Mid-Hudson Chemist

Fall 2017

National Chemistry Week Local Events

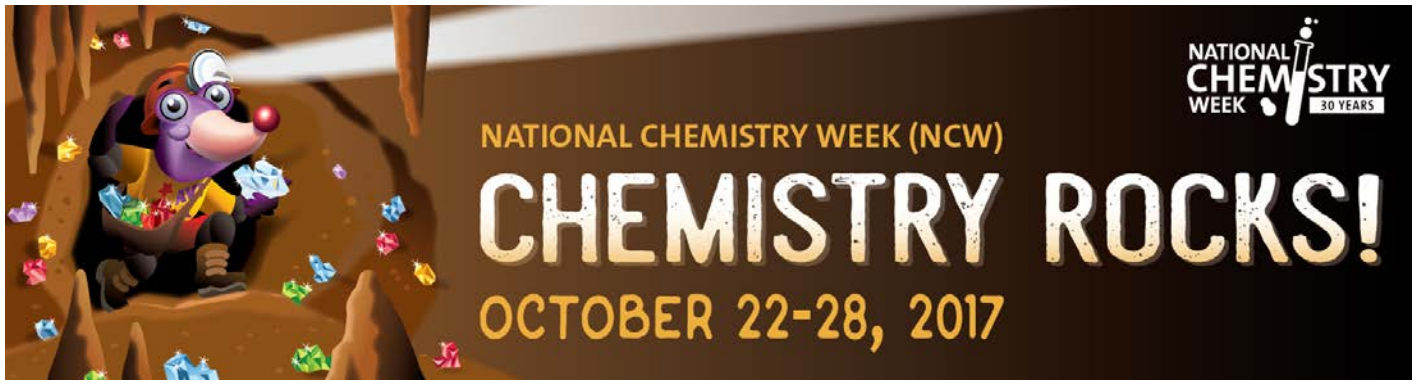
Annual Chemistry College Bowl
Student teams from local colleges compete to show off their knowledge of chemistry trivia! Students of all levels welcome.
Location: **Vassar College**
Date: Tuesday, October 24th, 7:00 pm
Contact: Linda Ferraro (liferraro@vassar.edu)

Family Night

Location: **Mount Saint Mary College**
Date: Friday, October 27th
Contact: Lynn Maelia (Lynn.Maelia@msmc.edu)
Location: **SUNY New Paltz**
Date: Friday, November 3rd, 5:30 pm
Contact: Laura Silvernail (silvernl@newpaltz.edu)
Location: **SUNY Orange**
Date: Friday, November 3rd
Contact: Cynthia MacMahon(cynthiamacmahon@sunyorange.edu)
Location: **Marist College**
Date: Wednesday, November 8th, 7:00 pm
Contact: Jocelyn Nadeau (Jocelyn.Nadeau@marist.edu)

Upcoming Events

The Chemistry of Explosives
Speaker: Dr. Natasha Khatri
Place: Lucas Military Heritage Center, West Point History Museum
Date &Time: November 16th, 7 pm (Refreshments at 6:30 pm)
Please see announcement on page 3.



2017 Executive Committee

Chair: Patti Cusatis; **Chair-Elect:** Lynn Robinson; **Past Chair**: Marianne Scheffler; **Treasurer:** Joan Skinner; **Secretary:** Jocelyn Nadeau; **Councilor:** Mary Dery; **Alternate Councilor:** Timothy MacMahon; **Members–at–Large:** Mary Ellen Sinclair, Christopher Sgro, and Neil Fitzgerald; **NCW Co-Chairs:** Cynthia MacMahon and Timothy MacMahon; **Science Olympiad Chair:** Lynn Maelia; **Awards Co-Chairs:** Patti Cusatis, Lynn Maelia, and Marianne Scheffler; **Government Affairs Chair**: George Ruger; **WCC Chair:** Lynn Robinson; **YCC Chair**: William Maelia; **Publicity Chair:** Chet Dziobkowski; **Webmaster**: William Maelia; ***Mid-Hudson Chemist* Editor/Publisher:** Gissel Mentore

~Join the Mid-Hudson ACS Discussion List~

The following website may be used to subscribe, unsubscribe, or view the archive:

lists.msmc.edu/mailman/listinfo/acs-mh

To post a message to all the list members, send email to acs-mh@lists.msmc.edu.

