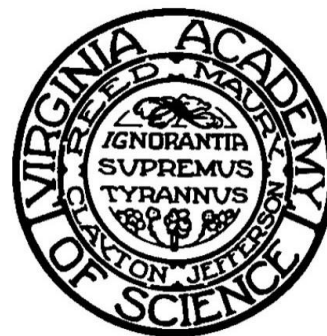
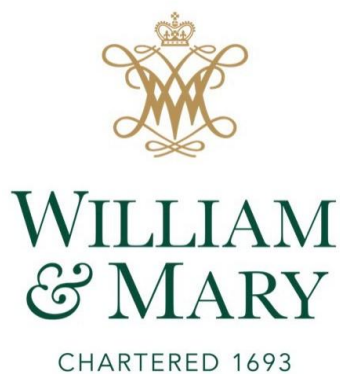


Virginia Junior Academy of Science Research Symposium and 82nd Annual Meeting

May 5, 2023 - General Session
May 6, 2023 - Student Presentations
May 18, 2023 - Awards Ceremony



A Program of The Virginia Academy of Science

Virtual Research Symposium, hosted by
The College of William & Mary
Williamsburg, Virginia
Program is available on the VJAS website www.vjas.org

The Virginia Academy of Science

The Virginia Academy of Science (VAS) is the fifth largest state, region, or city academy of science in the U.S.; it was founded in 1923 to promote the civic, academic, agricultural, industrial, and commercial welfare of the people of Virginia. Exemplary programs have included Flora of Richmond and Vicinity, Published, 1930, the first comprehensive multidisciplinary studies of the James River Basin and the Great Dismal Swamp, volunteer research assistance to Virginia in the instance of the Kepone pollution disaster, and leadership in establishing the Science Museum of Virginia.

Fall Undergraduate Research Meeting:

The focus of this meeting is support of undergraduate student research. Specific details about the 2021 Fall Undergraduate Research Meeting, including the location and date will be made available on the VAS website (www.vacadsci.org) during the summer.

The Virginia Junior Academy of Science

VJAS is a national model for the new and renewing state junior academies and has been ranked among the top three in the nation for over two decades. Through VJAS and other programs, VAS annually reaches over 40,000 Virginia middle and high school students. Hundreds of volunteers make it possible for Virginia secondary students to experience these activities.

The College of William & Mary

The Virginia Academy of Science and the Virginia Junior Academy of Science express their sincere appreciation to The College of William & Mary for the generous support in providing web conferencing meeting rooms and services.

A Tradition of Excellence, A Commitment to Action

Join the Virginia Academy of Science

Support the Virginia Academy of Science

Contributors and Supporters

The Virginia Academy of Science and The Virginia Junior Academy of Science notes with appreciation the contribution and support of hundreds of individuals and dozens of organizations to the success of this year's Research Symposium and Annual Meeting.

VJAS Awards and Sponsors:

American Association for the Advancement of Science American Junior Academy of Science

American Naval Engineers

Ann Hancock Fund Botany Award

Carpenter and Berry Funds

Catesby Jones Fund

Dr. and Mrs. Preston Leake - Applied Chemistry Award

Dr. Russell Rowlett

Dorothy Knowlton Fund

Ertle Thompson

AJAS Fellowship

Friends of the Virginia Museum of Natural History Genetics Award

Gwathmey Chemistry Awards Jeffers Fund

Joyce Peterson Fund

National Association of Academies of Science

R. Dean Decker Honorarium

Richmond Area Speleological Society

Roscoe Hughes Memorial Award

The Virginia Academy of Science

The Virginia Psychological Foundation

Virginia Association for Biological Education (VABE)

Virginia Chapter, National Foundation for Infectious Diseases

Virginia Division, American Cancer Society

Virginia Marine Science Consortium, Virginia Sea Grant College Program

Virginia Tech Chapter, Gamma Sigma Delta (Agriculture)

Sponsors of VJAS Scholarships:

Bethel High School VJAS Science Club Old Dominion University

The Virginia Environmental Endowment

Virginia Ellet

Sponsors of VJAS Research Grants Fund:

The Virginia Academy of Science

Virginia Environmental Business Council

Officers of The Virginia Academy of Science

President.....Deborah Neely-Fisher, Reynolds Community College
President-Elect.....Conley McMullen, James Madison University
Vice President.....Parrish Waters, University of Mary Washington
Secretary.....Christopher R. Osgood, Old Dominion University
Treasurer.....April Wynn, University of Mary Washington
Executive Officer.....Philip M. Sheridan
Executive Officer Emeritus.....Arthur F. Conway
Associate Executive Officer.....Carolyn M. Conway

