



ALL WINS

Member's Night at the Academy

Friday, September 20th
5:00pm to 9:00pm

Maize Maze, Cherry Crest Farm

Saturday, September 21st
9:00am to 4:00pm

WINS I

First Class of Fall Session

Wednesday, Sept. 11th
4:00pm to 5:30pm

Field Trip! Bronx Zoo

Saturday, Oct. 5th - Meet at the
Academy at 8:00am, back by 7:00pm

Field Trip! - Hawk Mt. Sanctuary

Saturday, October 26th - Meet at the
Academy at 8:00am, back by 4:00pm

Field Trip! - The American Museum of Natural History

Saturday, December 7th - Meet at the
Academy at 8:00am, back by 7:00pm

Dates to Remember...

WINS II

Coastal Geology Workshop

Thursday, September 19th
4:30pm to 6:00pm

College Workshop for Parents & WINS

Thursdays, October 10th
5:30pm to 7:30pm

Malacology / Shell Show

Saturday, October 19th OR
Sunday, October 20th
10:00am to 5:00pm

College Tour - DC & Maryland

November 7th to 10th
Thursday 5:30pm to Sunday 6:00pm

Delaware River Basin Workshop

Thursday, November 21st
4:30pm to 6:00pm

WINS Newsletter

Editors

Betsy Payne
Allison Smith

Contributors

Rabiyatu Jalloh
Nixa Soto
Sandy Tang

Send your comments or questions to:

Betsy Payne, WINS Manager
The Academy of Natural Sciences
of Drexel University
1900 Benjamin Franklin Parkway
Philadelphia, PA 19130
payne@ansp.org
(215) 299-1064
(215) 299-1165 fax

All activities are
rain or shine!

Please let
Ms. Betsy know
if you cannot
make it to an
activity
beforehand.

**Women In Natural
Sciences (WINS)** is an
innovative and successful
science enrichment
program conducted by
the Academy of Natural
Sciences of Drexel Uni-
versity in collaboration
with the School District
of Philadelphia. Since its
founding in 1982, WINS
has been providing
female public school
students with hands-on
science classes, scientific
literacy and skill-building
activities, and opportuni-
ties for personal growth
in a uniquely nurturing
setting.

INSIDE THIS ISSUE:

MAYA Youth Summit 2013 2

My USDA Intern-
ship Experience (cont.) 3

10 Things I Learned 3
in WINS I

Birthday Girls 3

Dates to Remember 4

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Rabiyatu Jalloh

My USDA Internship Experience

Since 2008, ANS has collaborated with the U.S. Department of Agriculture Eastern Regional Research Laboratory in Philadelphia and placed several WINS as interns. This year, Rabiyatu Jalloh, Rayne Green, Stephany Alcantara and Michelle Huynh participated, and at the end of the summer presented what they learned to the USDA staff and the WINS II at the USDA's Federal Women's Program activity commemorating Women's Equality Day. What follows is Rabiyatu Jalloh's experience:

As I was walking into USDA for my first day, I wasn't nervous I was excited, other people had told me how much fun it was. The first day I worked with an analytical chemist named Dr. Steve Lehotay who has been working there for a long time. He explained to me what analytical chemistry is and why it is important in the work he does. Then he showed me how to pipette. We had a contest to see who could do it better - we tied. By the end of the day I really enjoyed my time working with Dr. Lehotay.

The next week I worked with another analytical chemist name Dr. Marilyn Schneider and we did an experiment that was going to help her with a study that she would be participating in, this fall. We worked with beef samples; we injected a drug into the beef, then we extracted the drug from the beef. It was a really long process but it was so much fun! I really enjoyed working with the equipment in the lab.

The following week I worked with Dr. Alan Lightfield and we did an experiment with M&M's and markers so that I could learn about chromatography, which in simpler terms means separation of colors. I separated the M&M's by size and

color, also by the M&M types which was peanut and regular. Dr. Lightfield then showed me how to do TLC (Thin Layer Chromatography) by taking a sheet of special paper making little dots with the different types of markers and placing in a liquid inside a glass container. After a certain amount of time we could see the colors of the different markers separating into different color components. It was a very fun experiment.

I next worked with Dr. Guoying Chen on finding antibiotics in milk. We prepared the samples, and in order to detect the antibiotics we had to use a spectrometer. Dr. Chen showed me the piece of equipment that he designed and built which would detect the antibiotics by light. It amazed me that he created his own machine and he wasn't even an engineer. It taught me that you could do anything you put your mind to.

