

YOUNG WOMEN IN BIO

Young Women In Bio (YWIB) is a nationwide, nonprofit, volunteer organization that encourages young girls to explore opportunities, education, and careers in STEM.

Our Mission: YWIB gives girls the inspiration and support they need to become tomorrow's leaders in science, technology, engineering and math (STEM). As a nonprofit with 13 chapters across the U.S. and Canada, we partner with leading companies, universities, hospitals and organizations to develop engaging, educational and motivational programs. We exist to ignite the curiosity and fuel the passion in girls, supporting them as they shape and change the world.



Igniting curiosity. Inspiring success.

ATLANTA YOUNG WOMEN IN BIO EVENTS 2017 - 2018

Daisy Bourassa joined YWIB March of 2018. She only participated in one of the outreach events during that academic year.

EVENT #1 - Agnes Scott GEMS STEM Day

On April 14, 2018, students from Alcovy High School came to Agnes Scott College for the entire day to attend classes, tour the campus, and participate in different STEM activities with Agnes Scott faculty and students. The high school students were from the "Gift Girls" group at Alcovy. The Agnes Scott students who organized with day are from the Generating Excellence in Math and Science (GEMS) living and learning community. For the YWIB sponsored activity, students extracted DNA from strawberries then looked at the DNA under a microscope.



ATLANTA YOUNG WOMEN IN BIO EVENTS 2018 - 2019

EVENT #1 - Saint Philip AME STEM Fair

YWIB attended the annual church STEM fair and had a great time talking about the structure of a cell.

This was the 11th annual Saint Philips AME Church STEM Fair. The purpose of this fair is to expose K-12 students to S.T.E.M. careers through hands-on activities with professionals in science, engineering, and math, as well as a variety of technical careers. St. Philip's Resource Ministry is working to make sure middle and high school students are exposed to careers to encourage their interest in pursuing S.T.E.M. opportunities.

Exhibitors included TRS Robotics, 3-D Printing, Blueprint Camp LLL, DeKalb County Extension Service 4-H, Young Women in Biology, Clorox, Centers for Disease Control and Prevention (CDC) and others.

Each student who attended received a backpack with school supplies from the church. There was also parent workshops on how to prepare students for college, education resources to compete effectively, and information on summer programs and leadership experiences to supplement students' educational experience.



EVENT #2 Sarah Smith Elementary

On December 4, 2018, YWIB-Atlanta was excited to return to the annual Sarah Smith Elementary STEM Night. YWIB-Atlanta volunteers enjoyed talking with over 400 students and parents about DNA. Students participated in various activities with the YWIB volunteers including coloring a picture of a cell, learning about organelles, creating 3D DNA origami and performing DNA extraction from strawberries! YWIB-Atlanta is extremely thankful for the Agnes Scott College student volunteers.



EVENT #3 - Women in STEM Career Fair Atlanta Jewish Academy

On March 17th, representatives from YWIB Atlanta attended the first ever Young Women In STEM Fair at the Atlanta Jewish Academy. This event was designed to expose female high school students and 8th graders from across the metro Atlanta area to a wide variety of educational and career paths in STEM, connect the girls with women in STEM fields, and help the girls connect with their peers with similar interests. The event included a keynote address by Dr. Lori Zeltser from Columbia University, numerous booths representing places like the CDC and Georgia Department of Public Health (and Women In Bio, of course) to provide the participants with opportunities to meet women who have careers in STEM fields, and break-out sessions meant to give the students a hands-on STEM experience or learn more about a specific topic. YWIB Atlanta volunteers, along with a handful of Agnes Scott College student volunteers, spoke with the young participants who visited the WIB booth to discuss their current interests and future ambitions as well as the volunteers' own careers or studies in STEM and answer the students' questions. The students' interests were varied – from rheumatology to writing – and the WIB and Agnes Scott volunteers were delighted to engage with them and hopefully inspire them to continue exploring the innumerable options available in STEM.

Meanwhile, the break-out sessions were arranged similar to a conference, with the students choosing which of the handful of sessions to attend. YWIB Atlanta facilitated a breakout session titled “From Cups to Cleaner” which focused on green chemistry which had a great turnout. Students were introduced to the 12 principles of green chemistry, learned about renewable resources such as the biodegradable polymer polylactic acid (PLA), and used a simple base hydrolysis to convert a PLA plastic cup into a household cleaning product. Agnes Scott College student volunteers helped WIB volunteers facilitate the “From Cups to Cleaner” session, which also gave the high school students a unique opportunity to connect with women just a bit older than them pursuing STEM majors while they waited for the reaction to complete. Both the high school students and the Agnes Scott College students enjoyed and benefited from the experience – a resounding success!



EVENT #4 - Atlanta Science Festival

On March 23rd, YWIB Atlanta was thrilled to return to the Atlanta Science Festival's Exploration Expo! 22 volunteers (both WIB Atlanta chapter members and undergraduate students from Agnes Scott College) facilitated the activities at the YWIB booth for an estimated 400 visitors. The culminating event of the two-week festival, the Exploration Expo was a free event that drew over 25,000 people to Piedmont Park in downtown Atlanta for a fun-filled day. The Expo featured over 100 interactive

activities and performances celebrating the excitement, diversity, and influence of science, technology, engineering and mathematics in Atlanta.