Virginia Junior Academy of Science

VJAS Committee Chair.....Se W. Jeong
VJAS Committee Vice Chair.....Michael E. Lovrencic
VJAS Director.....Susan P. Booth
VJAS Associate Director.....Robin W. Curtis

VJAS Student Officers

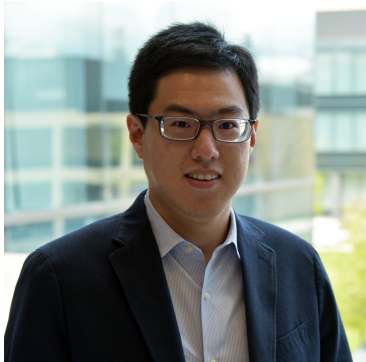
VJAS Co-President.....Arman Lateef, Governor’s School @ Innovation Park
VJAS Co- President.....Laasya Konidala, Mills E. Godwin High School
VJAS Vice President.....Charlotte Cunningham, Washington-Liberty High School
VJAS Secretary.....Yash Saxena, Maggie L. Walker Governor’s School
VJAS Co-Editor-in-Chief.....Jacob Tiller, Central Valley Governor’s School
VJAS Co-Editor-in-Chief.....Rania Lateef, Charles Colgan High School
VJAS Communication Liaison.....Nitya Kumar, Douglas Southall Freeman High school
Officer Alumni.....Kayla Holston

Advisory Committee Members.....
Lynn Tao, Sriyutha Morishetty, Harris Ilyas, Justin Kim

The College of William & Mary Local Arrangements Chair

Local Arrangements Chair.....Joshua Erlich

VJAS Committee Chair's Welcome



May 5, 2023

Dear Virginia Junior Academy of Science participants,

On behalf of the Virginia Junior Academy of Science Team and Committee, I would like to extend the warmest welcome to each and every one to the 82nd Virginia Junior Academy of Science (VJAS) Annual Meeting and Research Symposium. Although we are not able to meet in person, The College of William & Mary in Williamsburg, Virginia, is hosting our Research Symposium virtually this year.

First, I would like to congratulate our student finalists. Despite the challenges, each one of you strived to conduct the best possible scientific research experiments in a variety of different settings and circumstances. Your valiant and resilient efforts shine through brightly – as a VJAS student finalist, your research papers have been read

thoroughly and were selected by a rigorous panel of evaluators from across the state. This is a great accomplishment and you should be proud of your research and academic success!

As we commence our virtual Annual Meeting and Research Symposium, I would like to share some thoughts with you. This past year, more so than any others, we have seen a rise in the stake – the importance – of the role science and research plays in our society. Scientists from all corners of the Earth joined together and responded to meet a daunting challenge. We have acted as one to address a global crisis that discriminates against none.

This atmosphere of cooperation and working together as collaborators, and not necessarily viewing each other as competitors all the time, is something we scientists need to continue promoting. Yes, there is a balance – but our society will greatly benefit and the frontiers of knowledge further breached into new territories faster if we work together more often. Therefore, I would encourage you to view each other during this virtual Research Symposium as future collaborators and colleagues, partners of the future, rather than as competitors.

As you move onward into your collegiate and professional careers, I understand that some of you will continue the path of a scientist, but just as many will choose different routes in medicine, teaching, politics, and so on. What we hope to convey at this year's Annual Meeting is that no matter which career route you choose, your fundamental understanding of science and how research is conducted to bring progress, will be invaluable and become a lifelong foundation. And remember, you can always be an advocate in promoting science and research, wherever you are.

In closing, I hope the 82nd VJAS virtual Annual Meeting and Research Symposium is an enriching and engaging experience for everyone. Once again, welcome and congratulations on your accomplishments.

