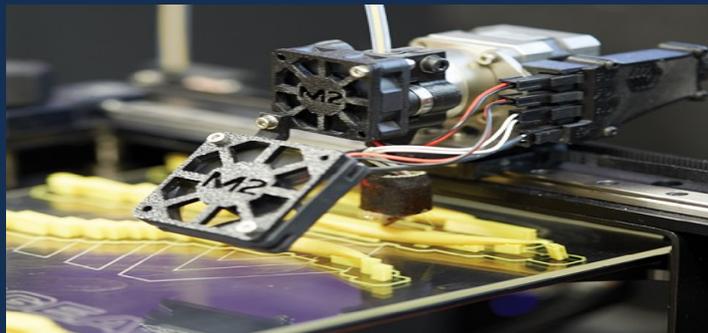


## - THE TEAM WILL -

- Consist of students with a high degree of interest in the STEM discipline areas.
- Focus on project/problem-based learning.
- Provide inquiry based instruction focused on problem solving, decision making, discovery and a high degree of interactive involvement.
- Promote an interdisciplinary teaching approach.
- Expect students to have a high work ethic.
- Include consistent application of Maryland's STEM Standards of Practice and Maryland's College and Career Readiness Standards.



## - QUESTIONS -

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## - OUR TEAM -

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## - OUR MISSION -

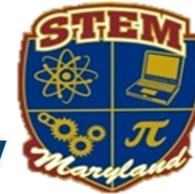
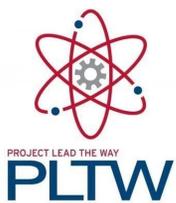
The NexGen STEM Academy at Salisbury Middle School seeks to develop a holistic student that is intrinsically motivated to assess and solve community and global problems through innovation, collaboration, and reflection.

## - STEM SOP -

1. Learn and Apply Rigorous Science, Technology, Engineering, and Mathematics Content.
2. Integrate Science, Technology, Engineering and Mathematics Content.
3. Interpret and Communicate Information from Science, Technology, Engineering, and Mathematics.
4. Engage in Inquiry
5. Interpret and Communicate Information from Science, Technology, Engineering and Mathematics.
6. Collaborate as a STEM Team
7. Apply Technology strategically



3D Printed Map of Maryland



## - STUDENT - - SELECTION -

1. To be eligible for consideration, students must meet a number of academic requirements including GPA, RI, and a math assessment.
2. Students must express a true interest in STEM content areas. If they are not, this may not be the program for them.
3. If needed (greater than 50 students), a random drawing will be conducted.

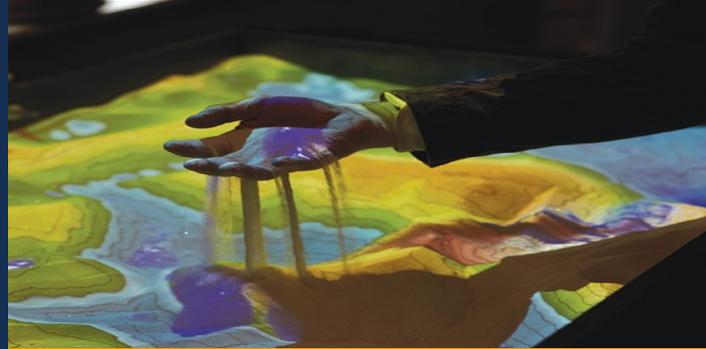


Students using Google Earth to analyze regions of the world to create a 3D model.

## - MORE - - INFORMATION -

[www.smsnexgenstem.org](http://www.smsnexgenstem.org)

## - SAMPLE - - UNIT -



How do geographic tools help us to answer questions and solve problems?

### - PROJECT LEAD THE WAY- GATEWAY -

Students learn tools such as the design process, a dynamic mathematics software, a computer-aided design program, computer simulations, an engineering notebook, and possibly a 3D printer to design, model, and build objects. These tools are essential to the learning experiences in all of our content areas.

### - MATHEMATICS -

Students learn the fundamentals of ratios and proportions, which is essential to the learning experiences in all of our content areas. This requires students to study scale factor, coordinate grids, measurement conversions, and percentages and apply them to solving real world problems.

### - SOCIAL STUDIES -

Students are introduced to the work of geographers, and the tools they use to understand the world. These tools include types of maps, map elements, spatial relationships, regions, etc. Students will work to use design software to model regions, and mapping software, such as Google Earth Pro and ArcGIS to create a map that displays data useful for solving problems.

### - SCIENCE -

Students understanding of the tools geographers use to solve problems is reinforced through the use of the following technology and concepts: Global Positioning Systems (GPS), scientific skills and processes, map stencils, and Augmented Reality Sandbox. Students will apply their knowledge of mapping, design and modeling to the study of Electricity and Magnetism, which includes the understanding of how to design circuits, and computer boards. These learning experiences are then applied to create a device to solve a common problem.



A therapeutic toy for a child who has cerebral palsy.

### - ENGLISH/ LANGUAGE ARTS -

Students will study literary works that explore identity. Students will explore literary works, including the autobiography of Maya Angelou and Edgar Allan Poe's "The Oval Portrait" to evaluate how their identity is influenced by others. Student reading and evaluation of texts culminates in several assignments including a life map and autobiography.