



REPORT TO THE LEGISLATURE

## STEM Pilot Project Grant Program

June 2016

**Authorizing legislation:** Engrossed Substitute House Bill 2380  
(2016 Supplemental Capital Budget)  
(<http://lawfilesextra.leg.wa.gov/biennium/2015-16/Pdf/Bills/Session%20Laws/House/2380-S.SL.pdf>, Section 6018  
(3)(d))

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## **Executive Summary**

The Washington State Legislature established the Science, Technology, Engineering, & Math (STEM) Pilot Program in the 2015-2017 capital budget (Chapter 3, Laws of 2015, 3rd Sp. Session, Section 5026) and provided \$12,500,000 in funding. Grants awarded under the program constitute the districts' local funding for purposes of eligibility for the School Construction Assistance Program (SCAP) to construct or modernize STEM lab classrooms. School districts are eligible to receive grants if they have a special housing burden due to lack of sufficient space for science classrooms and labs to enable students to meet statutory graduation requirements.

## Introduction

The Office of Superintendent of Public Instruction (OSPI) is tasked to administer the grant to school districts with assistance from Washington STEM, a statewide STEM education organization. The 2015 Supplemental Capital Budget further modified the grant program by providing additional grant scoring criteria.

## Funding Distribution

OSPI distributed the funding provided as directed by the legislature in the 2015-17 capital budget. The following is how the STEM Pilot funding was distributed:

Funding Category	Amount	Percent
Competitive Grant Funds to Pilot Districts	\$11,975,000	96.0%
Contract with Washington STEM	\$200,000	1.6%
Grant Administration*	\$325,000	2.6%
Total	\$12,500,000	100%

\*Administration funding was limited to 3% percent of the funding provided; OSPI allocated 2.6% for administration.

## Recent changes to the graduation requirements

By 2019, graduating seniors will be expected to complete three science credits, two of which are specified as “lab” credits. Meanwhile, the state has adopted new K-12 learning standards in science which, for the first time, include considerable emphasis on engineering and the integration of engineering with natural sciences. The learning standards also call for students to engage in disciplinary practices. That is, as students learn core ideas they will engage in the science and engineering disciplines in ways that approximate the practices of working STEM professionals. Consequently, the emphasis on laboratory science is heightened in K-12 schools, especially at the high school level..

## Project Components & Features

The capital grants are intended to fund the following capital spaces and specialized equipment:

- Additional square footage of classroom space and renovated space devoted to lab learning experiences (including both inside and outside learning spaces).
- Specialized tools, materials, and curriculum for students to conduct lab investigations.
- Ancillary spaces to support teacher collaboration, preparation of lab experiences, storage of STEM materials and tools, and student projects.
- Modular design of spaces, equipment, and equipment storage to facilitate flexible use of existing or new space to accommodate both collaborative student investigations and whole class activities and demonstrations.

## Eligibility Requirements and Conditions

The following list of Requirements, Conditions, and Limitations was established in the legislative language.

### Requirements

- Districts are eligible if they have a special housing burden due to lack of sufficient space for science classrooms and labs to enable students to meet the statutory graduation requirements.
- Districts must demonstrate a lack of sufficient space of science classrooms and labs to facilitate meeting statutory graduation requirements.
- Districts must have faculty in place that are prepared to teach science and engineering in a manner consistent with the science learning standards, or must demonstrate that a plan and budget are in place to recruit and train faculty to do so.
- District must secure a private donation of cash, like kind, or equipment in a value of no less than \$100,000.

### Conditions and Limitations

- Grants constitute districts' local funding for purpose of eligibility for the School Construction Assistance Program (SCAP).
- Total STEM funds available for awards is \$11,975,000.
- Total eligible area of all STEM pilot projects must not exceed 36,880 square feet (SCAP Funding).
- Districts may use grant award for multiple projects. The STEM grant funds available for each district grant is limited to no more than \$4,000,000. Total eligible area per STEM pilot project must not exceed 15,840 square feet.
- Eligible area for STEM pilot projects is 1,440 square feet per science lab or classroom combination, or both; and 1,040 square feet per science classroom.
- At least one grant award is made to school districts located in the Puget Sound Region; at least two grant awards are made to school districts located east of the Cascade mountains; and at least one grant award is made to school districts located in southwest Washington that currently offer curriculum using equipment called Real-Time PCR and a scanning electron microscope to build partnerships with academia and industry leaders to develop in-depth research projects.
- The Office of Superintendent of Public Instruction (OSPI) must award no less than six, and no more than eight grants, within the appropriated funding, and may depart from the recommended prioritized list (developed by Washington STEM) only after consulting with the Office of Financial Management (OFM) and the appropriate committees of the legislature.

