STEM Science, Technology, Engineering, Mathematics

Manasquan Elementary School

@ManasquanSTEM on Twitter

VISION and MISSION STATEMENT

Manasquan Elementary School:

"Preparing Tomorrow's Innovators"

We believe that encouraging critical and creative thinking through a STEM instructional approach will prepare our students for the future workforce.

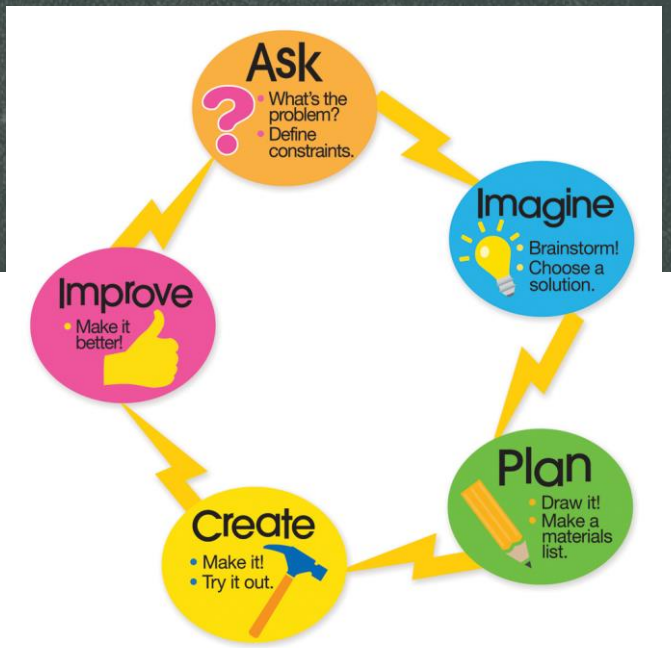
What is STEM?

- ✓STEM education is the re-visioning of science education to enable the next generation of innovators.
- ✓STEM is a range of instructional strategies that help students apply concepts and skills from the different disciplines to participate in a “design process” to solve meaningful problems.
- ✓STEM “thinking” encourages our students to ASK questions first …. then work to create their own solutions.

In a STEM activity, learning often comes from failures ……

- Why didn’t it work?
- What can you do about it?

The Difference?



- STEM adds an ENGINEERING component to ALL Subject Areas!!!

Through an integrated, interdisciplinary approach …..

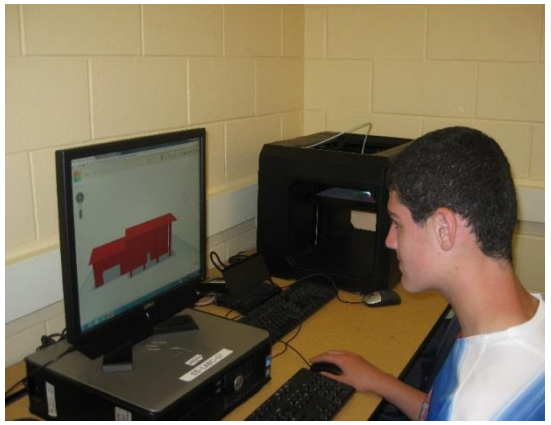
Students are encouraged to participate in the *Design Process*:

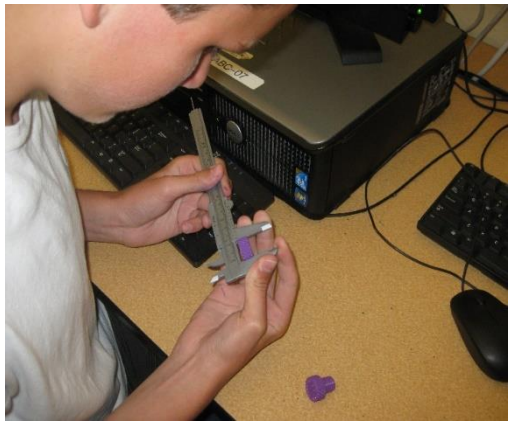
Identify the problem or challenge – ASK!
Brainstorm for solutions - IMAGINE !
Design and research - PLAN!
Build a model - CREATE!
Test and evaluate – TIME TO REFLECT!
Make adjustments - IMPROVE!

STEM Experiences

- ***Extend*** the curriculum in science, mathematics, and technology education to include rigorous enrichment activities and experiences with an engineering approach
- Provide opportunities to participate in lessons that require ***increased*** critical thinking and problem solving skills
- Expose students to ***more advanced*** lessons that encourage them to investigate, model, and explain the natural and designed world through an integrated curriculum

Resources





- Fully equipped STEM Lab
- Mindstorms Robotics Platform (LEGO Education)
  - EV3 Core & Expansion Set (Gr. 6-8)
  - WeDoSTEM Set (Grades K-5)
- MAKERBOT Replicator 3-D Printer
- Raspberry Pi & Hands-on Coding Blocks
- Engineering is Elementary kits
- 1:1 Tablets (Grades 6,7,8)

Goals in Action

- STEM Lab / Renovated Media Center
- Updated K-8 Science Curriculum aligned to the NJ Student Learning Standards & Next Generation Science Standards
- STEM Lab experiences for all K-8 Technology Education classes
- Rotation classes:
  - Grade 7 - *Technology & Engineering Design*
  - Grade 4 – *STEM Enrichment*
  - Grade 8 - *Multimedia Literacy*

STEM …. to STE[a]M™ **Integrating the Arts!**

STEM … where the jobs of tomorrow will be

Questions waiting to be answered …..

https://www.youtube.com/watch?v=W1K2jdjLhbo