Mid-Hudson ACS Website: www.midhudsonacs.org

Please visit our updated site and contact our Webmaster (William.Maelia@gmail.com) with your comments or additional items to be posted.

Like us on Facebook: www.facebook.com/MidHudsonACS

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~Join the Mid-Hudson ACS WCC Discussion List~

The following website may be used to subscribe, unsubscribe, or view the archive:

lists.msmc.edu/mailman/listinfo/wcc-mh

To post a message to all the list members, send email to wcc-mh@lists.msmc.edu.

Call for Candidates for the Mid-Hudson Section Executive Board

It is time to elect the executive board members for 2018, and we would like to invite any section members interested in serving on the board to put their names on the ballots.

Positions open for election are: Chair-Elect, Treasurer, Secretary, and Member-at-Large.

To have your name placed on the ballot for consideration, please contact Jocelyn Nadeau (current Secretary, Jocelyn.Nadeau@marist.edu) by October 14, 2017. For nomination purposes, all candidates are required to provide a very short bio for the ballot, which Jocelyn will contact you about before the election.

Hudson Valley Science Café

A Science Café is a monthly gathering in a café, pub or restaurant, open to the public, with a short presentation of a topic followed by discussion. The essence of a Science Café is informality, with groups seated around tables with food and drink to encourage conversation. Hudson Valley Science Café usually meets on the 4th **Wednesday** of the month at 7 pm, from April to November, except where indicated.

Meeting site: La Casa Vicina, 1015 Little Britain Road (Route 207) in New Windsor. Website: LaCasaVicina.com. Please arrive around 6 pm if you want to order dinner. There will be a special menu and you can order until 6:45 pm. The $4.00 admission fee includes coffee or tea. No orders will be taken during the presentation.

October 25 – Genetically Modified Food, Julianna LeMieux, Ph.D., Senior Fellow in Molecular Biology - American Council on Science and Health and Adjunct Instructor of 'Science Forward' at CUNY.

November 29 (Fifth Wednesday) - Evolution, Altruism, and the Advent of Positive Evolutionary Psychology, Glen Geher, Ph.D., Professor of Psychology and Founding Director of Evolutionary Studies, SUNY New Paltz

Website:
www.cafescientifique.org/index.php?option=com_content&view=article&id=196:hudson-valley&catid=78:cafe-pages

Hudson Valley Science Café has received start-up funds from WGBH-NOVA and the American Chemical Society. For information, or to suggest a speaker (yourself included), please contact Dr. Toby Rossman (tobyrossman@yahoo.com).

Hudson Valley Science Café is on Facebook:
www.facebook.com/hudsonvalleysciencecafe

GEMS OF THE HUDSON VALLEY

75th

Mid-Hudson Section

American Chemistry Society

Be a part of our Section CARAT CLUB with attendance to this seminar!!!

Dr. Natasha Khatri, Picatinny Arsenal

The Chemistry of Explosives: From Accidental Discovery through Modern Development

Date and Time: Thursday, November 16, 2017 at 7 pm

Light Refreshments and Social Time: 6:30 pm

There will be time to tour a limited section of the museum following the talk.

Location: Lucas Military Heritage Center in the West Point History Museum

The following link will provide directions and a map as well as information about Lieutenant Colonel Lucas:

https://www.westpoint.army.mil/museumLucasCenter.html

Details of the talk and the speaker to follow. The listserve and website will be updated as we get closer to the event.

