

NEXT MONTH:

SEPT 4 NO SCHOOL
SEPT 26 ALL DAY
ELECTIVE
SEPT 27 INTERIM I



New Initiative Begins at RVGS

The Governor's School staff is excited to introduce a new program to our school, *RVGS Determined*. The goal of this initiative is for every student to benefit from a school-wide culture of growth that facilitates personal improvement and intrinsic motivation. The program developed from a recognized need to appropriately address the challenges- and future opportunities- experienced by our gifted population of students.

Planning began last spring, with the teachers collaboratively reviewing information from student discussions, survey results, classroom experiences, and research in psychology and cognitive science. These efforts facilitated the development of priorities and principles tailored to the needs of our student body. Insights and inspiration were also drawn from last year's academic

workshop series offered with support from Dr. Jill Weber. *RVGS Determined* is centered on the core principles of Reflection, Virtue, Growth, Goal-Setting, and Determination. A growing pool of research points to traits such as perseverance, grit, and growth-mindset being key factors in success and goal achievement. Through engagement with the *RVGS Determined* principles, we hope to provide our students with the tools necessary for long-term success.

In addition to focusing on the principles listed above, the program will feature a series of in-class growth activities, with the intent of encouraging active discussion and reflection by our students. Support and structure for active goal-setting will also be provided to encourage our students to create a framework for students to reach their fullest potential.

The RVGS staff took a few moments from their busy preparation for the opening of school to enjoy the recent eclipse!

Counselor's Corner

Welcome! I am excited to be working with you again as your RVGS Guidance Counselor. I hope you have all had a fun-filled summer and are ready for the exciting year we have ahead of us. As we are approaching the beginning of a new school year, I want to inform the new students and parents, as well as remind the returning students and parents about my Guidance Page on the RVGS website. This page contains multiple resources for students and parents that include college planning, scholarships, study skills and upcoming opportunities. I keep this page updated, so please check it periodically. The web address is www.rvgs.k12.va.us.

There will be many things going on this fall, but I want to point out a few things to look for. I will be going into classrooms and meeting with new students throughout the first semester to discuss study skills and time management. I will also be meeting with new students individually to create an academic profile/overview of their high school and college plans and to check in to see how the first semester is going. I will also hold review sessions with Juniors and Seniors to go over the college process and where they should be at this point in their high school careers. If you have specific questions or concerns, I am happy to meet with your student (or you and your student) individually. As always, please feel free to call or email me with any questions or concerns you may have.

Message from the Director

Welcome back for another new and exciting school year. The staff and I are enthusiastic to see our returning students back in the building and to meet our new RVGS 'Lab Rats'!

In addition to continuing with our tradition of strong instruction and rigorous courses, we have some new additions and changes that we believe will continue to grow our school. Along with our new RVGS Determined program, described in this month's newsletter, we have added new course offerings and opportunities for students. Our engineering electives are evolving to include more hands-on experience with fabrication, focusing on 3D printing, laser-cutting, and use of Arduino microprocessors. Our AP Statistics course now provides dual-enrollment credit, expanding our dual-enrollment offerings to five courses. Additionally, our physics classes, both first year and AP, will broaden applications of technology and programming to further supplement our existing instruction in Python coding skills through math classes.

Among the new additions at RVGS this year, we welcome four new staff members. While we will miss our departed staff members, we worked hard in the spring to successfully recruit a group of highly talented and dedicated teachers. Please join me in welcoming them:

- Mrs. Nancy Aldridge— RVGS Physics, Engineering Design and Fabrication
- Mr. Matthew Browning— Algebra II, AP/DE Statistics, Fundamentals of Research
- Mr. Brandon Taylor— AP Calculus AB, AP Calculus BC, Research Statistics
- Mrs. Joanne Villers— RVGS Chemistry, AP Environmental Science, Environmental Research

Please always feel free to contact me if you have any questions, comments or concerns.

PROJECT FORUM

The 2017-2018 RVGS Project Forum will take place on Saturday, February 3rd. The inclement weather date is Saturday, February 10th. Please mark both of these on your calendar and keep them free of conflicts.





William & Mary Leadership Award

The 2017 recipient of the William & Mary Leadership Award for the Roanoke Valley Governor's School was Madison Duval (PHHS).

