Middletown Township Public Schools Volume XI - Marking Period 3 Grade 6 Edition

STEM Ideas for Science Classes

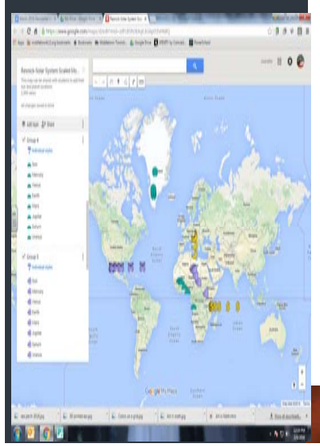
Using Google Maps to make a scaled model of the solar system

Students work collaboratively to create a Google map to represent a scaled model of the solar system.

Students are able to visualize the distance between each planet and each planet's distance from the sun.

Students will also discuss future possibilities of space exploration using technology driven probes.

These challenges and activities, aligned to the New Jersey CCCS and NGSS, are available for your classes. Please contact your school's STEM Specialist.



Step into STEM

Bringing engineering into the classroom through an integrative, real-world approach to learning science and mathematics

Science • Technology • Engineering • Math

HAVE YOU *HEARD* THE LATEST ON 3D PRINTING?

Scientists can now "print" human-size bones, cartilage and muscle, using a new device called a 3D bioprinter, The tissue and organ structures produced by the printer could one day be used to replace injured or diseased tissues in human patients.

The demand for engineered tissues and organs has been on the rise because of the limited availability of donated tissue and organs.

The 3D printed "ears' have tested and survived when implanted under the skin of mice and even developed blood vessels after two months!

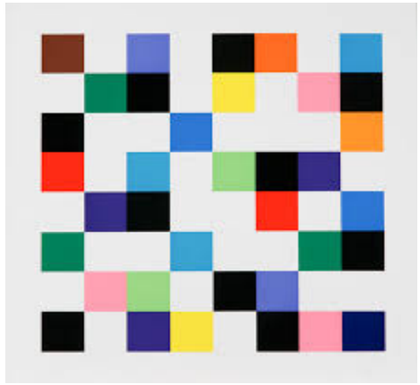
Please see http://www.livescience.com/53719-photos-bioprinted-human-bones-muscle.html?scrlybrkr for more information.

STEM club update

The STEM club teams at Bayshore, Thorne and Thompson have been working hard to build and test their underwater Rovers to compete in the SEA Perch competition on Saturday, April 16th at Rowan University.

The teams will be faced with two challenges this year. They must first navigate through an obstacle course, come to the surface, then re-submerge and return through the course to the end. In addition, students will be required to release 3 different sized objects and transport them in a controlled manner then dropping them into a container.

Best of luck to our STEM club teams!



STEM and Art

Here are a few ideas for giving STEM projects some STEAM (STEM with ART)

Design. Students can apply design and decoration to products that were created during the course of a design challenge. They could use computer graphics to create logos or stylized designs to include in communications or presentations. Through artistic design, students could improve the appearance, design, and usability of a product created during a STEM project.

Performing arts, such as drama and speech. What about technical or persuasive writing? Those arts fit naturally into the "Communications" stage of the engineering design process. They would work well as part of a STEM project.

Creative planning. As students brainstorm solutions for an engineering problem, encourage them to adopt an inventive, artistic approach. Calling on their artistic right brain can help them to generate more creative and innovative thinking.

Original Article by *Anne Jolly, Education Week.*

STEM Resources

Engineering and Nanoscience:

http://www.classroomengineers.org/media/nanoscience/

High School STEM Gap (Boys are still more likely than girls to chose a career in STEM.)

http://teachers.egfi-k12.org/high-school-stem-gap/

NAE connects Educators with Experts.

http://teachers.egfi-k12.org/nae-connects-educators-with-experts/

STEM Ideas for Math Classes

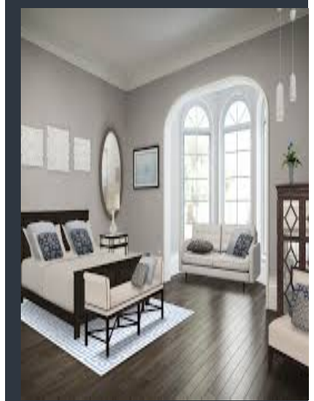
Planning a Renovation

Students work in small groups to plan, design and configure a room renovation based on a $5,000 budget.

Using the "Homestyler" app, students use an online catalog to create a family room, living room, bedroom, or home office with furniture, rugs, paint, and accessories.

All items are 25% off so students will need to determine the final cost and create a spreadsheet to calculate their spending.

Creativity abounds!



Middle School STEM Specialists

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