- OSPI administration funding is restricted to the amount specified in OFM guidelines for administering grants. The current restriction is 3% of the total new appropriated project costs.
- Grant awards resulting in additional square footage are excluded from the school district's inventory of available educational space for determining eligibility for the state's School Construction Assistance Program (SCAP) for new construction for either a) Five years following acceptance of the project by the school district board of directors, or b) The date of the final review of the latest study and survey of the affected school district following acceptance of the project by the school district board of directors, whichever is earliest.

## Timeline

Beginning in July 2015, after the biennial 2015-2017 capital budget was enacted, OSPI staff and Washington STEM worked collaboratively to develop grant program procedures, application scoring criteria, and award distribution processes. Before and during the application period, OSPI and Washington STEM provided statewide training and outreach regarding the STEM Pilot Program's application guidelines and award conditions. The application period closed in late January 2016, with a total of 34 districts submitting applications that included 63 projects to construct, replace, or modernize science classrooms or science labs. The total project costs for these proposed STEM projects totaled over \$130,000,000.

From February through mid-March 2016, Washington STEM assembled a review team to score all applications based on grant criteria and conditions (see appendix A). A prioritized list of projects was then submitted to OSPI for further review and clarification. Shortly after this review and priority process was completed, the enacted 2015 Supplemental Capital Budget in April further modified the STEM grant program by providing additional scoring criteria and project conditions. Due to these changes and additions enacted in the supplemental budget, Washington STEM was required to submit a revised prioritized list of projects to OSPI. Several projects that were on the original prioritized list no longer met the modified criteria set forth in the supplemental budget. In early May 2016, six school districts received preliminary award announcements from OSPI (See table 1).

After these announcements, these six school districts submitted documentation that finalized their intent to construct the STEM project as described in the application, along with the verified final project budget and project scope. A certification letter from the district that confirmed they had secured the required \$100,000 private donation (a condition of the STEM Pilot Program) was also received from all districts.

<b>Date</b>	<b>Milestone</b>
November 16, 2015	Application opened
January 28, 2016	Application closed
January 29–February 3, 2016	OSPI processed applications and reviewed for completeness
February 4–23, 2016	Washington STEM Application Review
February 24–March 21, 2016	Washington STEM finalized applications and completed site visits
March 22, 2016	Washington STEM provided OSPI with prioritized list of projects
April 18, 2016	Supplemental Legislative Budget enacted – grant criteria modified
April 19–29, 2016	Washington STEM incorporated legislative changes and finalized new prioritized project list
May 11, 2016	OSPI announced preliminary awards
May 11, 2016–June 30, 2016	Districts required to submit additional project documentation in order to finalize grant approval
July 2016	Funding available to districts
June 30, 2017	End of biennium – A request for reappropriation will be made for projects not yet completed

### **Washington State Application Response**

Thirty-four (34) school districts submitted applications that included 63 projects to construct, replace, or modernize science classrooms or science labs in the amount of \$130,196,414.

## Appendix A: Review Process/Scoring

As previously mentioned, OSPI worked extensively with Washington STEM to develop criteria and application materials. OSPI was responsible for the development of the application and worked with districts to finalize applications in the iGrants system. At the close of the application period, OSPI gathered all application materials and forwarded them to Washington STEM. Washington STEM then worked with a committee of education and design experts to review applications and prepare a prioritized list of projects. The following is a summary of the Washington STEM review process:

1. All applications were reviewed for completeness;
2. Completed applications underwent an initial review by a review committee of content, design, and education experts;
3. Finalists were reviewed through onsite (school) visits with key district and school personnel; and
4. Final list of prioritized projects was developed.