Sincerely,

Se W. Jeong

Chairman, VJAS Committee

SCHEDULE OF EVENTS

Virginia Junior Academy of Science 2023 Research Symposium

Friday, May 5, 2023		
7 PM - 9 PM	VJAS General Session and Jeffers Memorial Lecture	Live Zoom Webinar Zoom Link: https://cwm.zoom.us/j/97313062589

Saturday, May 6, 2023		
8 AM - 8:30 AM	Judge's Meeting	ZOOM LINK https://cwm.zoom.us/j/97704410766?pwd=anc1REx1eFNNaEZobVVKMVLmzhwZz09
9 AM - 4 PM	VJAS Student Paper Presentations	30 Concurrent Zoom BreakOut Rooms Presentation Sessions https://cwm.zoom.us/j/97704410766?pwd=anc1REx1eFNNaEZobVVKMVLmzhwZz09
Specific Student Paper Presentation schedule starts on Page 8		

Thursday, May 18,, 2023		
7 pm - 9 pm	VJAS Awards Ceremony	Live Zoom Webinar: <i>To Be Announced and Posted on VJAS Home Page</i>

George W. Jeffers Memorial Lecture

Friday Evening VJAS General Session

NASA's Search for Life Beyond the Earth



John Delano, PhD

Distinguished Professor (retired)

University at Albany, State University of New York

John Delano received his PhD in geochemistry from Stony Brook University, and retired in late 2016 from the University at Albany, State University of New York as a professor at the Distinguished rank. During his academic career, he served as the Associate Dean of the College of Arts and Sciences at the University, an Associate Director of a NASA Astrobiology Institute involving a consortium of five universities, and was the recipient of several university awards including the President's Award for Exemplary Public Engagement. He served on more than two dozen scientific advisory panels for both NASA and the National Science Foundation. His research was funded principally by NASA that resulted in 70 peer-reviewed articles in professional journals. Since arriving in Williamsburg, he has published two additional scientific papers, taught six courses for the Osher Institute for Lifelong Learning at William and Mary, and made more than 80 presentations to regional organizations.

Animal & Human Sciences (MS AH)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Kumar Priya The Effect of CBD oil on the population of Drosophila melanogaster	George H. Moody Middle School
9:20-9:40 AM	Goel Ahana The Effect of Fennel Seeds on Pancreatic Cancer Cells	George H. Moody Middle School
9:40-10 AM	Sambangi Saanvi The Effect of different soaps on bacteria inhabiting the hand	George H. Moody Middle School
10-10:20 AM	Shaw, Avery The Effect of Yeast Types on the Taste of Root Beer	Sabot at Stony Point
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Byrne, Fin The Eating Habits of an Invasive Species: The Cane Toad	Sabot at Stony Point
11-11:20 AM	Decker, Penelope The Efficiency of Clicker Training vs. Positive Reinforcement in Canine Training	Sabot at Stony Point

Chemical Science A (MS-CS A)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Adusumilli Ritvik, The effect of different household chemicals on the corrosion rate of stainless steel	George H. Moody Middle School
9:20-9:40 AM	Becker Shayna, Murray Julia-The Effect of Sugar Content on the Evaporation Rate of Liquids	Sabot at Stony Point
9:40-10 AM	Madurantakam Shravan The Effect of Crosslinking on Diffusion of Robitussin™ from Calcium Alginate Gel	George H. Moody Middle School
10-10:20 AM	Chakraborty Prithvi The Effect of Enzyme Invertase on Glucose Concentration Level	George H. Moody Middle School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Kalagi Shrihari The Effect of Household Acids on the Rate of Corrosion	George H. Moody Middle School
11-11:20 AM	Kirubaharan Diyaa The Effect of Different Foods on Stomach Acids	George H. Moody Middle School
11:20-11:40 AM	Knepper Abby The Effect of the Healthy Glucose Replacements on the Height of the Candy	Williamsburg Middle School
11:40-12 PM	Kota Karthikeya The Effect of Sunscreen on Saccharomyces Cerevisiae to Prevent Ultraviolet Radiation	George H. Moody Middle School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM		
1-1:20 PM	Bedestani Brandon, Abbott Logan-The Effect of Type of Chip on the Amount of Fat	Dorothy Hamm Middle School

