



THE GOVERNOR'S SCHOOL for SCIENCE AND TECHNOLOGY



VERIZON APP CHALLENGE

Since 2012, Verizon has issued a challenge to high school students to create an app that will have an impact on their local community or school. The GSST team had to meet



requirements such as size and recruiting an advisor. They then chose a problem they believed they could solve and create a concept idea of what their app would look like, how it would function and how it would meet the needs of the school or community. They were required to submit essays outlining this as well as a 3 minute video which was posted to youtube. GSST boasted a team of five consisting of students from Williamsburg-James City County. They focused on what schools have available and what they

schools have a in place and with an could utilize their eliminating the teacher to provide a computer. In the their youtube.com one of the students

**WINNERS
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BEST IN
STATE
AND
REGION**

need. Most BYOD policy app the students own device need for the laptop or opening of presentation explains “Students don’t feel engaged in class, this is happening with increasing frequency in our math classes causing students to dismiss STEM careers before even getting to higher education”. Another team member mentioned “Games were successful in lower level math class but there has been no equivalent for high school math classes.” The team summed up their goal for their Math I/O app as “revitalizing high schoolers interest in math to better understand the concepts they are being taught”. They were chosen as the one winner for the state of Virginia giving them the opportunity to compete at the regional level comprised of the east coast in which they won. They hope to make their app a reality and we wish them all the best.

Virginia Living’s editorial team has once again named the Governor’s School for Science and Technology to its **Top High Schools and Colleges 2015** list. Virginia Living’s Top High Schools and Colleges 2015 list recognizes schools for excellence and innovation in five categories: Arts and Humanities; Science, Math and Technology; Performing Arts; Health and Medicine; and Capital Improvements.

\$8.8 million in scholarships
GSST Class of 2016 was awarded \$8.8 million in scholarships from numerous top tier colleges and universities!

COCA-COLA SCHOLAR

Quintin Lassiter was named a 2016 Coca-Cola Scholar. He was selected from among over 20,000 applicants and recognized for academic achievement, leadership and commitment to service to school and community.

Quintin nominated Dr. Margaret Mulvey for the Coca-Cola Joseph B. Whitehead Educator of Distinction Award. Mr. Kevin Williams, Manager at Coca-Cola of Yorktown presented the awards.



Newsletter



INTERNATIONAL SCIENCE & ENGINEERING FAIR



GSST seniors, Rhiannon Edwards and Robin Bai, presented their mentorship work at the International Science & Engineering Fair in Phoenix, AZ. ISEF is the most prestigious venue for high school science and engineering work. Rhiannon and Robin were among 1700 students from 75 countries selected to compete.

Odyssey of the Mind



Odyssey of the Mind is an international competition that is focused on creativity and problem solving. The GSST team selected the "Something Fishy" problem and embedded several creative fishing techniques in an 8-minute skit. Teams also have a "spontaneous" challenge on competition day. The team won 2nd place at regionals.

16th Annual CNU Regional High School Mathematics Contest.

CNU High School Math Contest is an annual mathematics competition for high school students in southeastern Virginia. The goal of the competition is to cultivate interest in good mathematics.

Congratulations GSST teams for placing 2nd, highest score and an honorable mention!

The team of Robin Bai - Tabb HS, Macallan (Callie) Cruff - Poquoson HS, Stephen Shamaingar - Jamestown HS, and Samuel Washburn - Poquoson HS, and team Alexandra Kemper - Jamestown HS, Chae Kim - Menchville HS, and James Kirby (joined by an individual student from Tabb High School) **tied for 2nd place in their division!**

Robin Bai was honored for highest score on the Governor's School team, highest scoring senior, and 2nd highest overall score.

Stephen Shamaingar received honorable mention for his individual score.



Virginia Junior Science & Humanities Symposium



Twelve students from The Governor's School for Science and Technology (GSST) presented at the Virginia Junior Science and Humanities Symposium held at James Madison University. The program is designed to challenge and engage students (Grades 9-12) in science, technology, engineering or mathematics (STEM). Students compete by presenting the results of their original research efforts before a panel of judges and an audience of their peers. The Virginia Junior Science and Humanities Symposium is a collaborative effort with the research arm of the Department of Defense and administered in cooperation with nationwide colleges and universities.

GSST students earned 1st place, Earth & Science, 1st Place, Physical Science, 2-2nd place awards in Environmental Science and a 3rd place in Life Sciences.



2016 CAPITOL DAY (AYGS)

GSST students traveled to Richmond to speak with delegates regarding the value of Governor's Schools and the unique opportunities that they provide. Delegates representing each of the areas served by GSST were visited at their offices. Students also had an opportunity to see the House of Delegates in session and tour the capital grounds.

