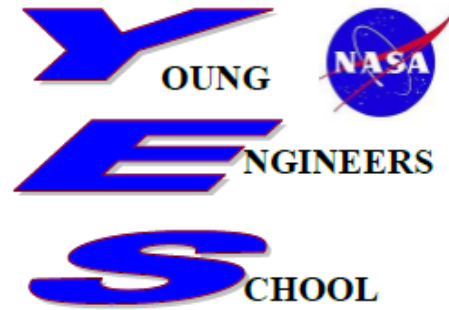


ALBERT LEONARD MIDDLE SCHOOL
25 GERADA LANE
NEW ROCHELLE, NEW YORK 10804

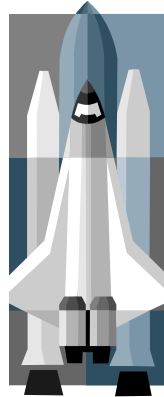
Just Say...



A Unique Summertime Academy for Incoming Middle School Students to Meet the Challenges of **STEM**

Science, Technology Engineering & Mathematics

Stephen G. May, Director
sgmay@nredlearn.org



Special Introductory Session Open to **5th Grade Students only:**
Aug. 8, 2022 - Aug. 18
9 am—3 pm

Held at

Albert Leonard Middle School
Mrs. Camille Edwards-Thomas,
Principal

Through
The City School District of New
Rochelle
Mr. Jonathan Raymond,
Superintendent

LUNCH AND SNACK WILL BE PROVIDED.

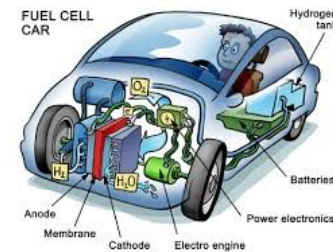
STUDENTS MUST SUPPLY THEIR OWN TRANSPORTATION

BE A PART OF AN ENGINEERING TEAM AS WE PARTICIPATE IN DAILY ENGINEERING

The Bubble Gum Stretch
The Marshmallow Tower
The Tallest Golf Tee
The Gum Drop Solution
The Balloon Dilemma

HYDROGEN FUEL CELL

Discover the latest in 21st century Automotive Technology. Around the world, scientists and engineers are looking to find new ways to meet our growing energy needs without further damaging our environment, endangering our planet or increasing our dependence on foreign oil.



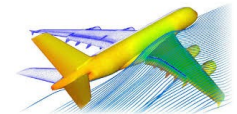
LEVITATOR MAGLEV VEHICLE

Using the repulsive force of like magnetic poles, maglev vehicles are an amazing mode of transportation that encourages an understanding of magnetic repulsion, friction, propulsion systems, equations, analyzing, and graphing data.



THE AERODYNAMICS OF FLIGHT

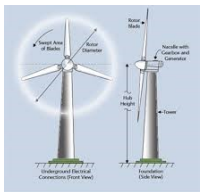
Design and build a series of gliders using different materials. Test each of them for distance and duration of flight.



WIND ENERGY

Wind energy has the potential to supply all the electricity needed in the United States. Take a close-up look at wind energy as we:

- Measure Wind Speed
- Calculate RPM
- Determine optimum pitch angles
- Create a wind farm producing a specified voltage



Drawing of the rotor and blades of a wind turbine, courtesy of ESI



AP MINI DRAGSTERS

- Apply your knowledge of aerodynamics and design to build an air racer.
- Test the racer, record the data.
- Potential energy and kinetic energy come to life as students discuss how they can make modifications to their races to make it run faster and longer.



EARTHQUAKE CHALLENGE: BRIDGE BUILDING

- Bridges are a vital part of our transportation system.
- Use C.A.D. (Computer Assisted Drawing) to design model bridges.
- Determine strength of materials, types of joints, symmetry, lamination and efficiency.
- Experiment, and problem solve with student engineered basswood structures for earthquake resistance.
 - Compression and Tension
 - Stress and Triangulation

SOLAR POWERED VEHICLES



- The perfect tool for learning various math, science and engineering skills.
- Work with photovoltaics, drive and pinion gears, energy and alternative energy.
- Build, test and experiment as you calculate slope, coordinate graphing, speed, velocity, acceleration and more.



ROCKETRY

- Design and construct a rocket which uses pneumatic force for launching.
- Have fun with subjects such as force and motion, thrust, center of gravity.
- Adjust the trajectory angle, make predictions and perform computer data collection.
- Discuss the engineering of aerodynamic design.

STEM Based Instruction...



...allows us to demonstrate the pragmatic value of Science and Math skills through actual Technology and Engineering application. It is this philosophy that opens the door for student success. We encourage them to think about how to use math and science concepts rather than simply committing the material to memory.

Engineering is all around us.

From the moment our day begins, to the moment our day ends, engineering impacts everything and everyone. We believe that this program will help to maximize students' individual strengths and abilities while inspiring them to become the leaders of tomorrow.

Students learn best by doing.

They will make the connections between Science,



Technology, Engineering and Mathematics (S.T.E.M.) through a variety of hands-on activities. We will engage, entertain and educate them in a fun and interactive way as they begin to develop the skill-set and problem solving abilities needed for the world of tomorrow.

The Young Engineers School

(Y.E.S.) is an outstanding enrichment opportunity for current 5th grade students to enjoy interactive engineering. We offer expert instruction combined with fascinating experiments and activities specially designed for the interests of incoming middle school students.



Name _____

Address _____

City _____ Zip Code _____

Email _____

Phone (Home) _____ Phone (Cell) _____

Emergency Contact Name & Phone Number _____

Relationship to student _____

Elementary School _____

Middle School student will attend _____

SPECIAL INTRODUCTORY SESSION FOR 5TH GRADE STUDENTS **ONLY**
August 8, 2022—August 18, 2022
Monday to Friday
9am—3 pm
Students are required to attend all ten meetings.
Program fee is \$ 385.00
Please enclose your check for \$385.00
(Payable to Albert Leonard Middle School)
along with this application.

There are only **25 seats** available for this session.
 First come, first serve
 Preference will be given to students who excel in Math, Science and Technology.

Applicants must be in the 5th grade and currently enrolled in the New Rochelle Public Schools.

All Students will be reviewed for proficiency in Math and Science.

For More Program Information or to Submit Application

Albert Leonard Middle School
 Attention: Mr. Stephen G. May, Tech Ed. Dept.
 25 Gerada Lane
 New Rochelle, NY 10804
 Phone: (914) 576-4339
 Email: sgmay@nredlearn.org