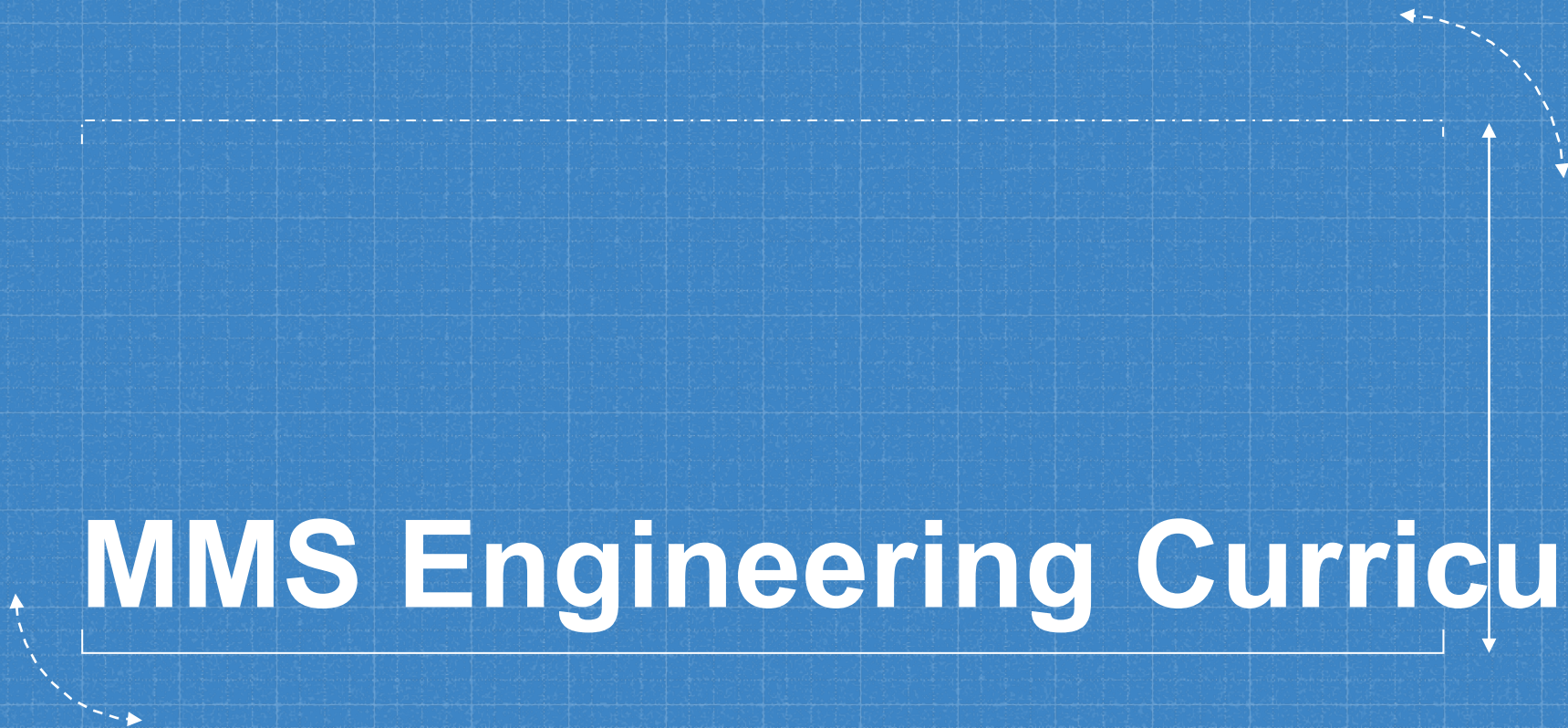


MMS Engineering Curriculum



MMS Fab Lab: Continuous Improvement

- Current Content
 - Design & Make 1
 - Design & Make 2
 - MS Fab Lab
 - CSI Mahtomedi
- Planned Improvements



Design & Make 1

- Grade 6 - 1 Quarter
- Essential Content
 - What is Engineering?
 - Different types of engineers
 - Engineering Design Process
 - Development of technology
 - 2D vs 3D design
 - Design software-Sketchup,Adobe Illustrator, Cameo Silhouette for vinyl cutters
 - Intro to Lasering
 - Lego Robotics and block programming

