



GEORGE WASHINGTON

# CARVER SCIENCE FAIR

Providing opportunities for students to gain enriched learning experiences through scientific inquiry & discovery

42ND GEORGE WASHINGTON CARVER SCIENCE FAIR

vol . 27

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*Designed and edited by Carver Chronicle Committee*

## ***“Standing on the shoulders of Giants”***



Thomas Anderson Jr. (far left)

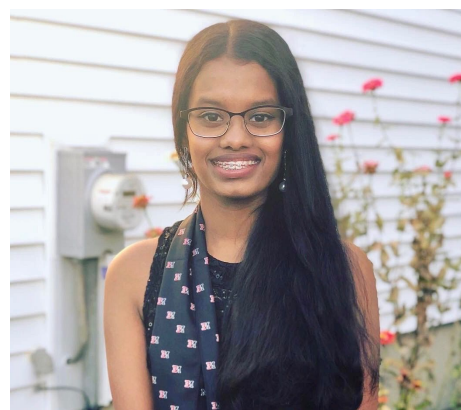
*“If I have seen further, it is by standing on the shoulders of Giants.”* This quote from Issac Newton is famous in the scientific and mathematical community. Researchers interpret this quote as a standard for scientific progress. Others say it is the foundation in which great men and women build for the next generation. The George Washington Carver Science Fair sees this “Giant” as Mr. Thomas Anderson Jr. (1936-2019). In 1976, this fair came into existence on top of the experience, passion and determination of Mr. Anderson, not only to ensure Philadelphia students could explore their inner scientist but to create a culture of learning and success. Building on the legacy of

incredible partnerships such as Temple University, the Academy of Natural Sciences and the Delaware Valley Science Fair, the Carver Fair will continue to endure the changes of the world and advocate for the next generation of musicians, artists, inventors, entrepreneurs, business people, doctors, lawyers, engineers and scientists. We honor and recognize Mr. Thomas Anderson Jr. as the “Giant” we all stand on.

## ***Student Spotlights***

**Aleena Alex**

**Freshman, University of Pennsylvania**



## **Where are you from?**

I reside in Northeast Philadelphia. I am a graduate of Northeast High





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School and am a freshman at the University of Pennsylvania.

### **What are some of your hobbies or things you like to do to occupy your time?**

Apart from my school and extracurricular activities, I love dancing. I focus mostly on Indian dance forms including Bollywood and South Indian folk.

### **What was your last topic chosen for the Carver Fair and why did you pick it?**

The topic I chose for my Carver Science fair project was: *Novel target against CARM1-high HGSOC cells*. I arrived at this topic through my internship which I completed during the summer after my junior year. I got an amazing opportunity to do a research fellowship at Wistar Institute for 8-weeks during the summer. The project I completed during this internship along with some additional remote research was presented during the Carver Science Fair.

### **How did you hear about the Temple Upward Bound program? What was the best part about this program?**

I heard about this program through my high school counselor. I cannot thank them enough for the support and mentorship that led to my

success and achievements, one of them being my acceptance into the University of Pennsylvania. One of the best parts of this program was that it taught me the importance of financial literacy and independence; the mentors put in great efforts into ensuring that college education would not be a financial burden for me and my parents.

### **If you wanted to get other students interested in entering a science fair what are the top two reasons why?**

Being part of the science fair for two years has provided me with personal growth and an ever-ending curiosity for science. You not only get the opportunity to present your project but also get a chance to see and understand the various other projects within the science fair.

Presenting at the science fair has improved my communication and critical thinking skills and it has promoted my passion for science.

### **Plans for the future?**

I look forward to graduating with a B.S in Biology, concentrating in Cellular and Molecular Biology. I am currently conducting research remotely on-campus and look forward to exploring science in general. I am currently a pre-med

student and medicine is my first passion before science. I am hoping to go to medical school after graduation but am still deciding whether to do an M.D or an M.D/PhD program.

### **Parent response: Why is it important to have young people engaged in STEM-related activities?**

STEM-related activities provide several qualities to rising young students. It promotes the quality of innovation and critical thinking. It enhances their ability to problem solve as well as to face challenging outcomes.

### **How has your child's participation in the Carver Science Fair led to other opportunities?**

Through her experience in Science Fair, she has gotten immensely passionate about research, and her passion for science (especially biology) also increased. She loves to begin new projects and is inquisitive about recent medical research and breakthroughs.

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### **Student Spotlights**

**Christopher Sarpong**

**Junior, Philadelphia Military Academy**



#### **Where are you from?**

I am from South Philadelphia, and I go to The Philadelphia Military Academy in North Philadelphia.

