



What is STEM (Science, Technology, Mathematics, and Engineering)? >>

STEM is more than integrating a variety of different content areas. It is a real-life way of thinking and learning.

Learning in a STEM context prepares students for success in coursework across the curriculum, opens doors for further study and careers, teaches life-long learning skills, and prepares students for life after school.

Whether incorporated into the traditional classroom or implemented in a wider context, STEM is a powerful tool for meeting the changes and challenges in teaching, learning, and assessment accompanying the *Next Generation Science Standards* and the *Common Core State Standards in Math and Language Arts*.

Participants in this workshop will gain an understanding of the STEM way of thinking and experiences in implementing STEM school-wide or in multiple or single subject classrooms.

What will I learn during this workshop? >>

- Understand the paradigm shift that STEM represents, and how it impacts student engagement and achievement.
- Learn how to use STEM to increase the participation and success in STEM courses and careers for all subgroups, including girls, underrepresented groups, low achievers, English Language Learners, and SPED students.
- Understand the research that supports STEM, including effective teaching and learning, differentiated instruction, project-based learning, and brain targeted teaching.
- Understand and practice how to incorporate STEM teaching and learning strategies into your daily, unit and long-term planning.
- Understand and prepare to incorporate the integration of science, math, engineering, and technology through inquiry and literacy into your classroom.
- Relate STEM to the standards and the assessment of the NGSS and the CCSS in mathematics and language arts.

Who should attend? >>

All K-12 schools and districts will benefit from this workshop. Attendees include:

- Classroom teachers of science, math, and/or technology looking to increase participation, preparation, and success in their classrooms.
- Secondary teachers, department chairs, and administrators integrating a school-wide curriculum that supports all content areas.
- K-6 teachers and teachers of special education.
- Schools adding an "A" to get STEAM and including the arts in the mix.

Customized Workshop Formats for Schools and Districts >>

Workshops can be customized to meet the specific needs of your school or district. To extend effectiveness, we use a collaborative approach, including Lighthouse Teachers and Peer Coaching. Choose from the following formats:

◆ Introductory 2-3 hour workshop

Participants are provided with an overview of STEM, including the basic components of classroom planning and the advantages and challenges of implementation.

◆ Intensive STEM Training (1-3 days, tailored to your site's needs)

Participants are trained in how to plan and implement STEM (peer coaching and differentiated instruction). Themes include inquiry, mathematical modeling, engineering, project-based learning, engaging scenarios, literacy, role of technology, synergistic integration of content, and relationship of STEM to standards and assessment.

◆ On-site STEM Development (tailored to your site's needs)

On-site support can be arranged for classroom observations and individual / small group conferencing. Follow-up workshops, faculty meetings, and department meetings can be implemented, as needed. Online communications are also utilized. In addition, participants are trained in peer coaching to provide immediate support, and to be Light House Teachers to build capacity beyond their own classrooms.

