



OPAS Initiative Steering Committee

Workgroup Feedback on Funding

Part I: What do OPAS workgroup consider the best use of a hypothetical \$1 Million?

The Succeed workgroup noted these considerations:

- *Long-term investments vs. Targeted Programs*
- *Very leery of web-based curricular materials, even if aligned to state standards. Strongly feel teachers need the peer interaction and support to implement new content or pedagogy.*
- *Costs – SMILE and MESA are very good but hard to extend because of cost. \$1M won't get you very far replicating such a program across the state.*

Tom Thompson of ODE, the Prepare Workgroup and the Steering Committee notes these considerations:

- *Support demonstrated programs so that we do a few things well.*
- *Incubate promising projects – move at least some from “promising” to “demonstrated”.*
- *Developing a system/infrastructure to understand how the current and evolving K-16 system supports STEM education, where the gaps are, and how can they be closed. Many opportunities are lost because we don't understand how all the pieces of STEM education in Oregon fit together to meet the demand for people who can fill STEM careers.*
- *How could OPAS support these efforts, including finding additional staffing and funding, if necessary.*

The Steering Committee has noted that some NSF funding opportunities are lost because there is not an avenue in place for optimizing the collaboration of organizations with principal investigators to address Broader Participation and Outreach requirements of NSF RFPs. The SMILE program has often been approached for these collaborations for which they are often not an appropriate partner; Skip Rochefort at OSU has collaborated on many NSF grants addressing Broader Outreach and Participation requirements.

Projects in need of funding	Expected Results	Costs
<p>(S) Establish teacher learning communities, including pre-service teachers, perhaps via a conference or sessions at other conferences focusing on teaching excellence in STEM</p> <ul style="list-style-type: none"> • Perhaps supported by case studies <ul style="list-style-type: none"> ○ Lesson materials <ul style="list-style-type: none"> ▪ Align with standards? ○ Video clips of classroom practice <ul style="list-style-type: none"> ▪ Teacher teaching ▪ Teacher-student interaction ▪ Student activity ○ Interviews with students, and possibly parents • Offer ongoing interaction with a mentor teacher – classroom visits 	<p>Ongoing interaction and mentoring through</p> <ul style="list-style-type: none"> • Content sharing • pedagogy • peer support 	<p>Sub costs when one teacher visits another for a day of observation, mentoring</p>
<p>(Domes, McGuire) State-wide professional development in PTE that includes specific training to enhance current programs offering instructors specifics that they can immediately integrate into their current curriculum. Could be modeled on SuperQuest and/or the Longview, Washington workshop on Engineering and Prototype development - http://www2.mcneel.com/teacherworkshop/viewworkshops.asp#363</p>		<p>~\$4-5K (lunch, materials, instructors, facilities) Partner with SAOF, other?</p>
<p>(S) Direct opportunities for students, perhaps using ASPIRE as a model</p> <ul style="list-style-type: none"> • Mentoring activities given high priority – develop the vision to take advantage of existing STEM opportunities • Connections to industry • scalability 		
<p>(M) Cost share 20-25 new ASE internships for small business that cannot afford the full 2700 cost per student.</p>	<p>Enable students to intern with a start-up or other small business, instead of just large corporations</p>	<p>\$75,000 per year</p>
<p>(M) Infrastructure to support Adult volunteers in STEM classes. Specific ideas: database to track adults with specialized training, e.g. FOSS Science kits</p>	<p>Inviting & supportive mechanism to match interested adults with STEM classroom volunteer opportunities</p>	<p>\$150,000 to establish (needs more cost analysis)</p>

(M) Seed next NOISE conference	Establish NOISE as a sustainable group	\$20,000 – conference,
(M) Revamp BEC’s TechnoScienceSupersite to enable searching and direct updates by NOISE member organizations	Internet resource to better connect, Families, Formal, and Informal STEM educators on events and places of STEM learning	\$100,000 data base, \$25,000 make NOISE-updateable
(P) Project Lead the Way (PLTW) has a sound curriculum, a demonstrated track record, and is capable of state-wide impact. PLTW supports engineering career exposure with a rigorous curriculum that teaches math and science in context. PLTW aligns well with expanded science/math requirements and provides schools with laboratory-based experiences. OPAS should embrace PLTW as a supported initiative, collaborate with schools and ODE on broad-based implementation, and collaborate to obtain major foundation/government funding to make this program accessible to all Oregon schools.	1. The goal should be for all Oregon high schools to have the opportunity to adopt PLTW, with the expectation that approximately one-third will actually do so. 2. Complementary goals at the middle school level should be set within 2 years once funding for the high school program is secured	~\$2M, with funding split between foundations, OPAS, government grants, and local school funding.

What goals, selection criteria, and eligibility criteria should apply if OPAS is able to underwrite at \$400K RFP for the 07-09 biennium?

The Succeed workgroup noted these considerations:

- *Do not subdivide such a small amount among workgroup’ goals – solicit the proposals for projects that speak to needs tied to workgroup strategies, and choose the best of the lot. Ensure consideration of all workgroups’ perspective by having at least one member from each workgroup on the review committee.*

RFP Goals	RFP Criteria
(S) Increase STEM content and awareness among teachers, students, or families	<ul style="list-style-type: none"> • Favor programs <ul style="list-style-type: none"> ○ That already exist with a good track record ○ And/or, are highly replicable or extensible
(S) Expand Oregon’s capacity for STEM education and careers	<ul style="list-style-type: none"> • Favor quality over quantity (that is, depth of touch over number touched)
(S) Address needs implicit in each of the workgroups’ focal strategies	
(P) Impact: Project greatly enhances success of students in preparing for and choosing STEM careers, and success is documented through a scientific assessment process.	<ol style="list-style-type: none"> 1. Curriculum clearly linked to STEM standards 2. Career exploration incorporated into curriculum. 3. Assessment process matches the objectives 4. (TT) Demonstrated potential to improve student interest and awareness in engineering related careers through previous studies or data.
(P) Reach: Project accessible to a substantial fraction of Oregon schools and students across all categories of ethnicity, economics, geography and educational background.	<ol style="list-style-type: none"> 1. Clear identification of students served; numbers and demographics during both ETIC and planned follow-up phases. 2. Plan for how Reach will be expanded following the ETIC-supported phase.
(P) Sustainability: Project is incorporated in the core programs and budget of participating schools following the start-up phase.	<ol style="list-style-type: none"> 1. Clear strategy for sustainable funding following completion of the ETIC-supported phase.
(P, TT) Portability: Successful projects can be replicated at other sites	Identify a mechanism for dissemination that goes beyond simple awareness. Identify potential issues that may adversely impact replication.
(P-TT) Inclusivity: Project diversifies the population of students who show interest in engineering-related careers.	Identify how the project will encourage the involvement of students who are from populations typically underrepresented in engineering-related careers.