2017 College Recognition Awards

The 2017 College Recognition Awards were presented at the Undergraduate Research Symposium held on April 21st at Marist College. The purpose of the award is to recognize achievement in the field of chemistry and to encourage further study in chemistry. One student from each of the colleges in the Mid-Hudson Section were presented with a certificate and a monetary award. The names of the worthy recipients and their research advisors are listed below.

Educational Institution	Student	Student's Hometown	Advisor
Mount Saint Mary College	Ryan Forster	Patterson, NY	Dr. Janet Petroski
United States Military Academy at West Point	Timothy Naudet	Tujunga, CA	Dr. Dawn Riegner
Bard College	Tamaki Chiba	Tochigi, Japan	Dr. Swapan Jain
Vassar College	Bufan Zhang	Beijing, China	Dr. Joe Tanski
SUNY Dutchess	Patrick Powell	Holmes, NY	Dr. Jeff Cavalieri
SUNY Orange	Jacob Jordan	Alaska	Dr. Timothy MacMahon
Marist College	Carolyn Turcotte	Hopewell Junction, NY	Dr. Paula Checchi
SUNY New Paltz	Abigail Fagan	Needham, MA	Dr. Pamela St. John

Our ACS Local Section 75th Diamond Anniversary Tour of the New York State Crime Lab

-Glenn Roy, Ph.D., 30y ACS member, Adjunct Professor at Vassar College.

Where else can you get a glimpse into the plague of crime and drug addiction in our local population than by touring one of the four NY State crime labs?? Our ACS local section tour of the NY State Police Satellite Crime Laboratory facility was an eye opener!!! The new facility has moved to an opulent building design from a previously older building. A perfectly illustrated one hour slide show exhibited the capabilities of the lab to discern the law-breaking evidence of drug trafficking and other crimes. Clearly, the scientists at the facility have a broad knowledge of what illicit drugs are being sold illegally and often collected as evidence.

The tour began with the entrance where every evidential example is logged into a database and secured to a limited access area. Then the expedient analyses begin. The timeline is crucial for court appearances and charges to be levied to the arrested individuals. Traceability of standards and weights, and the evidence chain of custody are paramount to the success of this lab and every lab in NY.

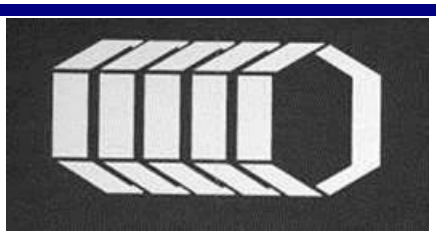
The new lab has received 90% new instrumentation through grant funding and this chemist was thrilled to see Agilent and Perkin Elmer choices. Oh how I love those expensive "toys"! Also developed are optical exams and simple thin layer chromatography profiles for each and every illegal substance brought into evidence.

Commercially available libraries are used for reference comparison by instrumentation to identify the illicit evidence and standards are run for confirmation. There is no question whether fentanyl and carfentanil are involved in trafficking and leading to the increasing overdoses and deaths of addicted drug users. Those drugs are reserved to anesthetize elephants! To that end, for safety of the lab forensic scientists, an isolation hood is provided. Surprisingly, a few grains (the size of a salt granule) of carfentanil can mean death if absorbed by the scientists and/or law enforcement in the field. We are not elephants. New and very unusual structural analogs of mind-altering drugs are also identified. What a wonderful evening of understanding criminology and analytical chemistry!!

Please visit:

https://www.crimemuseum.org/crime-library/forensic-investigation/origins-of-forensic-science/

All publicly funded forensic laboratories in NY State must be accredited to ISO/IEC 17025:2005 for Testing and Calibration Laboratories and the New York State Commission on Forensic Science in order to be operational. There are 20 accredited forensic laboratories throughout New York.