#### **What are some of your hobbies or things you like to do to occupy your time?**

Most of my free time is solely dedicated to my extracurricular activities. In debate time, as co-captain, I have the responsibility of making sure that

the new members are able to fully understand the resolution, which is just the topic we are arguing about. But that is not the extent of my responsibility. I am also president of my school's National Honors Society, so I have to direct community service projects, plan meetings and talk to the school's staff about permission for projects and assemblies. Aside from this, I also like to read. I try to read as many books per year as I can.

#### **What was your last topic chosen for the Carver Fair and why did you pick it?**

My topic for the Carver Science Fair was "how does blue light affect the sleep schedule." Blue-light is the most prominent wavelength of light that is produced from artificial light, so this means things like smartphones, laptops, tablets. Blue-light has been a strong culprit of eye diseases, migraines, and destroying sleep schedules. Out of the many facets that blue light can affect, I chose to focus on how blue light affects migraines and the sleep schedule. I chose this because I have always had a hard time sleeping and get migraines and headaches a lot. I also knew that for the majority of my life I exposed myself to blue light, and this was my chance to figure out the correlation and find a solution.

#### **How did you hear about the Temple Upward Bound program? What was the best part about this program?**

I heard about Temple Upward Bound through my school counselor in 9th grade. The best part about the program is the opportunities you get and the strong, stable support system from the Tutor Mentors, advisors, and students.

#### **If you wanted to get other students interested in entering a science fair what are the top two reasons why?**

I would encourage other students to simply ask questions or look at the things they don't understand. In my case, my science fair project came from something I've always known, but never really found out why or if it was true. I simply wrote down "how does blue light affect eye pain?" and after months of research and testing, I know the answer.

#### **Plans for the future?**

My future plans are going to college and getting my master's degree in electrical engineering. Then after college, I would like to work hard and establish a name for myself.

#### **Parent response- Why is it important to have young**



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## people engaged in STEM-related activities?

I think it is important because it keeps young people actively involved in current events. Young people need to keep occupied with something to keep them out of trouble and involved in activities that will keep them engaged in worthwhile activities.

## How has your child's participation in the Carver Science Fair led to other opportunities?

My son has become motivated to learn new things. He enjoys researching topics and finding the answers to difficult problems. He also enjoys group projects and helping others solve problems.

*(Thank you to Upward Bound for student photos and interview responses)*



College of Education and Human Development

Temple Upward Bound Math & Science is a year-round college preparatory program for motivated high school students in Philadelphia. UBMS supports scholar participation in the Carver Science Fair among other opportunities. Interested 8th and

9th graders are eligible to apply. More information and the application can be found at this website:

<https://education.temple.edu/upwardbound>"



*We would like to gratefully acknowledge [STEM Wizard](#), the amazing virtual Science Fair platform keeping Philadelphia region students engaged in Science, Technology, Engineering and Math (STEM).*

*I've found the temporary (I hope...) transition to an online fair has been smoother and more organic than expected. We've had some hiccups, of course, but the willingness of the participants to work virtually has shown that their love of science and competition is still strong."*

*-Erik Wickley-Olsen*

*Moving Carver to a virtual platform has enabled us to become more efficient in how students register and apply to be part of the science fair. Although we can't wait to see the young scientists in person, STEM Wizard can be our on-going application portal.*

*-Dr. Jamie Shuda*

Program Director- Dr. Susan Jansen-Varnum

Program Manager- Tiffany Elbardissi

Program Coordinator- Michelle Drummond

### Executive Committee

Committee Chair- Dr. Nancy Peter

KD Davenport

Dr. Kathy Fadigan

Dr. Jacqueline Genovesi

William Hart

Ambra B. Hook

Dr. Jamie Shuda

Erik Wickley-Olsen

### Members

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*Carver Members cont'd*

Caitlin Hearn

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Emily McGady

Derrick Myers

Betsy Payne

Jayne W. Scott

Tarence Smith

Andrea Swan

Dominique Thomas

Sarah Wengryniuk

Jeremiah White

Jackie Williams

Carole Williams

their willingness and time and we apologize that we ran into some technical issues! Special thanks to those who were willing to help out in other ways like judging.

*A special thank you from the Director of Outreach, Education and Research at the University of Pennsylvania, Jamie Shuda:*

Shout out to Ambra Hook, former SDP Science Director and lifelong teacher. Ambra ensured that all students were provided with the access and opportunity to take part in our virtual fair. Her many hours of dedication are why we are able to host such a successful virtual event. She always champions students first!

***A BIG THANK YOU*** to our sponsors. We could not do this work effectively without your ongoing support.

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*A special thank you from the Director of Science at the School District of Philadelphia, KD Davenport:*

Shout out to the student volunteers who volunteered to review applications. We truly appreciated