HAMPTON UNIVERSITY PREM PARTNERS WITH GSST

Hampton, VA - An interdisciplinary Hampton University (HU) research team has been awarded a renewable 5-year \$3.0 million grant from the National Science Foundation (NSF) Division of Materials Research's Partnership for Research in Education and Materials (PREM) program that expands an established collaboration between Hampton University-based materials science researchers and colleagues at the Brandeis University Materials Research Science and Engineering Center (MRSEC). The Hampton PREM award of \$600,000 per year will support collaborative research, education, training and outreach activities of the Hampton University faculty, post-doctoral fellows, graduate students, undergraduate students and high school students from New Horizons Governors' School for Science and Technology (GSST). Awarded through a highly competitive process, the project is entitled "Hampton-Brandeis PREM" and is under the direction of Hampton University's Dr. Raymond Samuel and Dr. Deidre Gibson and Brandeis University's Dr. Seth Fraden. Among Hampton PREM investigators and/or collaborators is Ms. Vikki Wismer from the New Horizons GSST. "As the PREM Director of Education and Outreach, we are excited to partner with the GSST, and the Virginia Aquarium to provide materials research opportunities for high school students, HU graduate and undergraduate students and facilitate outreach activities at HU and the Aquarium for the public", said Dr. Deidre Gibson, co-PI and Chair of Marine and Environmental Science.

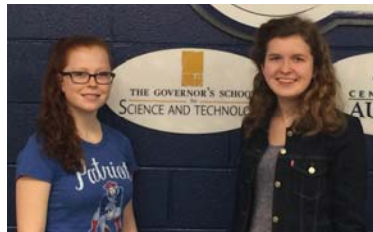


*GSST Scientific Programming Students
Win 2016 NCWIT Award for Aspirations in Computing*

The regional NCWIT (National Center for Women & Information Technology) Award for Aspirations in Computing honors Macallan Cruff, Poquoson HS and Alexandra Kemper, Jamestown HS for their computing-related achievements and interests. Awardees are selected for their computing and IT aptitude, leadership ability, academic history, and plans for post-secondary education. They receive opportunities for scholarships, internships, research experiences, and other educational and employment opportunities provided by NCWIT member organizations. Each local award taps into the powerful network of NCWIT Alliance members: teams from academia, non-profit organizations, startups, and corporations come together to build a community of support for young women interested in computing.

**2016 Virginia & Washington DC
Affiliate Competition Results**

**Macallan Cruff - Winner
Alexandra Kemper -
Runner-Up**



What GSST Students are Saying

"It felt good to be one of a handful of students that had experience with circuitry, so thanks for giving us that experience. Many of the things we are learning in our intro to engineering class remind me of your engineering class, which makes sense, but I just wanted to say that I am grateful to have that prior exposure to engineering you provided for us. I appreciate everything you did for me, from engineering class to the HUNCH team experience. You are a great teacher!"

Kevin Brown, UVA Student
GSST 2015 Alumnus
Excerpt from a letter written to Prof. Walk

Governor's School Alumnus and Virginia Tech freshman Louis Rizzi was recently selected as a NASA Aeronautics Scholar, a competitive award providing a substantial portion of his tuition at Tech and securing him a summer research internship. Louis commented to his senior engineering and physics teacher, Steven Walk, "... I wanted to express my appreciation for your help. Further, having learned technical skills and the conceptual essence of engineering from you has been vital to my success at NASA and with Virginia Tech so far. Time and time again, things I learned in your class, from the technology hype cycle to CAD to problem solving critical thinking skills, have come to



be useful heuristics in my work. I hope future students continue to find the course as insightful as I did, and wish you the best of luck."

ODU 2016 GREAT COMPUTER CHALLENGE

Eleven teams from GSST competed in the "2016 Great Computer Challenge" contest that was held at ODU on March 5, 2016. Following are the results:

- Music Composition** - 1st. place Samantha Lee
- Scientific Programming** - 2nd place: Peter Capriotti and Stephen Shamaingar
- Scientific Programming** - HONORABLE MENTION: Hoon Ho Shin, Andrei Stan and Matt Vick
- Web Design** - 2nd place: Tim Felbinger, Noah Miller, and David Thames
- Scientific Programming** - 3rd place: Fred Doan, Robert Grey, Alexandra Kemper, Brian Van Rosendale and Gabriel Simmons
- Graphic Design** - 3rd place: Celina Pearson and Laurel Vaughan Du

Teacher Highlights



The Technology Enthusiasm award was given to Mr. Sridhar Chinnabhandar (Mr. C) at the 2016 31st Annual Senior Great Computer Challenge at ODU as his passion for the competition is apparent year after year. He has participated for 13 years. This year, he brought teams to compete in the following categories: CAD, Music Composition, JAVA Programming, Scientific/Non-Business Program-

ming, Graphic Design, Video Editing, and Web Design. Out of the 11 teams who competed, 6 placed this year. Mr. C has truly shown the Grace Little Technology Enthusiasm and passion for technology and we appreciate him this week and every week as his passion for learning is shared with his students.