LOCAL STUDENTS WIN CHANCE TO QUALIFY FOR INTERNATIONAL CHEMISTRY OLYMPIAD

Six outstanding high school chemistry students from the Mid-Hudson section participated in the 2017 USNCO national exam at Mount Saint Mary College in April to qualify them to become members of the U.S. National Chemistry Olympiad team. Based on the results of the national exam, twenty students from across the country were selected to undergo intensive training in June at the U.S. Air Force Academy in Colorado Springs. The top four were chosen to represent the U.S. in the International Chemistry Olympiad (IChO) competition in July. Although none of the Mid-Hudson student candidates were the top 20 in the country who passed on to the next level of competition, they should be commended for their outstanding performance on the local exam and their willingness to attempt the grueling 4 hours and 45 minutes of national testing. These students and their faculty mentors are:

Student	School	Mentor
Marcia Cal	Port Jervis High School	James Santos
Karthik Ledalla	John Jay High School	Frank Guglieri
Corrado Mazzarelli	Spackenkill High School	John Latino
Jeremy Webster	Spackenkill High School	John Latino
Justin Yeaple	Valley Central High School	Jennie Sexton
Yi Ling Zhang	Kingston High School	Jim Starr

The Mid-Hudson Section would also like to acknowledge the contributions of the following high school teachers who took the time to encourage students to participate in the local testing. Without their involvement in the process, our local Chemistry Olympiad competition would not be possible. Because of them, 229 students from 11 schools in the area participated in the first round of local section testing from which the top students were selected to take the national exam.

Teacher	**High School**
Jennie Sexton	Valley Central High School
John Donohue	Middletown High School
Frank Guglieri	John Jay High School
Jim Starr	Kingston High School
Veronica O'Donnell	Cornwall Central High School
Mark Tatro	James I. O'Neill High School
Jason Pavlich	Red Hook Central High School
James Santos	Port Jervis HS
John Latino	Spackenkill High School
Christopher Sgro	Highland High School
Gary Gray	Trinity Pawling School

Chemists Celebrate Earth Day Poetry Contest

2017 Winners
Mid-HUDSON local section #106
Theme: Chemistry Helps Feed the World

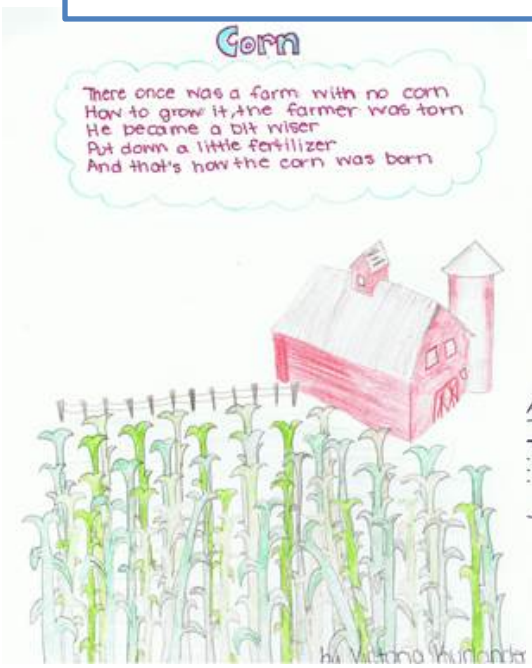
Congratulations to the winners of the Mid-Hudson ACS Chemists Celebrate Earth Day Poetry Contest. Our first place winner in the 9-12 category has also won 2nd place in the national contest.

