



# Academy of Math and Science



## RED BANK REGIONAL HIGH SCHOOL

SEPTEMBER 23, 2012

### MISSION STATEMENT

The Academy of Mathematics and Science is dedicated to providing a challenging program that emphasizes the connection between mathematics, science and everyday life. The Academy will provide unique learning experiences that integrate laboratory and research experience, allowing students to better understand the role of mathematics and science as an integral part of an increasingly global and technology society. Students will interact with the professional community as they develop the skills that will prepare them to be tomorrow's leaders.

### Extracurricular Activities

- Shore Math League
- NJ Science League
- Moody's Mega Math Challenge
- NJ Science Bowl, Princeton Plasma Lab
- Mu Alpha Theta Mathematics Honor Society
- SUPA Forensic Challenge

Students from our Academy started a chapter of the National Mathematics Honor Society and a Science Bowl team. They have competed in Moody's Mega Math Challenge, making it to the second round last year. They have participated in many volunteer activities and fund-raisers, including raising money for cancer research, victims of Hurricane Sandy, and participating in peer-tutoring. Every year the Math League celebrates pi-day with a pie sale, and last year we also had a pie-eating contest sponsored by the Math Honor Society.

### Academy Electives

Honors Research & Experimental Design	AP Chemistry	Accounting 1 & 2	Computer Applications
Experimental Design	IB Physics HL	Principles of Finance	Intro to Engineering
AP Calculus AB & BC	AP Physics B\C	International Business	Design
AP Statistics	IB Environmental Systems and Societies SL	Economics	Digital Electronics
Applied/Discrete Math	Environmental Science	Web Page Design	Principles of Engineering
Calculus	Marine Science	Computer Science	Civil Engineering
Statistics	Honors Advanced Topics in Chemistry	AP Computer Science A/B	Aerospace Engineering
IB Mathematical Studies SL	Chemistry	IB Computer Science HL	Engineering Design
IB Mathematics SL	Honors/AP Economics	Computer Aided Design	Music Theory 1, 2
AP Biology	Principles of Problem Solving	Forensic Science*	Honors Anatomy & Physiology*

### Graduating Students Listed the Following Majors:

- Engineering
- Fashion Merchandising
- Forensics
- Biology
- Pre-Medicine
- Mechanical Engineering
- Culinary Arts
- Accounting
- Elementary Education
- Aerospace Engineering
- Criminal Justice
- Business
- Mathematics
- Physics

Members of the first graduating class of the Academy of Math and Science are attending various universities and post-secondary programs, including:

- Brookdale Community College
- Syracuse University
- Georgia Institute of Technology
- Coastal Carolina University
- Loyola University
- Rutgers University
- New York University
- Wake Forest University
- Johns Hopkins University
- Stevens Institute of Technology

\*Concurrent Enrollment

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## ACADEMIC PATHWAYS

NINTH GRADE	TENTH GRADE	ELEVENTH GRADE	TWELFTH GRADE
English 9 CP/H	English 10 CP/H	English 11 CP/H/AP	English 12 CP/H/AP
Global Studies CP/H	US History 1 CP/H	US History 2 CP/H/AP	Economics or Elective Choice
Algebra 1 or Honors Geometry or Honors Algebra 2	Geometry/Honors Geometry or Honors Algebra 2 or Honors PreCalculus	Algebra 2/Honors Algebra 2 or PreCalculus/Honors PreCalculus or Calculus/AP Calculus or Statistics/AP Statistics IB Math Studies SL or Math SL	PreCalculus/Honors PreCalculus or Calculus/AP Calculus or Statistics/AP Statistics or IB Math Studies SL or Math SL or Other Math Elective
Exploratory Science or Biology	Biology or Chemistry/Honors Chemistry	Chemistry/Honors Chemistry or Physics/AP Physics B or AB Biology or AP Chemistry or Forensic Science (SUPA) or Honors Anatomy & Physiology (FDU) or IB Environmental Systems & Societies SL or Other Science elective	Physics/AP Physics B or C or AP Biology or AP Chemistry or Forensic Science (SUPA) or Honors Anatomy & Physiology (FDU) or IB Environmental Systems & Societies SL or Other Science Elective
2.5 credits each: Family & Consumer Science elective/ Personal Financial Literacy	Practical Applications of Math & Science	Research and Experimental Design	Academy Elective
World Language	World Language	World Language	Elective of Choice
Physical Education/Health	Physical Education/Health	Physical Education/Health	Physical Education/Health
Fine Arts Elective	Elective of Choice	Elective of Choice	Elective of Choice

Courses shown in red denote Academy requirements

**SPECIAL EVENTS...**Each year, sophomore students design and conduct their own experiments. They present their work in a mini-science fair to which teachers, administrators and peers are invited. The Academy has gone on a field trip to see a play about math, Eureka, at the Strand Theatre in Lakewood. Students in the Forensics class visited the CSI exhibit at Discovery Time Square. This year the sophomore class will be visiting the new Museum of Mathematics in New York City. We will also be participating in the Young Women's Conference in Science, Mathematics, Technology and Engineering at Princeton Plasma Physics Lab in March. We have had many interesting guest speakers including a marine scientist, naval architect, civil engineer, representatives from JCP&L, police detective and a computer security specialist.

### WE ARE ON THE WEB!

Several of our Press Releases are available at the following links:

<http://www.rbrhs.org/FA.aspx?ID=1036>

<http://www.rbrhs.org/FA.aspx?ID=999>

<http://www.rbrhs.org/FA.aspx?ID=990>

<http://www.rbrhs.org/FA.aspx?ID=794>