

Elementary STEM Opportunities

- Content Literacy Maps
- Science Kits
- Lab Classrooms
- Technology Integration
- Inquiry-Based Instruction, Problem-Based Learning, Action Projects
- Collaborative Groups
- Clubs
- District Science Fair
- Star Lab, Omni Globe
- Hour of Code
- Design Thinking

Secondary STEM Opportunities

- Highlights: Agriculture, Manufacturing, Engineer Your World, Problem-Based Learning, Project Lead the Way, Geometry in Construction, AMPED Manufacturing
- Clubs: Destination Imagination, Coding, Robotics, Greenhouse, MESA, RC Foam Fighters
- Building Community Partners
- Literacy Design Collaborative (LDC)



For more information about enrolling your child, please contact:

- District Science TOSA
- Big Thompson Elementary School
- Laurene Edmondson Elementary School
- Ivy Stockwell Elementary School
- Turner Middle School
- Walt Clark Middle School
- Berthoud High School



Thompson School District’s STEM Program



Participating Schools

- Big Thompson Elementary School
- Laurene Edmondson Elementary School
- Ivy Stockwell Elementary School
- Turner Middle School
- Walt Clark Middle School
- Berthoud High School

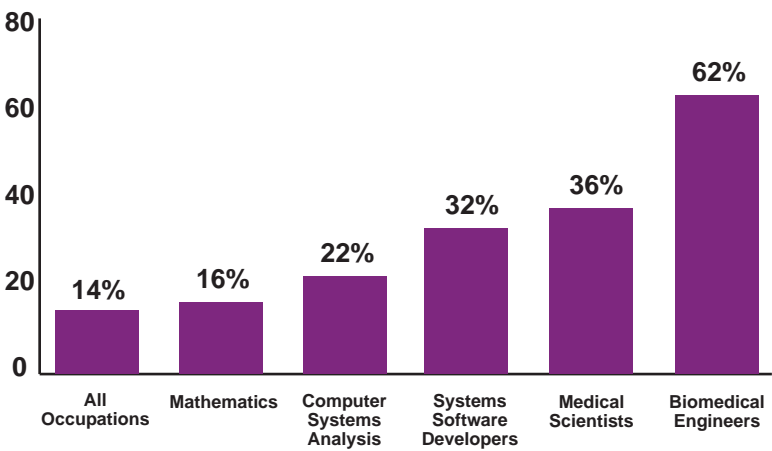
How STEM can prepare students for lifelong problem solving:

“STEM education is an interdisciplinary approach to learning that removes the traditional barriers separating the four disciplines of science, technology, engineering, and mathematics and integrates them into real-world, rigorous learning experiences for students.”
Vasquez, J. A. (2013). STEM Lesson Essentials, grades 3-8: Integrating science, technology, engineering, and mathematics. Portsmouth, NH: Heinemann.

“65% of today’s grade school kids will end up at jobs that haven’t been invented yet.”
United States Department of Labor: Futurework - Trends and Challenges for 21st Century

“Employment in occupations related to STEM is projected to grow to more than 9 million between 2012 and 2022; that is about 13%.”
U.S Bureau of Labor Statistics. (2014) Occupational Outlook Quarterly. Retrieved from <http://www.stemedcoalition.org/wp-content/uploads/2010/05/BLS-STEM-Jobs-report-spring-2014.pdf>

Projected Percentage Increases in STEM Jobs: 2010-2020



What does a STEM classroom look like?

- 1. Focus on integrating science, technology, engineering, and math throughout a student’s day.
- 2. Focus on a real-world problem or engineering challenge.
- 3. Use inquiry-based and problem-based instruction for student-driven learning.
- 4. Engage students in using an engineering design process that leads to developing a product or process to solve a challenge.
- 5. Emphasize teamwork, collaboration and communication.
- 6. Encourages students to be critical thinkers.



STEM students can...

- Ask questions and define problems
- Plan and carry out investigations
- Use mathematics and computational thinking
- Engage in an argument from evidence
- Develop and use models
- Analyze and interpret data
- Construct explanations and design solutions
- Obtain, evaluate and communicate information

Design Cycle Objectives



Investigate
Students identify the problem to be solved, develop the design brief and formulate a design specification



Design
Students design the product and solution



Plan
Students plan the product and solution



Create
Students use appropriate techniques and equipment, follow the plan and create the product and solution



Evaluate
Students evaluate the product and solution and their use of the design cycle