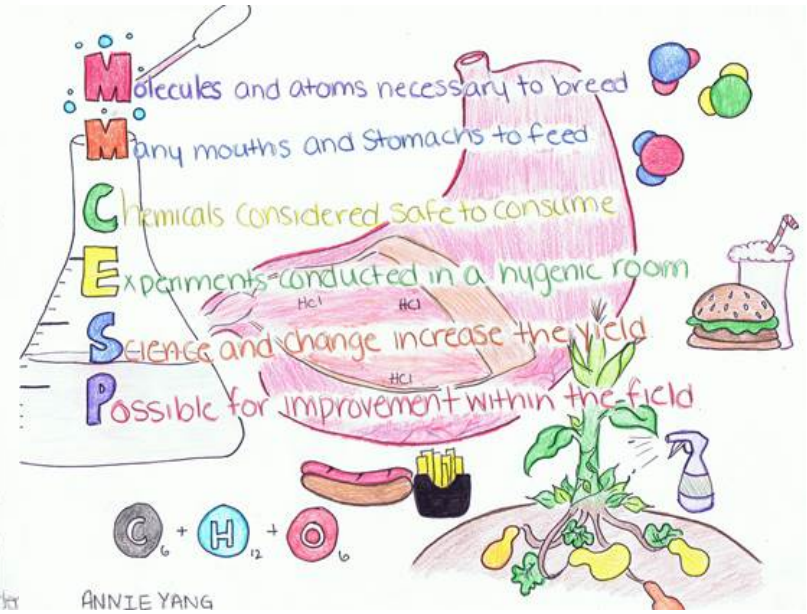
Grades 6-8

1. Victoria Kurlander – Minisink Valley Middle School
2. Kelly Finn – Minisink Valley Middle School
3. Clayton Fogler – Minisink Valley Middle School

Grades 9-12

1. Annie Yang – Newburgh Free Academy ***** 2nd place National winner*****
2. Ethan Husted – Red Hook Central High School
3. Emily Appenzeller – Red Hook Central High School





6-8 - Mid-Hudson winner – Victoria Kurlander

9-12 - Mid-Hudson 1st place winner and ACS National 2nd place winner – Annie Yang

ACS Mid-Hudson Section

58th Dutchess County Regional Science Fair Report – April 1, 2017

Our volunteer judges reviewed very exciting exhibits this year interacting with many young inspiring future scientists at the science fair. A total of **223** exhibits were on display at the Dutchess County Regional Science Fair. Our team reviewed **47** chemistry exhibits, and **29** exhibits in other categories, totaling **76** exhibits. This represents a total of **32%** exhibits reviewed out of **223** projects presented at the fair, which is an amazing accomplishment.

I would like to acknowledge our **Special Judges** who volunteered their time representing the ACS Mid-Hudson Section. Our volunteers performed a fantastic job representing our section as Special Judges at the 58th Dutchess County Regional Science Fair as follows:

Glenn Roy
Jason Wertz
Chi Nyugen
Chi-Lin O'Young
Cynthia Colon
Ellie Vasconez
Larissa Cohen
Nicoline Kiwiet
Elizabeth Harris
Kellan Harris – Future ACS Judge assisting his Mom

Also, I would like to report that an ACS Mid-Hudson Member-at-Large was a competitive judge at the fair and requested our assistance to review a specific exhibit. I would like to acknowledge Larissa Cohen for accepting this urgent request and providing assistance for our section member.

Our judges utilized the Dutchess County Regional Science Fair judging criteria described below:

1. Scientific Thought: (30 points):
The student demonstrates verification of laws, cause and effect, presents models or methods to support scientific facts and theories. The presentation was thorough for the models and methods scientific facts, theories and important scientific concepts.

2. Creative Ability: (30 points):
The student demonstrates creativity for the development of concepts, design, construction and application for the equipment, analysis, interpretation of the data and approach to solving the problem.

3. Skills (15 points):
The student exhibits the skills required to do all the work necessary to obtain the data to support the project. This includes the design, laboratory and computational and observations skills. The student did not need outside help from others. The student built the equipment independently.

4. Thoroughness (15 points):
The exhibit completed the purpose for the subject matter. The conclusions were based on a single experiment or a series of replications. The completeness of the notebook or recordings of the data was presented.

5. Clarity (10 points):
The student was able to describe and discuss the project. Determine if the speech was memorized or had little understanding of the principles.

