



# PROJECT LEAD THE WAY

## A STEM Initiative for Billings Public Schools

Welcome to the future! Billings Public Schools, the Education Foundation and community leaders are taking a bold step to immerse our students in a rigorous Science, Technology, Engineering, and Math (STEM) curriculum. We are committed to boosting student engagement and innovative thinking while developing problem solving and communication skills. Buoyed by the success of the Billings Career Centers’ Pre-Engineering and Biomedical Science program, our leadership team chose Project Lead the Way’s elementary curriculum, *Launch* to get things started.

In an effort to develop a pipeline of STEM-savvy students, we propose offering Project Lead the Way’s *Launch* program for our kindergarten through fifth grade students, the middle school curriculum *Gateway*, and continue expansion of programs at the high school level. We propose a multi-year implementation, starting with five elementary schools beginning in the 2014-15 school year: Arrowhead, Beartooth, Bench, Miles Avenue, and Washington Elementary Schools.

We know there is more work to be done to support our students in providing 21<sup>st</sup> Century skills and curriculum to increase the opportunities in Science, Technology, Engineering, and Math. There is a great need in our community, state, and nation to prepare our students for careers in these fields.

**The Vision:** As a leaders in STEM education, Billings Public Schools will prepare and inspire life-long learners from kindergarten through graduation. By learning collaboration, innovative thinking skills, our students will enter society ready and equipped to meet the changes of a global economy.

**The Mission:** To provide active learning, relevant to real-life, where students are given a chance to identify a problem, apply what they know, find unique solutions, and lead their own learning. The delivery of STEM education will be:

- Sustainable
- \*Equitable
- \*Aligned with more challenging standards

This will be accomplished through

- On-going, intensive professional development
- Effective teaching practices
- Proven, research based curriculum
- Community partnerships between schools, businesses, and community organizations, to provide mentors, funding, and a connection between education to the work place.

### Contributions to Make this Project a Reality in Year 1 and Into the Future

•Stillwater Mining Company	\$5,000
•Cloud Peak Energy (pledge)	\$5,000
•Dr. Enrico & Martha Arguelles	\$5,000
•SM Energy	\$10,000
•Education Foundation for BPS Board Directed Fund	\$10,000
•ExxonMobil	\$25,000
•Phillips 66	\$750,020 (over 3 years)

### **What is Project Lead the Way?**

Project Lead the Way is the nation's leading provider of science, technology, engineering and math (STEM) programs. Through world-class K-12 curriculum, high-quality teacher professional development, and outstanding partnerships, PLTW is helping students develop the skills needed to succeed in the global economy.

### **Implementation Timeline Goal:**

Year 1 (2014-15): 5 elementary schools - Arrowhead, Beartooth, Bench, Miles Avenue, and Washington with a technology training center at Orchard

Year 2 (2015-16): 6 elementary schools - Newman, Meadowlark, Eagle Cliffs, Highland, Broadwater, Burlington and 2 middle schools (will have schools apply & need to identify the middle schools this fall to begin putting together the budget & funds needed)

Year 3 (2016-17): 6 elementary schools - TBD and 2 middle schools

Year 4 (2017-18): 5 elementary schools - TBD and 2 middle schools

\*\*\*This is an aggressive timeline and a lot depends on funding. If we really begin working with the community now and SD2 budget planning, our goal is to make this timeline a reality.

### **Technology Training Center**

The creation of a 21st Century training room/classroom, would have a huge impact on teachers, students, and community members throughout the Billings area. The Technology Integration Specialists for Billings Public Schools currently conduct trainings, consult with classroom teachers, and model lessons for students in rooms that vary greatly as far as their accessibility to digital tools and resources.

In just the last 5 months, technology trainings have been in high demand; since September of 2013, the Technology Integration Specialists have conducted over 100 hours of training out of the school day, and more than 350 hours during the school day. Not only would the hours of impact be increased by having a designated training area, but the quality of these offerings would be drastically improved with reliable access to consistent, high-quality equipment.

The Technology Training Center will be located at Orchard Elementary, Phillips 66 Partner in Education. The cost of the Technology Training Center is \$63,000 and \$57,000 has been funded by Phillips 66.