In a letter written to Dr. Rhett Woo the Director, Jack W. Rhodes, Ph.D of the Honors Program at The Citadel, The Military College of South Carolina, extended his praise concerning Tom Hawkins, "He specifically mentioned that you were instrumental in preparing him for success in college. I want to congratulate you for the wonderful job you have done educating him. Tom is doing an excellent job at The Citadel. To begin with, he works hard, something you can take some of the credit for. With a rigorous curriculum taught by faculty, such as you, who uphold high standards, you helped him learn the satisfactions of a job well done. "

Director Highlight

Governor's School Director, Vikki Wismer, participated in the second annual summit to identify solutions to close the excellence gap; the troubling disparity in academic performance between lower income and higher income students at advanced levels. Mrs. Wismer was personally invited by the Cooke Foundation to collaborate with more than 100 other principals, as well as, other school leaders and experts nationwide to learn about cutting-edge research and share best practices for supporting high-achieving, low-income students.

VIRGINIA TECH INSTITUTE FOR CREATIVITY, ARTS & TECHNOLOGY (ICAT)

Governor's School teams competed for honors at the Virginia Tech Institute for Creativity, Arts, and Technology (ICAT) Governor's School Maker Conference on ICAT Day, May 2. The teams earned two of the three top awards at the invitation only event.

The conference **People's Choice Award** was awarded to the team project "DiaBuddy: An integrated macronutrient and insulin management application for diabetics and others". The team included Gabrielle Guill (Team Leader) Smithfield HS, Robin Bai Tabb HS, Abigail Oberdorf Smithfield HS, Waverli Taylor Windsor HS, and Alex Zhou Tabb HS.

The conference **At the Nexus Award** was awarded to the team project "Maestro: A new and intuitive way of making music." The team included Soohyun Yoon (Team Leader) Grafton HS, Trevor Broady Lafayette HS, Claire Du Tabb HS, Diane Park Grafton HS and Cameron ter Horst Lafayette HS.

ICAT at Virginia Tech is a university-level research institute positioned at the nexus of the arts, design, engineering, and science. ICAT was created to promote new, transdisciplinary research domains that transcend boundaries between art, design, engineering, and science to fuel future innovation within local, state, and national industrial partners. The ICAT Governor's School Maker Conference is organized around an invitation-only review of project proposals from select state Governor's Schools. Teams with winning proposals are invited to present their projects at the ICAT Day multi-school competition for top honors. At the 2015 conference, GSST won six out of the seven top extended criteria honors.

The ICAT projects provided one of many



A crowd stops to hear GSST students present their project "DiaBuddy: An integrated macronutrient and insulin

opportunities at the Governor's School for engineering students to understand and experience how the many subjects they have studied – mathematics, the sciences, communications, etc. – relate and cohere in the process of creating original designs for a specific purpose. Senior Physics and Engineering teacher Steve Walk provided the primary team mentoring for the conference projects. Said Professor Walk, "I like the ICAT focus on the need and benefits of creativity and the arts in technological development. ICAT provides students an experience duplicating the real-world challenges of engineering design: understanding and meeting the needs of a client or customer with innovative problem solutions and creative new opportunities. The ICAT project experience can have a deep and compelling influence on a student's professional career choice."



Junior Year Physics teacher Dr. Rhett Woo also attended the ICAT event as chaperone and project mentor. Dr. Woo observed, "I am amazed at the creativity, enthusiasm, and technical skills demonstrated by our students at ICAT. Technological advances and innovation require scientists and engineers of the future to mesh leading edge technology with creative vision. I am so proud of how they performed and the professionalism they exhibited."

Students on the project teams had good things to say about their ICAT Day experience. Alex Zhou of Tabb High School exclaimed, "The whole thing was incredible! I learned the most about the process of presenting and engaging an audience." Soohyun Yoon from Grafton High School summed up her experience, saying,



Students engaged their creative instincts together in the conference workshop "Human Centered Design and Social Impacts" organized by the Virginia Tech branch of

"Having the freedom to engineer any product we could imagine was exciting! It challenged us to find the fun and novel solutions to a real-world opportunity." Windsor High School senior Waverli Taylor added, "We students got to not only present our own ideas, but to go beyond that by learning about related important design issues, and to connect with other students of the same enthusiasm."

The Director of the Governor's School, Vikki Wismer, encourages teachers to have students participate in professional, highly-visible opportunities such as ICAT Day. "The real-world challenges of these events, experienced in a project-based, team-oriented learning environment, are precisely what is needed for the future success of our students. The Governor's School prides itself on offering students expanded learning and personal growth opportunities by providing far-outside-the-classroom-walls experiences such as the ICAT conference."



For more information on the Governor's School for Science and Technology call 757-766-0000 or visit us on the web, www.nhrec.org/governorsschool/.