

DATES TO REMEMBER:

AUG 5-7 ORIENTATION
AUG 20 FIRST DAY OF SCHOOL
FEB 1 2020 PROJECT FORUM

RVGS Newsletter

Issue 7
May 30, 2019

Counselor's Corner

Congratulations, Students and Parents! This is our last newsletter for the 2018-2019 school year, and we have survived! AP and SOL testing is behind us, courses for next year have been chosen, students have completed their final exams, and the halls are sadly quiet. As summer approaches, most all of us are just thinking about enjoying some down time. Spending relaxing time with family and friends is essential to your health and well-being. However, while enjoying this down time, there are things your students can be doing in helping to prepare for the future.

Summer is a great time to explore college options. The internet is a great place to start, but physically visiting campus is essential in making your final selections. It is never too early to begin this exploration. Rising seniors should also begin putting together a resume that includes any school or community organizations they have been involved in as well as community service or volunteer work. Athletics and employment should also be included. Any leadership roles or titles are important to note as well. This resume is an extremely helpful tool for counselors and teachers when writing college and scholarship recommendations. It's also a great way to present your accomplishments to colleges and scholarship committees.

If you have any questions or concerns, please feel free to contact me. I will be in my office through June 12th, and I will return on July 22nd. Have a fun and safe summer!

A Triple Play at ISEF!



ISEF was held this year May 12-17 in Phoenix, Arizona, and our Lab Rats fared remarkably well at the awards ceremony! It's incredibly rare to be recognized at ISEF, but 3 of our 5 projects won awards this year—only one school in the world won more category awards than RVGS. Congratulations to our entire delegation for earning the trip of a lifetime, and THANK YOU ALL for so successfully representing our school!

Here's Luke Suess's first-hand account of his experience:

ISEF in First Person by Luke Suess

ISEF, the International Science and Engineering Fair. Every year the world's brightest, most dedicated, and youngest minds come together to share and compete against each other on the global stage. This year, the Roanoke Valley Governor's School boasted its largest line up of ISEF finalists in school history. ISEF finalist veteran **Logan Dunkenberger** was accompanied by first time finalists **Mary Grace Giles**, **Kevin Sheng**, the team of **Luke Suess** and **Luke Gardner**, and the team of **Erik Scarlatescu** and **Harrison Huang**. Together, along with RVGS physics teacher Dr. Holt, these seven students crossed the continent to exhibit their research and represent RVGS in the Olympics of the science world.

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Message from the Director

It's hard to believe we have reached the end of the 2018-19 school year. I commend our students for their tremendous growth over the course of this year—we recognize your efforts.

As noted in this issue, we are proud to have sent a remarkable five projects from RVGS to ISEF this year, with the students bringing home three grand awards! This is a remarkable achievement that brings pride to the whole RVGS community.

RVGS had a banner year in 2018-19. Some of our top moments include:

- Ranking among the top schools in the world at ISEF
- Earning the most category and grand awards at the state science fair
- Hosting Governor's School students from across the state for the Shelly STEM Challenge
- Focusing on student well-being by encouraging growth mindset and healthy sleep habits
- Providing our students access to nationally known speakers, like Dr. John Mather and Dr. Sandra McGuire, as well as local STEM experts
- Celebrating the Class of 2019's successes as they were offered over \$3.3 million in scholarships
- Exceeding our annual fundraising goal with our community's generous support

I would like to thank the RVGS community for your trust and support as we strive to provide the most impactful and effective educational environment that Virginia has to offer. Have a safe and enjoyable summer!

Virginia State Science and Engineering Fair

VSSEF brings together regional fair winners from a dozen regions across the commonwealth, for a total of more than 200 projects that are judged by 70 experts in higher education and business communities from around the state.

Thanks to the efforts of Mr. Levy and Dr. Dave Trinkle (RVGS parent and VTC's Associate Dean for Community and Culture), **this year's state fair was held on April 6 in Roanoke, at the Berglund Center, where it will also be held again next year.** A total of 18 RVGS projects (22 students) earned a spot at the competition, and a full dozen of them were recognized at the awards ceremony.

Research projects at the state fair are literally the best of the best of the best – meaning the entries have already won at the school, city or county, and regional levels – and being recognized among this select group is a monumental achievement. Please congratulate the

following students who received awards at the state fair:

The Governor's Award (AKA the First Grand Award, which is Best in Show for the state fair): **Mary Grace Giles** for her project titled, "Evaluating the Impact of Coal Ash Pollution through a *C. elegans* Developmental Model". By winning the Governor's Award, Mary Grace earned an all-expense paid trip to ISEF!