The William & Mary Leadership Award is presented to the one Junior who best exemplifies the spirit of the Roanoke Valley Governor's School. Award recipients are selected because of their demonstration of the

following: inspirational leadership, outstanding scholarship, and unwavering loyalty to the high school and community. William & Mary has set the tone for both leadership and higher education since its founding in 1693.

Congratulations Madison!



Mr. Browning and his wife had their first child, Elliana, in July! Congratulations to the Browning family.

Teacher Spotlight on Mrs. Jo Villers

Chances are, Ms. Villers' dinner last night was fully home-grown, but not in the traditional sense. Her salads are picked from plants and weeds in her yard, and she pairs them with complementary honey wine poured from her own meadery. Ms. Villers and her husband are environmental scientists, and chemists, and what's found in nature is part of everything they do.

"We love the outdoors," she said, "and when we're out we'll often gather wild violets, dandelions, daylily buds, mustard greens, lamb's quarters – those taste like spinach – and one time we even caught and sautéed grasshoppers. We like to go mushroom hunting near the Carroll County/Floyd County border, and our favorites are morels and chanterelles.

Yum! You can make a meal pretty quickly if you know what to look for." WOW! Who knew? And the meadery? "That was my husband's idea," she said, laughing.

In 2004, the Villers purchased 12 acres of farmland as a "haven from I95 and suburbia," and a year later, they bought three hives (150,000 bees). They opened Blacksnake Meadery the very next year, over a decade ago now, and Steve retired from full-time teaching last year to be able to spend more time at the meadery.

"We share the responsibilities," she said, "but my husband does most of the work now, and I help take care of the bees when I can. We have 29 hives at six different bee yards, and I love everything about the bees, even the smell. Just watching them come in and out of the hive is mesmerizing. I love to watch the bees clean up after we harvest the honey, and most years I'll cut the caps off, spin the honey, and make candles from the wax cappings."

Before Ms. Villers became a candlemaker, a beekeeper, a meadmaker, and a forager, she was a biochemistry student at Penn State. She planned to work in a lab in cancer research, but fell in love with teaching while serving as a professor's TA. She earned her master's through the Mississippi Teacher Corps, a program that recruits college graduates to teach in Mississippi's most critical-need areas, and she has spent the last 10 of her 22 years of teaching at Patrick Henry High School, just a stone's throw away

from RVGS.

At PH Ms. Villers taught chemistry, AP chemistry, biology, and AP environmental science (APES), and at the Governor's School, she'll teach chemistry, APES, and environmental research. She also served as an AP Environmental Science Reader for five years, from 2010-2014. This means she flew to Cincinnati each spring to help grade the national APES exams, which, of course, bodes very well for our students who are hoping for a 5 on the exam in May.

Originally from Bristol, Ms. Villers has made quite a roundabout path to get back to this part of Virginia, "home," where she can see the mountains every day, walk to work, and enjoy the outdoors as much as possible. In her very limited free time, Ms. Villers enjoys music – she's been to concerts at Red Rocks and is a regular at FloydFest – cooking – "especially the chemistry of cooking and anything to do with fermentation" – and travel – she's visited 49 of the 50 states (Hawaii).

Just this summer, the Villers completed honey sensory training in Bologna, Italy (!), and opened The Hive, a tasting room in Roanoke that showcases their offerings of honey and mead, as well as regional ciders and wines. The Villers are as busy as the bees they keep, and who better to keep our kids buzzing than a teacher who absolutely personifies what she teaches? Welcome to Gov. School, Ms. Villers! We are so happy to have you!

-Regina Carson



Mrs. Villers and her husband, Steve, decked out in this season's trendy bee-keeper fashions.

It was a STEM Summer for these Students!

Holly Acker volunteered with summer camps for elementary-aged children at the Science Museum of Western Virginia.

Sarah Carista worked in Chron's disease research with Dr. Aubrey Knight at Carilion Clinic and Dr. Douglas Grider at Dominion Pathology.

Wells Carson completed Emergency Medical Technician coursework and training at Jefferson College of Health Sciences.

Shayom Debopadhaya attended the Virginia Department of Education's Summer Residential Governor's School for Medicine and Health Sciences and also participated in research at the Valdez Lab at VTCRI.

