



**STEM** (science, technology, engineering and math) has been identified as one of the most important needs in education today. Our classes use LEGO education and other materials to teach specialized STEM concepts and provide hands-on, project-based learning that is so important for 21<sup>st</sup> century learners. Kids are engaged in the engineering design process as they ask, imagine, plan, create, improve, and learn!

## **Why STEM? Success Starts With Critical Thinking, Problem-Solving Skills**

If you want your child to succeed in life, teach him or her how to think critically and solve problems. The best way to do that is to provide them with a good foundation in science, technology, engineering, and mathematics (STEM).

We are all familiar with the adage “give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime.” Too often we are feeding our students instead of teaching them how to feed themselves. The disciplines that do that best are STEM-related.

## **Educational Benefits**

- High interest/high engagement activity
- Collaboration, Cooperative Learning, Teamwork, Leadership and Responsibility are emphasized
- **STEM** skills and concepts:
  - **Science:** Conducting simple investigations, using equipment and tools to gather information, exploring testing and describing properties of materials, observation, reasoning, properties and forms of energy
  - **Technology:** inventing and turning ideas into action, troubleshooting and problem solving, constructing and testing,
  - **Engineering:** identifying a need or problem, modeling in two and three dimensions, testing and evaluating, redesigning and meeting design constraints
  - **Math:** whole number relationships, measurement, standard and non-standard units, adding and subtracting, estimating, counting, checking estimates, spatial awareness and language, comparison, sequencing

*He absolutely LOVED your class last week and has been counting the days until today's class!! This is amazing because Travis has never liked anything involving learning or sitting in a classroom. This really is great to see his interest peaked. Thank you for this great class. Jennifer Jones, Parent of a Student*



## Survey: STEM Engagement Begins Early

One in five college students say they decided to go into a STEM field in middle school or earlier.

More than half of male students and 35 percent of female students surveyed say that games and toys they played with as a child and the school clubs they joined initially sparked their interest in the field.

Just one in five students pursuing a STEM degree say that their K-12 education prepared them extremely well for college courses in STEM subjects

Microsoft estimates that there will be more than 1.8 million job openings in STEM-related fields by 2018.

Source:  
<http://www.usnews.com/education/blogs/high-school-notes/2011/09/28/survey-stem-engagement-begins-early>

*“If our students are to compete successfully for the jobs of the future, we must better prepare them to be lifelong learners and give them a strong foundation in science, technology, engineering and math.”* Brad Smith, Senior Vice President, Microsoft

