

MEMORANDUM

TO: Chairperson and Members
Boston School Committee

FROM: Nathan Kuder
Chief Financial Officer

SUBJECT: Grants for Approval

DATE: April 10, 2020

Attached please find the grants for approval by the School Committee on April 15th, 2020. Full copies of the grant proposals are available for your review and have been filed with the Office of the Secretary to the School Committee.



GRANTS FOR SCHOOL COMMITTEE APPROVAL
April 15, 2020

Amount	FY	Grant Name	Status	Fund Manager	Focus Area(s)	Sites
\$23,080	2020	Supporting Chemistry Teachers to Assess and Foster Chemical Thinking	Increase	Marianne Dunne	Curriculum and Instruction	Districtwide
\$23,080	Total					

SCHOOL COMMITTEE ACCEPTANCE FORM

Grant Name: Supporting Chemistry Teachers to Assess and Foster Chemical Thinking

Status: Increase

Grant Type: Competitive

Start & End Dates: 9/1/2016 – 8/31/2020

Funding Source: Federal (National Science Foundation) with UMass Boston)

Grantor Contact: Contact Name: Robert Ochsendorf Program Officer

NSF Address: 4201 Wilson Boulevard, Arlington, VA 22230

Phone: 703-292-5183. Email: rochsendorf@nsf.gov

Lead BPS Department and/or School(s): BPS Science Dept.

BPS Fund Manager: Marianne Dunne, Senior Project Coordinator

Department Head/School Leader: Holly Rosa K-12 STE Director

Original Award Amount: \$ 241,561

Increase: +\$ 23,080

Total Award Amount: \$ 264,641

Total Award Amount (if grant period more than a year): \$1,057,678

Carry-forward option: Yes

Approximate # of students (or teachers, central office staff) served: 24 Cohort Teachers; 40 teacher leaders per year in additional professional development; colleagues that these teacher leaders support; students of all of these teachers benefit from new skills/knowledge gained through the professional development.

Sites: Districtwide

Key External Partners: Dr. Hannah Sevian, University of Massachusetts, Boston; Chemistry Dept.

Grant Description

The “Supporting Chemistry Teachers to Assess and Foster Chemical Thinking” project is Phase II of a larger NSF-funded program on a learning progression in that studies students’ chemical thinking. The foci of this Phase II project are 1) to build a grassroots, teacher-led professional development model for middle and high school chemistry teachers, and 2) to study teachers’ use of formative assessments and

classroom discourse while teaching chemistry concepts, to help them make their instruction more responsive and productive.

Expense Categories This Grant Pays For

Senior Personnel: ~77% for salary/fringe for 1FTE Science Senior Project Coordinator and stipends for teacher- researchers

Travel: ~1% for people to present the findings at meetings/conferences

Participant costs: ~19% for stipends, classroom materials, workshops, etc.

District Indirect: ~3% indirect to the district

Specific, Measurable, Attainable, Realistic, and Time-bound (SMART) Goals

The central goal of this project is to develop and investigate an approach to transforming chemistry teaching through engagement in formative assessment that redirects teachers' attention, interpretation, and action toward the development of meaningful chemical thinking in their students. By the end of the grant, these strategies will be developed and implemented across middle and high school science content courses.

Goal #1: By the end of year 3, the Teacher-Researcher Team will develop a new formative assessment for each chemistry “unit” and learn to elicit, interpret, and respond to students’ chemical thinking in ways that increase student performance by at least 10% on summative assessments of the relevant content.

Indicators: new formative assessments, summative assessments

Goal #2: By the end of the grant (Year 4/5), all middle and high school BPS science teachers will implement best practices of formative assessments for their content area, to strengthen student understanding and classroom instructional practice, as informed by this research study. Research results gleaned from this (and other related studies) will inform best practices, as measured by student outcome data (formative and summative assessments, MCAS, where appropriate).

Indicator: Research Results, BPS science curriculum, assessment and instructional materials.