Chemical Science B (MS CS-B)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Mahesh Advika : The effect of heat cooking methods on the rate of degradation of ascorbic acid in bell peppers.	George H. Moody Middle School
9:20-9:40 AM	Marino Kate The Effect of Cooking Style on How Much Vitamin C is Preserved in Broccoli	Williamsburg Middle School
9:40-10 AM	Massie, Spencer What corrosion inhibitor slows the rusting of iron the most effectively?	Sabot at Stony Point
10-10:20 AM		
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Ramkumar Risvan The Effect of Temperature on the Corrosion of Aluminum	George H. Moody Middle School
11-11:20 AM	Shah Essam - The Effect of the Filtration Efficacies Among Dissimilar Semi-Permeable Fabric Types on Air Decontamination	George H. Moody Middle School
11:20-11:40 AM	Shah Ishan Comparing the Solubility of Brand vs Generic Allergy Medications in Hydrochloric Acid with pH similar to Stomach Acid	George H. Moody Middle School
11:40-12 PM	Sundberg, Caroline Which Types of Fabric (Linen, Felted Wool, or Polyester) will Dye the Most Effective in Different Types of Water	Sabot at Stony Point
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Tulchinsky Lydia The Effect of Different Liquids on Copper Tape	Dorothy Hamm Middle School

Ecology & Earth Sciences A (MS EE-A)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Barathi Saravanan & The Effect of Different Natural Plasticizers on the Biodegradability and Water Solubility of Cornstarch Bioplastic Films	George H. Moody Middle School
9:20-9:40 AM	Bell Daisy The Effect of Radiation on Seed Germination	Dorothy Hamm Middle School
9:40-10 AM	Martin Jenilia-The Effect of Water Purification Methods on the pH Level of Creek Water	George H. Moody Middle School
10-10:20 AM	Ghosh Siddharth The Effect of APS Schools on Stormwater Quality	Williamsburg Middle School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Gupton, Thomas Testing the Water Quality of Lewis G. Larus Park's Crocksucker Creek	Sabot at Stony Point
11-11:20 AM	Karmarkar Arya The Effect of Fertilizer on Water Quality	George H. Moody Middle School
11:20-11:40 AM	Laswon, Charlie The Effect of Different Growing Conditions on the Growth of Rainbow Chard	Sabot at Stony Point
11:40-12 PM	Ganbat Egshiglen The Effect of Soil pH on the pH of Water	Dorothy Hamm Middle School

Ecology & Earth Sciences B (MS EE-B)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Perrelli Alexander, Buchwald Derek-The Effect of the Type of Soil on the Amount of Water Retained.	Williamsburg Middle School
9:20-9:40 AM	Schroeder Zoe The Effect of the Type of Method on the Amount of Oil Cleaned Up	Kenmore Middle School
9:40-10 AM	Shanshan Liu The Effect of the pH of Water on the Growth of Salvia Hispanica Seeds	George H. Moody Middle School
10-10:20 AM	Shoffner Sophia Phosphorus Filtration in Simulated Streamwater Runoff	Swanson Middle School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Suresh Dwani-The Effect of different Nutrient sources while using hydroponic systems on Different Plants.	George H. Moody Middle School
11-11:20 AM	Umerov-Todoroki Maya The Effect of Nitrogen or Phosphate on Dissolved Oxygen Levels	Williamsburg Middle School
11:20-11:40 AM	Yellin, Nathan The Effect of the Rate of Heat Dissipation of Roofing Materials on the Urban Heat Island Effect	Sabot at Stony Point
11:40-12 PM	Zhang Olivia-The Effect of Ocean Acidification on Shell Weight Loss	George H. Moody Middle School

Engineering & Technology (MS ET)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Tkabladze Luka The Effect of the Amount of Borax on the Electrical Conductivity of the Magnetic Slime Robot	Dorothy Hamm Middle School
9:20-9:40 AM	Fox-Shin Angelo The Effects of Length on the Buoyancy of a Dowel	Dorothy Hamm Middle School
9:40-10 AM	Lyon Nora-The Effect of the Length of a Trebuchet's Short Arm on the Distance the Payload is Launched	Swanson Middle School
10-10:20 AM	Malik Haya The Effect of Insulation Material on Heat Retention	Kenmore Middle School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Parashar, Anika Plant Disease Detection Using Deep Learning	Hidden Valley Middle School
11-11:20 AM	Parikh Sophie The Effect of the Number of Fins on Distance Traveled	Williamsburg Middle School
11:20-11:40 AM	Pellreddy Eesha The Effect of Different Soundproof Materials on their Ability to Restrict Sound	George H. Moody Middle School
11:40-12 PM	Phillips, Isaac Determining the Amount of Weight a Hand made of Cardboard, Other Scrap Materials, and a Pulley System will be able to Pick-Up	Sabot at Stony Point
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Ramsey Emily The Effect of Different Bus Routes on Efficiency	Williamsburg Middle School
1-1:20 PM	Rane Aryaman - Voltage Produced by a Bicycle Driven Across a Short Distance Connected to the Shaft of a Generator	George H. Moody Middle School
1:20-1:40 PM	Rizvi Sophia Bandwidth Battle: How Remote Work and Streaming Apps Affect Internet Speed	Grafton Middle School
1:40-2 PM	Sarkar, Adrito/The Effect of Sound Reduction Articles on Volume(dB) of VJAS	George H. Moody Middle School
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Cohen Gabriel The Effect of Communication Protocol on Network Communication Speed	Dorothy Hamm Middle School