Third Grand Award: **Logan Dunkenberger** for her project titled, "Dynamic Roles of Epstein-Barr Virus Reactivation: Identifying novel mechanisms for EBV-positive lymphoma progression and treatment"

First Place: **Logan Dunkenberger** (Glenvar High School) in Cellular and Molecular Biology; **Mary Grace Giles** (Patrick Henry High School) in Earth and Environmental Sciences; **Adi Iyer** (William Byrd High School) in Environmental Engineering

Second Place: **Carly Smith** (Franklin County High School) in Chemistry

Third Place: **Ryan Mollin** (Franklin County High School) in Plant Sciences; **Kunika Tiwari** (Patrick Henry High School) in Earth and Environmental Sciences

Honorable Mention: **Shayom Debo-padhaya** (Salem High School) in Cellular and Molecular Biology; **Elysia Lin and Madison Stein** (Franklin County High School) in Behavioral and Social Sciences; **Billy Luqiu** (Cave Spring High School) in Biochemistry; **Uyen Tran** (William Fleming High School) in Chemistry

Special Awards: **Logan Dunkenberger, Ryan Mollin, Kevin Sheng, and Carly Smith** received special awards totaling \$2,500(!).

CONGRATULATIONS, LAB RATS!

Virginia Junior Academy of Science Symposium

Congratulations to our 11 Gov. Schoolers selected to compete at the Virginia Junior Academy of Science Research Symposium at ODU May 21-23! This year's theme was "Serving the World Through Science," which is exactly what VJAS Committee Chair and 2010 RVGS alum **Se Jeong** does every year by putting on this fantastic competition for students all across Virginia. **Thank you, Se!**



Results are in: **Caroline Grant** and **Maggie Laflam** won an Honorable Mention category award in Botany; **Lauren Frampton** won second place in Microbiology and Cell Biology; **Logan Dunkenberger** won first place in Microbiology and Cell Biology; and **Adi Iyer** won first place in Earth and Environmental Science. Also, **Lauren Frampton** won the Ann M. Hancock Cellular Biology Award for the best paper in cellular biology, and **Logan Dunkenberger** won the Catesby Jones Award for the paper that evidenced the most significant contribution to science at the entire symposium. Wow! Hooray for our Lab Rats! Well done.



Spring Ultimate Frisbee Tournament

This spring's Ultimate Frisbee Tournament was a big success! A total of six teams competed for glory, and "**Bioligarchy**" won the championship. Congratulations, Team! Our semiannual Frisbee tournaments facilitate canned food drives for Feeding America Southwest Virginia — thank you to all of our teams for donating 5 cans per teammate to help feed the hungry: **Bioligarchy, CtrlAltDefeat, Discappointment, Five Guys Burgers and Frisbees, The Dough Boys, and Watermelon.** Well played, everyone!

Senior Dinner 2019



On May 6th, the senior class, their families, the Governor's School's faculty, and RVGS Board and Foundation members all came together at Hotel Roanoke to celebrate our graduates, and it was a night to remember.

Board Chairperson Mark Cathey spoke about the outstanding character of the students, and teacher Brent Holt gave them excellent advice on becoming happy, fulfilled adults. Senior Carly Smith ended her speech encouragingly, with the Gov. School refrain "you will do great," and classmate Ryan Smith ended hers gratefully, by thanking everyone "for making these past four years so amazing." There were silly superlatives, serious awards, a slideshow comparing baby pictures with graduation pictures, and the announcement of our graduates' future academic plans as they walked across the stage.

In her speech, Ryan talked about what the Governor's School has taught her. "Time management," she said, laughing. "Teachers can also be your friends." "High schoolers are capable of more than I ever imagined." "The Govie Gala is superior to all other high school dances." Ryan also said that Gov. School "taught me to be excited about learning," and that no matter who you are or where you're from or what you're into, "the people sitting at your table in class can become your best friends, because there really is no difference between us when we're all trying to survive calculus."