### Scoring Criteria

The grant scoring criteria was intended to equitably distribute available funds to schools most in need and/or best prepared to use the funds as intended. Specific consideration was given to the following factors (but not limited to):

- Percent of students enrolled in the school free and reduced-price meal program.
- Priority for school districts that secured private donations of cash, like-kind, or equipment in value no less than \$100,000, weighted by the ratio of school district enrollments to value of donation.
- District ability/inability to raise funds through levies or bonds in the prior ten-year period.
- The extent that existing STEM facilities are inadequate to meet graduation requirements.
- Narrative questions were scored based on the scoring rubric below.

**The Washington STEM scoring committee also evaluated the applications based on the district response to several key questions:**

**Q1** Describe limitations of current space as it pertains to graduation requirements (offering lab science classes consistent with SBE College and Career Readiness Graduation Requirements for the class of 2019 and beyond) and ability to meet the Washington State 2013 Science Learning Standards.

**Q2** Description of proposed project and how it addresses lab space, resources, amenities, support, etc. per SBE definition of Laboratory Science.

**Q3** Explanation of how the investment links proposed space and materials with instructional program consistent with Washington State 2013 Science Learning Standards and student achievement in science.

**Q4** Characterization of current staff capacity (ratio of qualified science teachers to students) and ability to implement Washington State 2013 Science Learning Standards in the enhanced or new lab science space OR demonstrated plan and budget to do so.

**Each district response was given a score based on the following:**

**Compelling (15-20)**

Makes a compelling case with supporting data

**Adequate (8-14)**

Makes an adequate case with some supporting data

**Below Adequate (0-7)**

Does not make a compelling case and/or does not provide any supporting data.

## TABLE 1: LIST OF FINAL AWARDS

Region	District	Science Classrooms	Science Labs	Square Feet	Estimated SCAP Funding	Allocated STEM Grant Funding	Total Grant	Description
Southwest	Chehalis	6	2	10,720	\$1,898,150	\$3,622,798	\$5,520,948	Build a 13,164 square foot STEM wing at W.F. West High school to include 6 science lab classrooms including a robotics/engineering lab, a cell culture lab, biology, chemistry and molecular genetics labs (R-T PCR & scanning electron microscope) and 2 science classrooms.
Puget Sound	Franklin Pierce	5	0	6,845	\$1,425,406	\$2,865,914	\$4,291,320	Renovate an existing building (4,232 sf) and construct an addition (2,613 sf) to provide state-of-the-art STEM classroom/lab space. Very creative use of space that captures cross-disciplinary instruction. Courses offered will include: Aerospace Manufacturing and Composites, Principles of Engineering, Intro. to

								Engineering Design, Medical Interventions, Human Body Systems, Principles of Bio Medicine, etc.
East WA	Finley	7	0	10,080	\$2,149,358	\$748,689	\$2,898,047	Modernize existing shop and classroom and add new construction to create a separate wood shop and metal shop, 2 CTE classrooms, and 2 greenhouses. Courses offered will include: STEM science, 3D printing, engineering development, Bio-tech lab, Animal Science, Floriculture, and Horticulture Science.
East WA	Kettle Falls	4	3	5,625	\$1,056,448	\$572,069	\$1,628,517	Convert underutilized metals shop into a Maker Space/Fabrications Lab to more safely design, fabricate, test, and produce engineering projects. They will also renovate an existing lab used for Biology, Chemistry, and Human Biology.
Southwest	Centralia	4	4	9,920	\$184,106	\$3,432,297	\$3,616,403	Construction of a new stand-alone science facility including eight

								new science classrooms, four of which are to be fully equipped combination science lab/classroom spaces.
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*OSPI provides equal access to all programs and services without discrimination based on sex, race, creed, religion, color, national origin, age, honorably discharged veteran or military status, sexual orientation including gender expression or identity, the presence of any sensory, mental, or physical disability, or the use of a trained dog guide or service animal by a person with a disability. Questions and complaints of alleged discrimination should be directed to the Equity and Civil Rights Director at 360-725-6162 or P.O. Box 47200 Olympia, WA 98504-7200.*

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