After working with Dr. Chen, I worked with Dr. Yelena Sapozhikova another chemist, and we worked with polyphenols and antioxidants. We prepared samples of

(cont. pg. 3)



Rabiyatu Jalloh (left) with Dr. Marilyn Schneider, preparing a beef sample that will be used in an experimental process for drug extraction of the beef tissue.



The WINS participants at the 2013 MAYA Summit, from left: Tiffany Allen, the Academy's Early Childhood Educator, Deneisha Cook, Jada Parris, Jayde Hammond, Mahogany Davis and Sandy Tang.

The 2013 Mid-Atlantic YouthALIVE! (MAYA) summit was held in Pittsburgh, PA. This year's theme was "Communicating the Environment". After a long, 5 hour drive, the WINS entered the Andrew Carnegie Museum of Natural History. Just as we walked in, Mahogany, Deneisha, Jayde, Jada, and I were immediately separated into different groups. Although I was anxious and relatively quiet at first, my peers were friendly and welcomed me into their group.

The first activity was to build a sculpture representing a "newly cleared commercial space". We each had so many different ideas; it was refreshing to be able to talk to other students' and see different perspectives on the same task. That served as our introduction to some environmental issues. The second part of the summit's theme was communication. Later on that night we had a theater workshop that taught us how to make learning fun for other kids. After a few tours around the museum, we concluded our first day at MAYA.

The second day we zipped all around the city! One highlight was our visit to the Children's Museum,

where we got to see interactive art exhibits that were meant for kids. Of course, we enjoyed them too! The "gravity room" was my favorite spot in the museum because it was so surreal. After some tours of Pittsburgh's urban gardens, we boarded a bus to the Allegheny River. There we tested water samples, learned about watersheds, and discussed why it's important to keep our rivers clean. To continue the theme of "communicating the environment", we headed back to the museum to end the night with *Wall-E*.

The third day, we had to prepare a presentation. The WINS girls were allowed to stay together, and from the past two days we decided to teach people about safe drinking water. After an hour of rehearsal, we held a mock talk show in the Earth Theater. It was fascinating to see how each group had such different ideas for the presentations; they ranged from skits to raps to narratives. We concluded the night with an exchange of gifts and contact information.



Sandy Tang (right) working the lines collecting water samples from the Allegheny River in Pittsburgh.

The last night was bittersweet, because I was just beginning to make friends there. Time flies when you're having fun! It was sad that the trip had to end, but I was very thankful to have the opportunity to explore a new city, meet new people, and learn new things. It is rare to see such a diverse group of teens come together in one gathering. I was optimistic when we left Pittsburgh, because I know this group of teens will grow up to move forward and do great things with our lives.

Sandy Tang, WINS II

My USDA Internship Experience (cont. from pg. 1)

tea, coffee and juice and then detected the polyphenols and antioxidants using the mass spectrometer.

My time at USDA has been a very unique experience, I feel blessed to have been given this experience. I have learned the outline of analytical chemistry and how it relates to agriculture. I honestly can say that I enjoy science more than I did before and this has encouraged me to consider majoring in Chemistry for undergrad. Thanks to all of the people at USDA and WINS for giving me this extraordinary opportunity. I will forever be grateful.

Rabiyatu Jalloh, WINS II



Rabi demonstrating how to use a pipette during her USDA presentation on her internship experience.

10 Things I Learned in WINS I

As part of a lesson, we asked the girls to write down in their journals 10 things they have learned in WINS I that have really impacted them. Nixa Soto was kind enough to share them with us.

1. The littlest things can impact the water in such a big way.
2. I learned that we take most things in our life for granted.
3. I use over 2,000 gallons of water per week.
4. It is impossible to clean up an oil spill 100%.
5. Some landfills get about 80,000 tons of trash per week.
6. We go way over the limit of the foods we are, and are not supposed to eat.
7. Over 92% of the US Energy that we use is nonrenewable.
8. If miners died, their male children had to take over.
9. Some people in the world live with or under \$2 a day.
10. People in some countries need to work for everything that we have at our fingertips.



Nixa Soto (left) and Jaidah Murray during a WINS I visit to the Parkway.

Happy Birthday!

September

- 1st - Gere Johnson
- 10 - Imani Jackson
- 15 - Deja Paylor
- 28th - Cecile Smith

October

- 2nd - Alicia Vazquez
- 5th - Aurea Stephens
- 6th - Nixa Soto
- 19th - Zania Jones

November

- 7th - Sandy Tang
- 17th - Kajae Pannell
- 18th - DaiJzanaée Martinez
- 18th - Ti'anna Cooper
- 26th - Jacquelyne Ng