Respectively yours,

Marianne Scheffler

58th Dutchess County Regional Science Fair Results

Congratulations to the following ACS Mid-Hudson Award Recipients:

Superior ACS Award

Award: $ 50 Barnes & Noble Gift Card / ACS Certificate / ACS Medallion

Category	Grade Level	Student	Exhibit	School
Environment	Senior Division	Matthew Badia	Analysis of Peltandra Virginica Exposed to Varying Concentrations of Fluoxetine, S-Amphetamine, and Triclosan in the Hudson River	Pawling High School
Environment	Senior Division	Meaghan Ranalli	Improving Geothermal Safety with Nanoparticles	John Jay High School

Outstanding ACS Award

Award: $ 25 Barnes & Noble Gift Card / ACS Certificate / ACS Medallion

Category	Grade Level	Student	Exhibit	School
Chemistry	5th Grade	Anna Halstead	Absorbent Polymers	St. Mary's Fishkill
Environment	Senior Division	Dawn Kershaw	Extracting Ethanol from Food Waste for Use as Fuel	Pawling High School
Chemistry	9th Grade	Gillian Marma	Can You Stomach the Burn? A Study of Antacid Potency	Millbrook High School
Biology	Senior Division	Alicia Chu	Cannabiodiol as a Potential Anticonvulsant that Delays Seizures	Pawling High School
Chemistry	6th Grade	Olivia Lucal	Cupcakes and Rulers	Millbrook Middle School
Biology	6th Grade	William Schwiebert	Is Bottled Water Really Better?	St Mary's Wappinger

58th Dutchess County Regional Science Fair Results

Honorable Mention

Award: ACS Certificate / ACS Medallion

Category	Grade Level	Student	Exhibit	School
Chemistry	5th Grade	Matthew Darcy	Pucker Up	Hagan Elementary School
Chemistry	5th Grade	Christopher Primrose	The Energizer Bunny – True or False	St Mary Fishkill
Chemistry	5th Grade	Isabella Haydt	Burnt Cookies; Can You Blame the Cookie Sheet	St Mary Fishkill
Chemistry	6th Grade	Danielle Page	What is the Fastest Method to Cool a Soda	Dutchess Day School
Chemistry	6th Grade	Sadie Krueger	Sour, Bitter, Sweet or Salty?	Millbrook Middle School
Chemistry	6th Grade	Aidan Yen	Juices or Salt? Comparison of Road De-icing Alternatives	Lagrange Middle School
Chemistry	7th Grade	Trinity Ng	Endothermic Reactions	St Martin de Porres
Chemistry	7th Grade	Justin Hilal	Magic Sand	St. Martin de Porres
Chemistry	7th grade	Aidan Bucko	I Must Cashew a Question	Van Wyck Junior HS
Chemistry	7th Grade	Briana Jaldin	Moisturizers: How Efficient Are They?	St Mary Fishkill
Chemistry	7th Grade	Rose Snyder	What Common Household Liquid Had the Greatest Effect on Human Teeth	Linden Avenue Middle School
Chemistry	8th Grade	William Cho	Using a Calorimeter to Find the Amount of Calories in Nuts	Linden Avenue Middle School
Chemistry	7th Grade	Annie Vallamattam	Feeling Frigid	St Mary's Wappinger
Biology	8th Grade	Ameer Hamza	DNA Detective: The Code of Life	Van Wyck Junior HS
Environment	8th Grade	Vasudha Kilambi	Nitrate Leaching by Organic and Inorganic Fertilizers	School not provided
Environment	7th Grade	Seyvion Hargrave	How Do Various Effect Plant Growth	School not provided
Physics	8th Grade	Giancarlo Scolaro	Efficient Electrolytes for Hydrogen Production	School not provided
Physics	7th Grade	Ayanda Nxumalo	How Color Affects Heating by the Absorption of Light	School not provided
Chemistry	Senior Division	Paul Kayla	Which Antacid is Most Effective	School not provided
Chemistry	5th Grade	Adian Rogers	No More Pain – Most Effective Antacid	School not provided