To celebrate Women's History Month, the Atlanta chapter hosted a booth showcasing demonstrations corresponding to famous women in science. In honor of naturalist and illustrator Maria Sibylla Merian (1647-1717), visitors to the booth in the morning dissected flowers in order to discover the flowers' anatomy and how each part contributes to reproduction. Afternoon visitors had the opportunity to extract DNA from strawberries in honor of Rosalind Franklin (1920-1958), whose contributions to the discovery of the molecular structure of DNA paved the way for today's study of genetics. Visitors were able to learn more about these influential women through discussions with volunteers and handouts to take home. This was a phenomenal event and we hope to return next year!



EVENT #5 - Agnes Scott GEMS STEM Day

On March 29, 2019, students from Alcovy High School came to Agnes Scott College and spent the day attending classes, touring the campus, and participating in different STEM activities with ASC faculty and students. The 20 high school students in attendance were members of the "Gifted Girls" group at Alcovy. The Agnes Scott students who organized the day are representatives of the Generating Excellence in Math and Science (GEMS) living and learning community. This annual event was established by an Agnes Scott College alum to give students from her alma mater the chance to experience STEM resources not available to them otherwise.



For the WIB sponsored activity, students learned about green chemistry and renewable feedstock resources. Students used a plastic cup made from poly-lactic acid and performed base hydrolysis to break the polymer down into lactic acid monomers. The solution was then neutralized and can now be used as a safe, sustainable, household cleaning product. Students were able to bottle the cleaning product and take it home.

Students from both Alcovy and Agnes Scott showed significant interest in learning about the WIB organization and the GEMS were thrilled to have a national organization backing their event as a co-sponsor. The group picture shows students holding cups, cleaning products and the blue WIB keychains, and many are wearing their WIB pins.



ATLANTA YOUNG WOMEN IN BIO EVENTS 2019 - 2020

EVENT #1 - Saint Philip AME STEM Fair

YWIB-Atlanta attended the 12th annual Saint Philip AME Church's STEMS Career Fair (Science, Technology, Engineering, Math & Service) as an exhibitor. The 11 YWIB volunteers had a great time meeting roughly 100 families while showcasing two demonstrations corresponding to famous women in science. The demonstrations included flower dissection for Maria Silbylla Merian and strawberry DNA extraction for Rosalind Franklin.

The purpose of this fair is to expose K-12 students to S.T.E.M. careers through hands-on activities with professionals in science, engineering, and math, as well as a variety of technical careers. St. Philip's Resource Ministry is working to make sure middle and high school students are exposed to careers to encourage their interest in pursuing S.T.E.M. opportunities.

Backpacks with school supplies are given to all registered students and free workshops on college planning and financial aid are available for parents.



EVENT #2 - Girl Scout STEM Expo

On Saturday, October 26, 2019 Dr. Daisy Bourassa and four Agnes Scott College students partnered with the Georgia Intellectual Property Alliance (GIPA) to host a booth as exhibitors at the Girl Scouts Super STEM Expo held at the Delta Flight Museum in Atlanta, GA. Roughly 600 girl scouts and their families attended the STEM expo.

The booth consisted of several activities aimed to inspire girls to think like an inventor and to consider a career in STEM. The activities demonstrated that science and invention is everywhere...even in makeup! As part of the Science of Makeup booth we had three tables that focused intellectual property via patents, trademarks and innovation. Throughout the various tables in the Science of Makeup booth, girl scouts discussed what it means to be an inventor. Why invent something? Where does inspiration come from? Are you meeting a need? Solving a problem? The girls also learned about the importance of trial and error in creating the best product -i.e. special ingredient related to “clean makeup”. Participants even learned about finding the right packaging for a product and creating and protecting the brand – i.e. trademarks and design.

The first table showcased makeup patents, trademarks and related items, i.e. the patent for the eyelash curler, compact, lipstick tube, etc. for the girl scouts to examine. Participants also learned about several women inventors, including Juliette Gordon Low the founder of Girl Scouts. Juliette Gordon Low had two patents, one for a liquid container to use in trash cans and a design patent for a badge shaped like a “Trefoil” symbolizing the three parts to the Girl Scout Promise. Lastly, a local woman inventor was present and displayed the plaques she had for each of her three patents on various types of contact lenses.

The second table featured information on two clean and local makeup brands – The Clove + Hallow makeup line. A representative from Aillea, a clean makeup boutique in Atlanta, was in attendance to discuss the innovative makeup lines and the stories of the local women that created the lines.

At the third table, participants experienced a hands-on extreme wear lipstick trial. This activity showcased the scientific process. The girl scouts were asked to create a hypothesis on how long the lipstick will last. Volunteers helped the girls apply lipstick via a cotton swab and handed out the experiment logs for participants to blot their lips on and record their results and observations.



