NANOSCALE SCIENCE AND ENGINEERING AT THE MORRIS MUSEUM


Morris Museum

Please join Morristown High School students at the Morris Museum as they educate younger students about Nanoscience and Technology through multiple fun and engaging experiments!

Super Science Saturdays 12-2pm
February 21 - Oobleck: Solid or Liquid?
February 28 - Hex Bugs: Never Stop Crawling
March 14 - Hydrophobicity: Scared of Water!
March 21 - NanoBots: Mini Robots that Kill Cancer

Nano Day Family Festival 11am-4pm
March 28 - All exhibits

Educating their Future, About the Future

Over the course of the 2014-2015 school year, teacher Mariel Kolker, is the first to educate students at Morristown High School about nanoscience and nanotechnology. After hearing about this up and coming science, Nanoscale Science and Engineering students wanted to convey what nanoscience is to the public, as it is not recognized or known by many. With their knowledge from this class, they will collaborate with the Morris Museum in the running of a Nano Day Family Festival and Super Science Saturdays. On these dates, MHS students will teach younger students, between the ages of five and twelve, about nanoscience through a variety of experiments that touch on the basics of viscosity, brownian motion, hydrophobicity, medical nanoparticles and self assembly. Although these topics take high level thinking, MHS students have simplified them to make them fun and easily comprehensible for all ages by using oobleck, hex bugs, fortune tellers and other interactive materials. “Teaching is the highest form of learning,” says Mariel Kolker, “and through this, every student has gained a deeper understanding of these very complicated subjects and hope to translate their findings of these topics to the future generations of the Morris School District in a fun way!”

What is nanoscience?

Nanoscience is one of the most frequently heard, yet least understood areas of science today. Nanoscience specializes in the study of ultra-small structures, materials, and devices at the atomic and molecular scale. It is necessary for the public to become aware of how this subject is changing the world around us by creating new technologies and cures of diseases.

Where did the idea of this course originate from?

Teacher Mariel Kolker authored this course in conjunction with Dr. Pinar Akcora of Stevens Institute of Technology, through an NSF-funded grant on nanoscience research. This project based class explores the origin and main areas of research in nanoscience, and links the ideas of physics, chemistry, and biology. Not only do students use their science skills, but also utilize their english and reading skills as they perform research, critical reading, and communications.

Special Thank You

The Nanoscale Science and Engineering class have spent the first half of the school year fundraising and applying for grants to meet their estimated expenses for this project. Thanks to the generous donations from the Morris Education Foundation (MEF) and other fundraising opportunities, the students have been able to accumulate about $700 to cover their anticipated cost, which has contributed to the overall success of these events.

Please join the Nanoscale Science and Engineering class at the Morris Museum on the above dates to learn about this up and coming science! To find out more information, visit our website at www.nanose.weebly.com. Mrs. Mariel Kolker can be reached at mariel.kolker@morristownhighschool.org if you have further questions.