Promising Practices to Close the Achievement Gap Building Partnerships to Reach All Students

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What makes SPARK so promising?

Nurturing each students' brilliance through:

- English Language Development
- Opportunity to Learn
- 21st Century Skills
- Integrated learning
- College AND Career Readiness
- Engagement; High/low tech, high touch

English Language Development

- According to Diane August (2002), a senior research scientist at the Center for Applied Linguistics, English Language Learners (ELLs) spend less than two percent of their school day in oral language development.
- EL students, when speaking in school, often are not discussing academic topics or rigorous content.





 According to Gibbons (2002), EL students participate mostly in less complex forms of speech, such as only one-word responses.



Opportunity to Learn

- According to Dr. Robert Marzano's 30 year metaanalysis, the number one factor impacting student achievement is having the opportunity to learn.
- According to our Program Evaluation of Elementary Science in Roseville, large amounts of students receiving intervention for reading and/or mathematics are not participating in content-area learning (science, social studies, health).
- SPARK is designed to mitigate this opportunity to learn gap



21st Century Skills

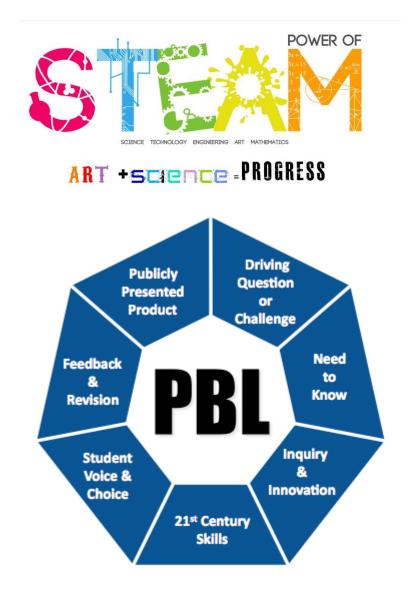


- Creating and Innovating
- Communicating
- Collaborating

- Analytical Thinking
 - Problem Solving
- Finding and Evaluating Information



Integrated, Project-Based Learning



- Studies have shown that STEM/STEAM-based integration can enhance learning and instructional quality over traditional methods through use of hands-on inquiryscience activities and projects (Satchwell and Loepp, 2002; Wicklein and Schell, 1995).
- Investigations which involve active thinking (e.g., drawing conclusions from data) are more likely to increase conceptual understanding (<u>Minner</u>, <u>Levy</u>, and <u>Century</u>, 2010).

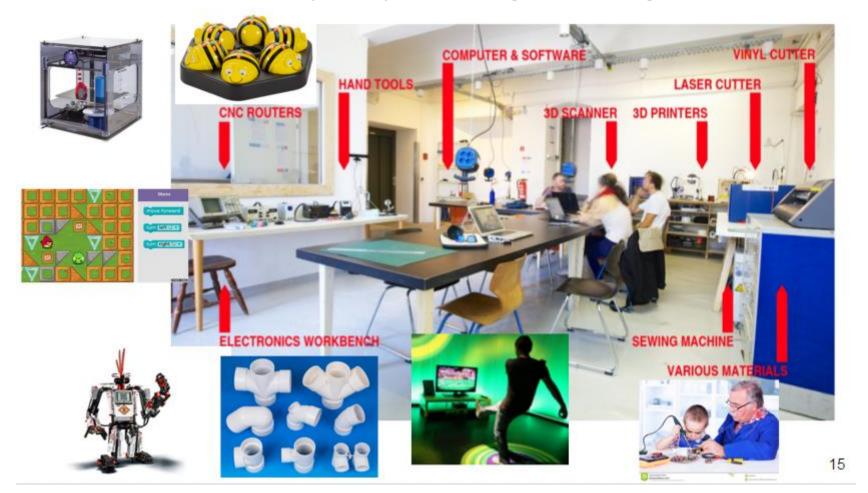
College AND Career Readiness

 College preparations; Percent of HS Graduates Enrolling in College - Fall something schools are 77% built for Distribution of Minnesota Job Vacancies by Educational Level, 2Q 2013 Life, Physical, and Social Science I Healthcare Practitioners and Technical Education, Training, and Library Workers Computer and Mathematical Statewide Roseville Public School District Architecture and Engineering Management In Minnesota Outside Minnesota Business and Financial Operations Arts, Design, Entertainment, and Media Healthcare Support Personal Care and Service Community and Social Service Total, All Occupations Construction and Extraction Installation, Maintenance, and Repair Career preparation; Office and Administrative Support Protective Service Transportation and Material Moving Production something schools hope Sales and Related Farming, Fishing, and Forestry Food Preparation and Serving Related Bldg, Grounds Cleaning, and Maintenance happen 100 Percent of Job Vacancies ■ Less than High School
■ High School Diploma
■ Vocational Education Bachelor's Degree Associate Degree Graduate Degree

Source: DEED, Job Vacancy Survey

Engagement; High/low tech, high touch

- High Tech- 3D Printers, Lego WeDo, Laser Engravers
- Low Tech- PVC Pipes (plumbing challenges), Dominos



SPARK LAB and Program at Central Park Elementary

SPARK @ CP (eMagazine)

What are students saying?

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