effectiveness of your

SMS/Regional STEM Hub, and the statewide network of Hubs?