



Workshop Highlights

Workshops #9

Our Elementary and Middle School Future Stars, Pluto, and Neptune Scholars learned about and created Electrical Circuits. Under the guidance of YMWIC STEM Educators, Scholars created different types of Electrical Circuits using Snap Circuit kits. Older Scholars were partnered with younger Scholars as they learned about AND Circuits (both switches need to be in the on position for the light to turn on) and OR Circuits (either of the two switches needs to be on for the light to turn on), as well as drawing engineering schematics to represent them.



Jupiter Scholars learned how viruses spread and the preventative measures that can be taken to prevent them from spreading. They did computer simulations to illustrate how a virus spreads through a population. YMWIC's STEM Educators shared why the COVID-19 vaccine was created and how it became ready for public use in a short amount of time.

Saturn Scholars (11th and 12th grade students) and their parents participated in a College Readiness Workshop. YMWIC's College and Career Advisor, Angela Smith, led them through activities that introduced them to the vocabulary of college and other information that many first-generation students may not have readily available, which can sometimes cause undue fear and put them at a disadvantage.

Ms. Smith explained the difference between the Bursar and the Registrar, how credit hours work, as well as what to expect as they transition to college life. She reviewed what to expect on Day One of college. Topics ranged from moving into the dorm, making friends, locating key campus buildings, and saying goodbye to their parents. Ms. Smith even shared embarrassing stories about things that she, as a first-generation college student herself, did not know upon her arrival to college. Scholars and parents were able to ask questions during this popular interactive workshop.



Workshops #13

The 13th workshops were held at West Chester University of Pennsylvania (WCUPA). Future Stars Scholars (3rd and 4th grade) participated in an Anatomy and Physiology experiment where they learned about resting versus active heart rates and learned where one can measure an accurate pulse on the human body. They then rested and did cardiovascular exercises and tested their heart rates after each activity.

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This activity was led by Professors Jennifer Maresh, Eric Sweet, and Michael Rosario with the help of WCUPA undergraduate biology majors.

5th and 6th grade Pluto Scholars performed in a series of Chemistry experiments such as making fog with liquid nitrogen and making objects brittle and breakable by freezing them in liquid nitrogen. They also used a technique called chromatography to separate the colors in inks and developed invisible ink. They learned about the interference and absorption of light in dyes and how we perceive colors. They also made slime and compared the effects of igniting an unreactive gas (argon) with that of a flammable gas (H_2) or an explosive mixture of gases (H_2+O_2). Professor Kurt Kolasinski led these activities with the help of WCUPA seniors Jackie DiPietro, Juliana Hetzel, Allie Pereira-Ogan, Stephen Dilullo, and WCUPA juniors Michael Quagliariello, Ashley Loingnon, Eric Nash, Paker Voit, Ruthy Hunjo, and Amir Sumpter.

Our Neptune Scholars (7th and 8th grade) participated in a Physics experiment that involved analyzing the standing waves produced by a string and a frequency generator. The students learned about resonance and how the frequency a string vibrates at depends on length and tension. This activity was led by Professors Anil Kandalam and Jeffery Sudol with WCUPA undergraduates Alex Piccone and Kenneth Wise.



9th and 10th grade Jupiter Scholars participated in a Physics experiment that involved analyzing the interaction of laser light with different materials. They observed the diffraction pattern of red and green laser light off of lattice structures and determined that the light scattering was influenced by the color of the light. Professor Brandon Mitchell led this activity with WCUPA undergraduates Alex Piccone, Vincent Kane, Gloria Zavala, and Ken Wise.

Biomedical Engineering (BME) was the topic for our 11th and 12 graders (Saturn Scholars). They learned about what BME is and some of the subspecialties such as mechanics, tissue engineering, and artificial organs. They then did an experiment where they could observe electrical signals from their own muscles and correlate this to how they were squeezing stress balls. They got to see firsthand how Biomedical Engineers use technology to acquire and display biological signals. This activity was led by Professors Jesse Placone and Nicole Ramo with WCUPA juniors Alexa Cesari, Shawn Menden, and Cade Stutzman.

At the end, the Scholars were at their best as they recited the YMWIC Credo (photo at left). These workshops were very exciting and beneficial to our Scholars. A special thank you to West Chester University Professors and students.



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Workshops #14

At Workshop 14, Scholars met at our Cheyney University headquarters. They visited the University's Planetarium for an opportunity to watch an exciting show and participate in a STEM workshop led by our STEM Educators, Naomi Hampson and Wanda Allaire. Scholars were split into two groups, one which watched a half-hour Planetarium presentation with Ms. Vanessa Atkins, a professor at Cheyney. After the Planetarium show, Ms. Atkins asked questions to test the Scholars' memory and understanding of the show they had observed.



Ms. Hampson and Ms. Allaire worked with the second group in mini workshops covering a variety of topics. They talked about the Scholars' experiences at the Science Expo, demonstrated robotics and took a brief look at several slides using a small portable microscope. Later in the week with other Chapters, Scholars participated in a workshop, Designing and Running an Experiment. They learned about data-driven experiments, developing a hypothesis, using that hypothesis to design an experiment, and deciding on how many trials should be done. They also discussed controllable and non-controllable variables, learning about careful experimental setup and repeatability.



Parents were able to explore our new Headquarters and afterwards, everyone was treated to a pizza dinner.

