

Skyview Science Professional Development Project

*Dewey J. Hansen & Helen Cothron Hansen
Memorial Fund*

Skyview High School Science Dept.

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Application Form

Report Fields

Project Name*

Name of Project

Skyview Science Professional Development Project

Amount Requested

Amount Requested

\$18,170.00

Grade Level

Please select grade level below.

9th-12th Grade

Primary Subject Area

Please select the primary subject area of your grant.

Science

School

Please select your school from the list below.

Billings Skyview High School

Number of Students Served

Please enter the number of students that will be potentially served by this grant.

1585

Project Cost

What is the total cost of your project?

18170

Statement of Need

Please describe the need for this project. For example, how will this project impact student learning?

The science teachers at Skyview would like our students to experience science and science opportunities inside, outside and beyond the classroom. We would achieve this through field trips, kits designed for hands-on labs, college shadow days, and helping to fund the Skyview Victory Garden.

The science teachers at Skyview, in accordance with School District 2's Common Core and STEM initiatives, need professional development in the techniques and rigor of the Next Generation Science Standards. With the nation-wide push for STEM, our staff continually looks for new and better ways to teach science using cutting edge techniques, presentations, and technologies. Our staff is hungry for new ideas. The best training available for this is through the National Science Teachers Association.

Primary Goal

Please describe the primary goal of the project and how it blends with School District 2 goals and curriculum.

Field trips afford students the opportunity to see the area they live in and apply the concepts learned in the class to the world they see.

Kits demonstrate cutting edge technology in a concise and appropriate format for students to experience laboratory activities hands-on.

The Garden is where all students have the chance to explore various aspects of developing and maintaining a garden and outdoor learning space. The garden will be an outdoor lab for science classes.

The science teachers at Skyview would like to connect, nationally, with leaders in the field of science education. Those of us who have had the opportunity to go to the National Science Teachers Convention realize how inspiring and productive the experience is. By increasing our content knowledge and our exposure to innovative pedagogical methodologies, we are confident that our students will benefit greatly.

Project Description

Briefly identify the major activities and materials involved in your project.

Listed below are the five general areas we plan to use the 2014/2015 Dewey Hanson Grant for:

- Helping fund the Skyview Victory Garden.
- Send teachers to content appropriate professional development conferences that serve the diverse and highly specific Curriculums of our science department.
- Taking students on field trips and science exploration opportunities.
- Acquiring supplies to bring cutting-edge labs to the classroom.
- Giving students an opportunity to see what career and college options are available for them in science and technology curriculum.

Professional Development

If your project includes professional development, how will it improve student performance?

Teachers come back with new and better ideas for teaching units in their curricular area. Fresh ideas breed enthusiasm. Enthusiasm exhibited by teachers, motivates student excitement in learning. Students that are exposed to exciting science content and challenging laboratory experiences will show an increased aptitude for understanding science and doing science.

When teachers return from the professional development conferences, each teacher is scheduled to present to the science faculty during PLC time. The fresh ideas are then multiplied throughout the science staff, eventually effecting most every student in science classes at Skyview High School.

Project Timeline

When will you implement your project?

The initial phase of the project will begin when the grant is awarded and work can begin on the Victory Garden. The grant will be used throughout the 2014/2015 school year, culminating by end of May, 2015.

Plan for Evaluation

How will you evaluate student outcomes for your project?

The student outcomes will be evaluated both objectively and subjectively. An increase in student enthusiasm for science due to improved activities/labs/field trips should show in an increased enrollment in science elective courses and we should also be able to observe an increase in our standardized test scores. Students participation in the Shadow Days will show that students finishing their education at Skyview are considering a career path in the sciences.

Project Budget

Please identify other funding sources, if applicable. You may either type or attach a budget

Please see attached document.

Project Budget 2014-2015 Dewey.docx

Supervisor Approval*

I have received approval from my supervisor to apply for this grant.

Yes

Attachment 1

Please attach any photos, pages from catalogs, or other documents below. This is optional.

Attachment 2

Attachment 3

File Attachment Summary

Applicant File Uploads

- Project Budget 2014-2015 Dewey.docx

Project Budget:

Please identify other funding sources, if applicable. You may either type or attach a budget

- Skyview Victory Garden - \$1000
- 2 staff to NSTA STEM spring-2015 Conference, Minneapolis, MN - \$3000
- Carolina & BioRad Kits (for Biology interactive learning) - \$2670
- Field Trip for students to MSU-Shadow Days (Chemistry & Physics) - \$2000
- 2 staff to NSTA National Conference, Chicago, IL - \$3000
- Field Trip for students to Yellowstone NP & Phipps Park (Geology & Earth Science Class) - \$2500
- 2 staff to an Area NSTA or Vernier workshop, (we plan to send two teachers to one of the following Area Conferences, depending on the teachers scheduling need. The fall conference is in Long Beach, CA and the spring conference is in Reno, NV) - \$2000
- Field Trip to Yellowstone NP & Sacrifice Cliffs (Earth & Environmental Science Class) - \$2000

Description of other Funding Sources:

Vernier & BioRad introductory training came from seminars at NSTA Conference sessions in 2011, 2012 & 2013, funded by Dewey grants. Beginning kits of Vernier probes have been purchased with money from a previous Dewey grant and from Skyview science department budget moneys. Hardware for using the BioRad kits has been purchased over the past three years by Skyview science department budget moneys.

We plan on attending three MSU-Bozeman Shadow days next year to offer experiences to students in each of three science curricular pathways. Bozeman offers shadow days in Engineering, Chemistry, and Health Services. We will supplement the funding by the Dewey Grant by having the students pay a small fee (possibly \$5 to \$10) to help pay for bus or van rental.

The field trips for Yellowstone National Park will be supplemented by charging the students a \$5 to \$15 fee to offset the cost of the bus.

The funding for the Skyview Victory Garden is coming from several sources. Skyview Principal Deb Black has secured funding, budget moneys from the Science Department, Family & Consumer Sciences Department, and Tech Education Department will all contribute. Nikki Wohler of the science department is in the process of writing a grant to the technology levy for hardware for a weather station that will be part of the Victory Garden, as well.