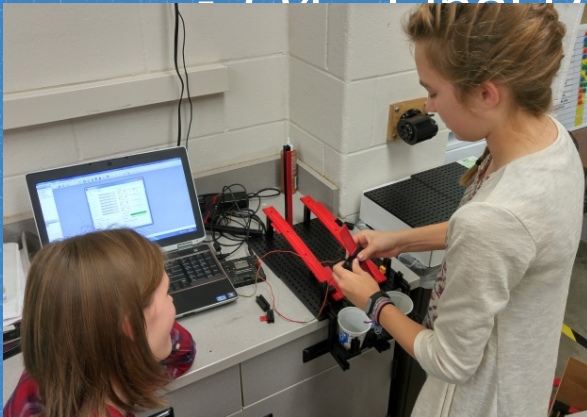
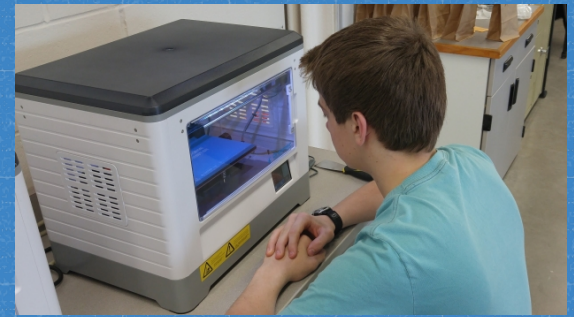


Design & Make 2

- Grade 7 - 1 Quarter
- Essential Content
 - Advanced Lego Robotics
 - 3D software-Solidworks
 - Sketch,extrude,revolve,shell, fillet,chamfer,etc.
 - Create parts and assemblies
 - Autodesk 123D Make
 - Intro to 3D printing
 - Coding Javascript through Kahn Academy

MS Fab Lab

- Grade 8 - 1 yr A/B Schedule
- Elective
- Essential Content
 - Q1 - Robotics/Coding
 - Q2 - 2D Design & Fabrication
 - Q3 - 3D Design & Fabrication
 - Q4 - Final Project Demonstrating Skills



CSI Mahtomedi

Grade 8

1 Semester Elective

Essential Content

Introduction to Crime Scene Investigation (CSI) Basics and Protocols

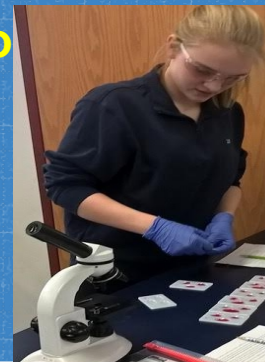
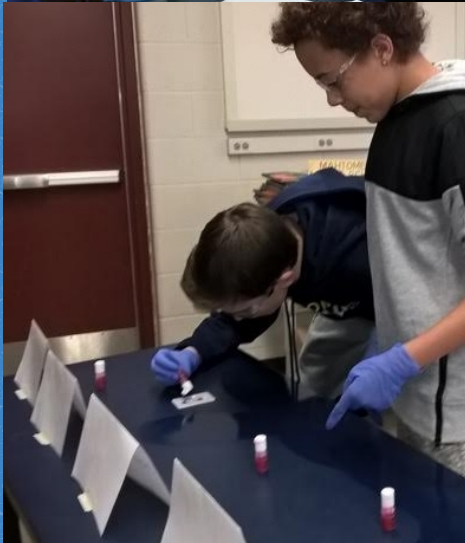
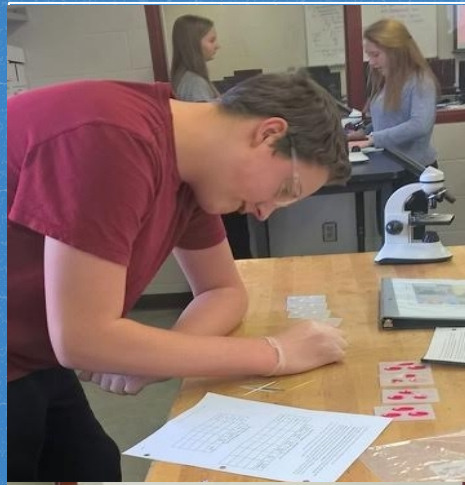
Exploring Evidence (Physical, Trace, Testimonial)

Fingerprints (Analyzing & Collecting)

Blood (Blood typing, Blood spatter)

DNA

Final Mystery Project: Mock Crime Investigation



Planned Improvements

- Design & Make 1
 - Refine robotics/coding unit
- Design & Make 2
 - Increased rigor due to D&M 1
- MS Fab Lab
 - Re-evaluate & modify the robotics/coding unit
 - Increase Project Expectations
 - Implement a mini-CNC mill
- CSI Mahtomedi
 - We received a generous HB Fuller grant that will allow us to continue incorporating more hands-on investigation that will include looking at art forgery, DNA electrophoresis, and additional mock crimes for the students to solve throughout the semester