Carly's reflections focused on the "atmosphere of support and acceptance at RVGS," and how it has been the most "exceptional, challenging, and welcoming" place. Gov. School is where she learned that "failure is subjective and temporary," and that "success is not about who you are, but rather it is about what you do compared to what you could have done." She said that graduation is a time to "recognize our successes and appreciate how hard we worked towards them" and to celebrate as a class "how truly awesome we are and all the things that make us unique."

Dr. Holt encouraged the students to take time in college for contemplation, to realize who they are and decide who they want to become. He told them to be kind, to be curious, to stay away from toxic people, and to develop a zest for life. He said our graduates should figure out what their dream is and go for it, because "if you're not working to achieve your own dream, you can bet that what you're actually doing is working to help somebody else achieve theirs." It was an inspiring message, full of wit and wisdom, and a terrific send-off for our seniors.

Next the students "honored" each other with Senior Superlatives such as Most Gullible, Drama King and Queen, Most Likely to Become Internet Famous, and Most Likely to Become a Billionaire. They received their senior pins, Mrs. Sebolt read their self-submitted proudest accomplishments – which ran the gamut from surviving being hit by a car to being awarded a full scholarship to Yale University – and Mr. Levy concluded his third Senior Dinner as the director of RVGS.

As everyone jumped up for hugs and pictures, I sat there a moment thinking if ever a school were able to empower its students to embrace the future, it's this one. These kids are ready, come what may.

-Regina Carson

Congratulations, Class

CAVE SPRING HIGH SCHOOL:

Allison Henion Virginia Tech
 Claire Lawson Virginia Tech
 Billy Luqiu Duke University

FRANKLIN COUNTY HIGH SCHOOL:

Ashley Dillon Duke Kunshan University (China)
 Jenny Fike Virginia Tech
 Brady Holbrook University of Virginia
 Elysia Lin Virginia Commonwealth University
 Jacob McCall North Carolina State University
 Hannah Mollin University of Virginia
 Chloe Newbill University of North Carolina
 Clayton Peters Virginia Tech
 Nicholas Peters Virginia Tech
 Nellie Philpott University of Virginia
 Carly Smith Stanford University
 Madison Stein Harvard, after gap year
 Lauren Thornton Virginia Commonwealth University

GLENVAR HIGH SCHOOL:

Logan Dunkenberger Stanford University

HIDDEN VALLEY HIGH SCHOOL:

Harrison Huang Duke University

PATRICK HENRY HIGH SCHOOL:

Ashlyn Boothe Virginia Tech
 Crawford Higgins University of Virginia
 Maya Ingram Yale University
 Kenyon John University of North Carolina
 Kevin Kelley University of Virginia
 Jonah Keyser-Rothgery Virginia Tech
 Camryn Koviak University of Virginia
 Justin Kreft Culinary Institute of America
 Caroline Kulp University of Virginia
 Anthony LeConte Virginia Tech
 Walker Long University of Virginia
 Haley McAden William & Mary
 Caleb McMurtry George Mason University
 Amanda Miller Gap year
 Giselle Pfaeffle University of Virginia
 Louisa Prillaman University of Virginia
 Michaela Robertson Virginia Tech
 John Smith, V Vanderbilt University
 Ryan Smith University of Virginia
 Shelby Stanley Davidson College
 Elliana Stratton Christopher Newport University
 Reid Tenzer Lewis & Clark College
 Morgan Thompson Virginia Tech
 Kunika Tiwari Virginia Tech
 Luke Waldenstrom Belmont University

LORD BOTETOURT HIGH SCHOOL:

Brooklyn Shelton New York University
 Yasmin Sykes University of Richmond
 Luke Wallace Virginia Tech

STAUNTON RIVER HIGH SCHOOL:

Wes Givens Virginia Tech

WILLIAM BYRD HIGH SCHOOL:

Abbey Ingram University of Virginia

SALEM HIGH SCHOOL:

Valerie Ballard Virginia Tech
 Shayom Debopadhyaya Rensselaer Polytechnic Institute
 Carson Pugh Virginia Tech
 Charlie Wallace University of North Carolina



ISEF in First Person, cont'd

by Luke Suess

This year, ISEF was hosted in the beautiful city of Phoenix, AZ. Our seven finalists would join over 1,800 students from over 80 different countries and territories to participate in a week full of festivities. Leaving early Sunday morning, our students met the dry heat and rugged landscaped of the Arizona desert as they landed in the City of the Sun. After setting up projects in the convention center, they first went to the student pin exchange. Hosted in a large ballroom, students mixed and milled around the room, striking up conversation and exchanging pins from their home country or state. A true representation of the world's mosaic of culture, students dressed in Japanese kimonos, traditional Arabian robes, cowboy hats, German lederhosen, and countless other traditional wardrobes celebrated their origins and learned about their peers.

