



GREAT NECK PUBLIC SCHOOLS

"Where Discovery Leads to Greatness"

#DiscoverGreatness

Curriculum Profile: Science 6

<u>Department</u>	Science		
<u>Course Name</u>	6th Grade Science		
<u>Course Length</u>	1 Year		
<u>High School Credits</u>	N/A		
<u>Description</u>	The sixth-grade science curriculum introduces students to science and engineering at the secondary level. This integrated science course allows students to explore select topics in physical, life, and Earth and space sciences while weaving in engineering. Students will primarily focus their studies on ecology, energy, forces, chemistry, and matter. The grade six program provides a strong foundation for all future science endeavors. Lab activities, engineering challenges, and an ecology field trip serve to reinforce science skills, content, and practices.		
<u>Target/eligible students</u>	6th Grade Students		
<u>State Learning Standards Link(s)</u>	Middle School Science-Learning-Standards		
<u>Primary texts and materials</u>	Explore Learning Materials & texts are at the discretion of the individual teacher and school.		
<u>Scope/Sequence</u>	Standards	Key Ideas, Terms & Concepts	
<u>Ecology and the Environment</u>	MS-LS1-6 MS-LS2-1 MS-LS2-3 MS-LS2-4 MS-LS2-2 MS-LS2-5 MS-ESS2-4 MS-ESS3-3 MS-ESS3-4	Students analyze their living and nonliving world. They focus on the cycling of energy and matter as it flows through ecosystems. They also analyze how changes both biotic and abiotic in an ecosystem have an impact on that ecosystem. Students investigate and learn about such topics as food webs, photosynthesis, and ecological relationships. Students will also investigate how human impact affects our Earth as a whole.	39 41 48 50
<u>Waves</u>	MS-PS 4-1 MS-PS 4-2	Students define and explore the properties of waves. They learn the basic anatomy of a wave and also investigate changing properties of a wave. They investigate such properties as frequency, wavelength, amplitude, and energy. Students focus primarily on mechanical waves (sound waves) and electromagnetic waves.	37
<u>Forces, Motion and Energy</u>	MS-PS2-2 MS-PS2-4 MS-PS3-1 MS-PS3-2	Students will be introduced to physics & energy investigating topics such as speed, forces, and energy. Students will compare kinetic vs. potential energy as students investigate how mass, speed, height, etc. have an impact on those energies. Students also learn about conservation of energy with respect to systems in which potential and kinetic energy are changing.	33 35
<u>Chemistry and Matter</u>	MS-PS1-1 MS-PS1-3 MS-PS1-4	Students identify and describe matter as being made of particles. They identify the structure of matter including atoms, compounds, and molecules. They investigate how	30 32

	MS-PS1-7 MS-PS1-8 MS-PS1-2 MS-PS1-5	to measure matter using basic laboratory tools and investigate what happens when different forms of matter interact with each other.	
<u>Engineering</u>	MS-ETS1-1 MS-ETS1-2 MS-ETS1-3 MS-ETS1-4	Throughout the course students utilize the engineering design process to solve problems. This includes defining problems and constraints, evaluating competing designs, analyzing data from tests, and developing models to achieve optimal designs.	52
<u>Additional Notes</u>	Sequence and materials are at the discretion of the individual teacher and school.		