

ADVANCING USING STEM

Your child will...

- Model different solutions to the same problem.
- Identify ways to create a more efficient design through the use of reusable materials.
- Be able to determine the difference between science (answering the question of WHY) and technology (answering the question of HOW)
- Discuss the economical difference between cultures and social standings.
- Understand how human will or desire can lead to the design of new technologies in order to solve a problem.
- Explain why resources are essential to all systems.
- Explain how the use of resources will be affected by consideration of cost, availability, appropriate applications, and regards for the environment.
- Understand the amount of energy used in their everyday lives, and determine ways to reduce their impact of the Earth and society.



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LANCASTER INDEPENDENT
SCHOOL DISTRICT

LANCASTER 6TH GRADE CENTER

S T E M

Science Technology Engineering Mathematics

i n

R E A L T I M E



DR. MICHAEL D. MCFARLAND
SUPERINTENDENT OF SCHOOLS

STEM EDUCATION FOR 21ST CENTURY LEARNING

How would our society function without the invention of the clock, airplane, refrigerator, and the telephone?

Benjamin Banneker, Orville and Wilbur Wright, John Standard, and Alexander Graham Bell were the creative minds that designed and built these machines that are still essential tools used every day and everywhere. We know these inventors used their knowledge of math and science coupled with the skill of engineering to initiate the development and improvements of modern technologies used today such as satellites and space shuttles.

"...leadership tomorrow depends on how we educate our students today -- especially in science, technology, engineering and math." - President Obama

Obama, Barak. "Remarks by the President at the Announcement of the "Change the Equation" Initiative." Online posting. Office of the Press Secretary. 16 September, 2010
<><http://www.whitehouse.gov/the-press-office/2010/09/16/remarks-president-announcement-change-equation-initiative>



PREPARING TODAY

STEM is a better way of helping students make the connections between Math and Science using technologies to innovatively engineer a product. Students participating in STEM education are taught critical-thinking skills through the presentation of "real-world" situations and are expected to develop resolutions to these issues. They are expected to work as persons in the industry, i.e. they work in teams to brainstorm, plan, design, test, and communicate/market their product.

The program will allow students to explore STEM careers and provide them with more rigorous math and science instruction, empowering them to face the challenge as they enter college or trade. Students participating could potentially graduate from high school with 60 college credit hours. Ultimately, the success of our children will be dependent on how well they perform in the areas of math and science.

STEM IN OUR SCHOOL

Lancaster ISD is committed to providing innovative programs ensuring that every student graduates with the skills necessary to compete in this technological advancing society, thus, beginning Summer 2011, we will offer STEM curriculums to students in Grades 5, 6, and 7. Lancaster 6th Grade Center, located at 1005 Westridge Ave., will open for the 2011-2012 school year as a Science, Technology, Engineering, and Mathematics school using problem-based/project-based learning (PBLs).

Student achievement in STEM disciplines in high school is among the strongest predictors of success in college.
Bill and Melinda Gates Foundation



This transformation of the once Lancaster Middle School's 6th Grade Wing will provide students with a new modern instructional setting. Classrooms will feature:

- promethean boards
- student computer stations
- a state of the art science laboratory
- computer learning centers
- virtual libraries

Students will visit museums and laboratories as they participate in virtual field trips as well as actually visit industries and universities known for STEM advancements.

They will have the opportunity to be active in:

- science, math, and computer clubs
- Winston Science Competition
- Regional and State Science and Engineering Fairs

We are currently developing sustainable relationships with various colleges, universities, and corporations as we build our program such as:

- UT Arlington Schools of Science and Engineering
- The Texas High School Project
- UT Tyler Project Lead the Way
- The Fort Worth Museum of Science and Natural History