Upper Merion Area School District
Middle School Technology and Engineering Education
Curriculum Revision/Update
Technology and Engineering Education
5th Grade – Introduction to 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 5 – Introduction to Technology –
Introduction to Technology is an activity-based course that introduces students to technology by examining Design and Engineering Technology. Students will study and apply the problem solving procedures, 21st century computer skills, technical drawing, simple machines and mechanisms, robotics and system control, aerospace engineering, structural engineering, and the engineering design process. Students will have a variety of projects and activities in the Design and Engineering Tech Lab. Students will work in teams and individually to complete required classroom and lab assignments. A STEM approach is used to integrate Science, Technology, Engineering, and Mathematics concepts in a digital classroom environment.

Instructional Time
22 cycles, 2 periods/4 day cycle, 44 – 43-minute classes, 31.5 hours of instruction, 22 days out of 90

1 semester in Design and Engineering Tech Lab – problem solving, technical drawing, computer aided design, simple machines and mechanisms, robotics and system control, aerospace engineering, and 21st century skills

Enrollment
- Curriculum Extension students are pulled from class for additional instruction in Reading and Math
- Approximately 2/3 of the 5th grade class is enrolled in this course – 30 /class, 120 students