



GREAT NECK PUBLIC SCHOOLS

"Where Discovery Leads to Greatness"

#DiscoverGreatness

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Curriculum Profile: Technology 7

<u>Department</u>	Technology	
<u>Course Name</u>	Technology 7	
<u>Course Length</u>	Twenty weeks (alternate days)	
<u>High School Credits</u>	N/A	
<u>Description</u>	In this 20-week class, students will continue their exploration of the 'human engineered world' with an emphasis into energy and transportation systems. The first ten weeks students will design and construct wind turbine blades They will also research energy systems and complete an 'energy quest' on-line interactive assignment. The second twenty weeks students will focus on alternative fuel vehicles and design and construct a compressed air power car. Design and drawing will be a critically important part of this unit. Hand tools and power tools from tech 6 will be reviewed again and used in the construction process. A culminating 'drag race' will be held at the end of the unit.	
<u>Target/eligible students</u>	students in grade 7	
<u>State Learning Standards Link(s)</u>	http://www.nysed.gov/career-technical-education/technology-education-learning-standards	
<u>Primary texts and materials</u>	Wood (Pine), hand saws, power drills, Disc/Belt Sander, wind turbine kits, computers with internet connection, plastic wheels/ metal axles , Various construction materials	
<u>Scope/Sequence</u>		
<u>Introduction to energy</u>	Introduce students to what energy is, how we are looking for alternative energy sources to fossil fuels. Solar, wind, geothermal, and water will all be discussed.	
<u>Safety</u>	Prior to working in the technology lab, students must go through a comprehensive safety unit. Safety rules are distributed, signed by legal guardians of the student, a safety video is viewed, and a safety test is taken.	
<u>Wind turbines / basic electricity</u>	New York State MST Standard 5 - #7 Management of technology	• Students learn the various attributes of wind energy and how it's a growing energy source across the globe. • Students will learn electricity basics • Students will research turbine design • Students will fabricate their own turbine blades • Students will test their designs and try to generate the most electricity in our wind generator. . • Students will complete an interactive on-line energy quest
<u>Compressed air car</u>	New York State MST Standard 5 -1 Engineering design New York State MST standards #5 -5 History and evolution of technology	• Students learn about different transportation systems, fossil fuels and alternative fuel vehicles. . • Students will learn about architectural/ industrial drawing • Students will learn basic measurements • Students will use these to make a drawing or 'plan' of their car. • Students will use coping saws to cut out the top and side profile of their cars • Students will drill holes for the air source and axles • Students will sand, decorate their cars • Students will apply wheels and axles to their car • Students will race on our 24' long track.
<u>Additional Notes</u>		