Olivia DeMattia shadowed doctors in the anesthesia department at Carilion Clinic.

Shannon Filer participated in the forestry session of an ecology program through Dabney S. Lancaster Community College that included field research and tree identification.

Kathryn Fink worked in vascular biology research at the Chappell Lab at VTCRI.

Christine Flora began her RVGS research project at the Chappell Lab at VTCRI.

Lauren Frampton attended the Virginia Tech College of Science's annual NanoCamp focused on nanotechnology, engineering, and medicine.

Henry Holbrook attended a C++ coding camp at the University of Virginia.

Abigail Ingram attended the University of Virginia's Advance summer residential program.

Kailyn Janiga attended the Virginia Aerospace Science and Technology Scholars (VASTS) program at Langley geared towards

designing a human mission to Mars.

Mattie Rose Keely worked on cyanobacteria extractions with Dr. Eva Collakova at Virginia Tech.

Kenneth King worked as an intern for engineering firm AECOM scouting sections of I-77 roadway and researching the history of the Wasena Bridge as they prepare to rebuild it.

Robert Kreft worked on multiple projects in multiple fields of engineering through Project Catapult, the technology behind Microsoft's hyperscale acceleration fabric.

Elysia Lin attended the VDOE's Summer Residential Governor's School for Mathematics, Science and Technology and also volunteered at the Science Museum of Western Virginia.

Maddie Nichols worked with Dr. Jim Westwood on parasitic plant research at Virginia Tech.

Dino Oikonomou, attended the Virginia Tech College of Science's annual NanoCamp focused on nanotechnology, engineering, and medicine.

London Paige attended Building Leaders for Advancing Science and Technology (BLAST) camp at Virginia Tech.

Maria Parnell began her RVGS research project at Kristin Knight's lab at Carilion Clinic.

Kate Pufko attended the VASTS aerospace engineering and design summer academy at NASA Langley Research Facility and began her RVGS research project examining the neurologic effects of ketosis at the LaConte Lab at VTCRI.

Richard Qiu completed an internship operating an electron microscope and writing electron micrograph post-processing software at the NASA Langley Research Center.

Erik Scarlatescu completed an internship with Dr. Stephen LaConte at VTCRI.

Bea Schleupner worked with Dr. Debbie Kelly on cancer research at VTCRI.

Kevin Sheng participated in glioblastoma research at Dr. Samy Lamouille's lab at VTCRI.

Jack Sherman completed an internship at the Virginia Department of Environmental Quality.

Carly Smith attended the Summer Residential Governor's School for Math, Science, and Technology, participating in classes such as Body Quest, Planet Hunting, Life of the Antarctic, Life of the African Plains, Space Life Conspiracy, and Art in Therapy.

Yasmin Sykes attended a field program through the Chesapeake Bay Foundation where she learned about the biology of the Chesapeake Bay and ways to conserve it.

Owen Trinkle worked in ALS research at the Valdez Lab at VTCRI and completed an internship at DESA, a start-up company developing a cognitive test app.

Erin Wienke worked in plant research with Dr. Eva Collakova at Virginia Tech and volunteered as a camp counselor at the Science Museum of Western Virginia.

Cabell Ann Whitlow shadowed doctors in the anesthesia department at Carilion Clinic.

Ashlyn Wolfe began her RVGS research project in Alzheimer's disease at Jefferson College of Health Sciences.



STEM Experiences for the Teachers as Well

Our teachers are always on the lookout for professional development opportunities! Here are some of the **STEM activities** our faculty participated in over the summer:

Materials Science Camp for Teachers sponsored by ASM International – a week of hands-on experiments and learning about the uses, properties, and behaviors of various ceramics, composites, polymers, and metals.

Virginia's Save our Streams certified stream monitor program administered by Western Virginia Water Authority – class-

room and field work to train monitors to identify macroinvertebrates and collect data on the health of streams in Roanoke City.

Design of Architectural Structures course at Radford University – drawing shear force and bending moment diagrams as well as solving equilibrium equations to compute support reactions of determinant beams under various loading conditions.

Also, one faculty member **took a Statistics course** at Virginia Western, one **taught a Biology course** at Virginia Western, and all of them participated in several weeks of **colleague collaboration** to enrich Gov. School coursework for the coming year.