Upper Merion Area School District
Middle School Technology and Engineering Education
Curriculum Revision/Update
Technology and Engineering Education
7th Grade – Applying Technology

**Philosophy** –
The Technology and Engineering Education program focuses on developing technology problem solving skills, technological literacy, and 21st century skills through hands-on activities integrating Science, Technology, Engineering, and Mathematics (STEM).

**Mission**
Technology and Engineering Education is committed to preparing students for post secondary success, citizenship, and life long learning by teaching technological literacy.

**Goals**
All students will be able to successfully contribute and function in a technological society.
All students will have basic skills in technological problem solving.
All students will develop technological literacy to be successful in life.
Create the innovative thinkers and doers of the 21st century.

**Core Values**
Be Honest
Be Fair
Keep our Commitments
Respect Individuals
Encourage Intellectual Integrity
Community of Character – Character Education

**Grade 7 – Applying Technology**
Applying Technology is an activity-based course that introduces students to technology by exploring Systems of Technology, Design, and Engineering using an integrated Science, Technology, Engineering, and Mathematics (STEM) approach to instruction. Students will study tools and processes in production systems, impacts of technology, the systems approach, computer aided design, aerospace technology, robotics systems, and problem solving procedure, and engineering design process. Students will work in teams and individually to complete required classroom and lab assignments.

**Instructional Time**
22 cycles, 1 period/4 day cycle, 22 - 43 minute classes, 15 hours of instruction, 22 days out of 90
1 semester in Design and Engineering Lab – problem solving, tech drawing, computer aided design, robotics, system control, design and engineering, and 21st century skills

**Enrollment**
• Approximately 2/3 of the 7th grade class is enrolled in this course – 30 /class, 120 students