Next on the ISEF itinerary was Monday evening's Opening Ceremony. This ceremony kickstarted the week's festivities and set the tone for an amazing week. Finalists listened to Feng Zheng, the scientist who developed CRISPR, the DNA cut and paste tool, deliver an inspiring speech about the importance of inspiration, collaboration, and dedication. Following the keynote speaker was the International Shout Outs. Representatives from every country and territory were called up on stage, giving students an opportunity to display national pride and celebrate their culture and country. At the end of the shout out, all the representatives lined up on the stage served as a vivid visual image that innovation and problem solving in the modern world necessitate collaboration of diverse perspectives.

On Tuesday, the day before judging, our Gov. School group headed out for a day trip to Sedona for some sight-seeing. Everyone on the trip would agree that the two-hour drive was well worth the time. Upon reaching Sedona, our finalists were confronted with one of the most beautiful geological features in the world. An army of banded red sandstone cliffs and crimson mesas rose out of the desert floor, soaring thousands of feet in the air, serving as a powerful reminder of the magnificence of nature. Our students spent the afternoon by a stream nestled in a lush gorge cutting its way through the bone-dry desert. A short expedition led to the discovery of a deep swimming hole lined with rock ledges that acted as natural high dives for our adventurous group of students. After an afternoon of swimming, cliff jumping, and basking in the sun, our students returned to the hotel to get some much-needed rest for the marathon of judging awaiting in the morning.

The expedition to Sedona was only one of three outdoor adventures. The day before, our students summited Superstition Mountain, a winding trail climbing into a narrow canyon that finally arrives at a breathtaking view over sandstone cliff. On Friday, before returning home, our students hiked in the rocky ridges bordering Phoenix. After a grueling mile climb, our students were rewarded with sweeping vistas of barren desert and distant mountains, untouched by the hand of human civilization. All three adventures into the Arizona desert wilderness inspired our students by reminding them of the magnitude and beauty of nature. In stark contrast with the accumulation of human knowledge seen at ISEF, nature in its mysterious beauty reminded our students how much is still left to discover.

Wednesday morning brought the anticipation of a long day of judging. Starting at 8:00 AM and lasting until 4:30 PM, judges interviewed all 1,800+ students for an all-day judging marathon. All the RVGS students reported feeling confident in their judging, and despite the longevity of the judging period, enjoyed sharing their year's worth of hard work with world class professionals volunteering as judges. At 4:30 our students headed back to their hotel to rest and relax before the Student Mixer. Starting at 7:00 and ending at 10:00, ISEF put on an electrifying dance party for students to let loose after a stressful day of judging.

With all the hard work finished for the week, our students had the opportunity to share and explain their projects to the public during the Open House on Thursday. In addition to interested citizens of Phoenix, parents of students, and college recruiters, hundreds of students of all grade levels from the Phoenix area roamed the maze of boards, finding inspiration and new ideas with every turn. After the open house, the RVGS students spent the afternoon at the movies before returning to the convention center for the special awards ceremony. During the ceremony, organizations, corporations, colleges and even the King of Saudi Arabia awarded projects with a total of over 5 million dollars in prize money and scholarships.

On Friday, the last day of the long, exciting week, the Grand Awards ceremony concluded Intel ISEF 2019. Fourth, Third, Second, First, best in category awards were given to projects in every category. At the end, 3 projects were chosen for the overall Grand awards, two with a cash prize of \$50,000 and one with, in addition to the title of the winner of Intel ISEF 2019, a \$75,000 prize. The Governor's School had their strongest year ever, with three out of our five projects placing. Mary Grace Giles and Kevin Sheng both secured fourth place awards. Logan Dunkenberger followed up her best in category award from last year with the second-place award this year. In doing so, she further distinguished herself as the most decorated ISEF finalist in RVGS history. With the close of the Grand Award ceremonies, the amazing week finally came to a close. The Roanoke Valley Governor's School left its mark at Intel ISEF 2019, but ISEF, with its priceless educational opportunities and once in a lifetime experiences, left its mark on all our finalists, a mark that will continue to influence them for the rest of their lives.