

Bennington School District

Bennington, Nebraska

JUNE 5, 2017

PROPOSAL #053017.01

Overview

Pitsco Education provides an engaging, hands-on, STEM solution for grades 6-8 students in Bennington School District's new middle school. Students are exposed to a variety of career fields, acquire knowledge, apply gained skills, and are evaluated on what they know and can do. This proposal includes curriculum and supporting professional services.

STEM for Grades 6-8

This solution engages grades 6-8 students with the latest in STEM education - Pitsco Education STEM Expeditions. STEM Expeditions are built on the engineering design process and best practices in math and science, and enable students to practice their content knowledge while completing real-world, relevant projects. Each Expedition begins with an essential question, which sets the focus and shapes students' thinking. The overall goal is to create critical thinkers and problem solvers by presenting real-world challenges to engage learners. Students collaborate in pairs and in teams as they seek to answer their essential question while recording data in logbooks to authenticate their learning.

Grade 6 will work together as a class, exploring one topic at a time. Grades 7-8 will explore topics in rotational pairs, with each pair working independently on different topics before moving to the next.

STEM Lab Details

- **Class Size:** 28
- **Cohorts:** 2 per year
- **Learning:** Whole-class for grades 6, rotational for grades 7-8
- **Scheduling:** Elective semester-long course
- **Professional Services:** Professional services include implementation strategies, education philosophy, and a consistent support system that creates stronger, lasting solutions. This includes customized program design, tailored professional development, personalized customer service, and regular on-site support from an Educational Services Manager (ESM).
 - Year 1: 3 professional services visits
 - Year 2: 2 professional services visits
 - Year 3: 1 professional services visit
- **Professional Development:** One-day onsite seminar for up to four teachers. Additional teachers can participate for additional fees.

| STEM Expeditions Titles |
|------------------------------|
| Grade 6 – Whole Class |
| ✓ Cultivating our Future |
| ✓ Flight Dynamics |
| ✓ Making Waves |
| ✓ Rolling Robots |
| ✓ Tower Power |
| Grade 7 – Rotational |
| ✓ Ahead of the Game |
| ✓ Bio Research |
| ✓ Building Bridges |
| ✓ Contraptions |
| ✓ Electric Tech |
| ✓ Future Footprints |
| ✓ Urban Wind Farm |
| Grade 8 - Rotational |
| ✓ Dragster Design |
| ✓ Engineering Rockets |
| ✓ Everyday Electricity |
| ✓ Get a Grip |
| ✓ Growing Up |
| ✓ Safe Food |
| ✓ Theme Park Physics |

- **Environment:** This program requires a dedicated space in which students can work in collaborative pairs and small teams on cloud-delivered curriculum and accompanying hands-on projects. *This space and furniture is the responsibility of the district.*
- **Electronic Equipment:** This program requires 2:1 student computing. Minimum recommendation is 14 student computers, though the assessment portion requires 1:1 computing, so 28 computers is ideal. Also required are one teacher computer, 28 student headphones/ear buds, a printer, and internet access. *This equipment and access is the responsibility of the school.*