Human Behavior (MS HB)

Shared Room/Judges with [High School Psychology Section A - see HS PSY-A Schedule](#)

Mathematics: Patterns & Relationships (MS MP)

Shared Room/Judges with [High School Mathematics Section - see HS MTM Schedule](#)

Physical Science & Astronomy (MS PA)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Coronado-Wager Kyra The Effect of Water Depth on Wave Velocity	Dorothy Hamm Middle School
9:20-9:40 AM	Hanger, Avery How Does the Amount of Water Affect the “Flip” of a Bottle?	Sabot at Stony Point
9:40-10 AM	Montpetit, Weston What Materials Result in the Lowest Percent Error in a Calorimeter	Sabot at Stony Point
10-10:20 AM	Subramanian Shruthi Research of Effect of Various Types of Metal on Melting Ice	George H. Moody Middle School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Sundarrajan Pranav The Effect of Varied Added Naturally-Occurring Substrates on the Efficiency of Voltage Production in a Microbial Fuel Cell (MFC):	George H. Moody Middle School

Plant Science & Microbiology A (MS PM-A)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Akula Rishi The Effect of Different Levels of Water Acidification on the Germination of Typha latifolia	George H. Moody Middle School
9:20-9:40 AM	Aravindank Maya-Research of The Effect of the type of medium on the height of the plant	George H. Moody Middle School
9:40-10 AM	Cartin Roxana The Effect of Different Age Levels on the Amount of Bacteria Found	Williamsburg Middle School
10-10:20 AM	Chung Geunyoung The Effect of Different Amounts of Soap Water on Phaseolus Vulgaris (Green Beans)	George H. Moody Middle School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Daddala Darsh - The Effect of Eggshell Fertilizer on a Plant's Growth	George H. Moody Middle School
11-11:20 AM	Gandhi Nitya Effect of the different pH levels on the plant growth.	George H. Moody Middle School
11:20-11:40 AM	Goyal Radhika The Effect of Different Materials on Apple Ripeness	George H. Moody Middle School
11:40-12 PM	Martin,Olivia, The Effects Mouthwash has on Bacteria on the Teeth	Benton Middle School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Kumar Aditi The Effect of Different Amounts of Algaecide on Aquatic Plant Growth	George H. Moody Middle School
1-1:20 PM	Kumar Devansh The Effect of Different Irrigation on Tomato (Solanum lycopersicum) Growth	George H. Moody Middle School
1:20-1:40 PM	Mahabir, Mason, The Effect of Fertilizers on Seedling Growth	Benton Middle School
1:40-2 PM	Mangi Madeline, Amundson Clara-The Effect of the Type of Plant on the Amount of Time Taken to Remove CO2 From the Atmosphere	Williamsburg Middle School
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Haught Jordan Effect of Interstellar Rock on the Cellular Survival of Lepidium Sativum (Common Garden Cress)	George H. Moody Middle School

Plant Science & Microbiology B (MS PM-B)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Mital Eshaan Effect of Turmeric on UVC-Induced damage in mung bean plants	George H. Moody Middle School
9:20-9:40 AM	Moussavi, Sara, The Effect of Different Types of Benzoyl Peroxide on Bacterial Growth	Benton Middle School
9:40-10 AM	Nayak Riyan Effect of Type of Environment on Plant Height	George H. Moody Middle School
10-10:20 AM	Parab Aakash The effect of natural and artificial fertilizers on soil pH	George H. Moody Middle School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Patankar Ishaan The Effect of Different Fertilizers on the Height of a Trigonella Foenum-Graecum over 14 days.	George H. Moody Middle School
11-11:20 AM	Patel Aanchal - The Effect of Caffeine on Nigella Damascena Growth	George H. Moody Middle School
11:20-11:40 AM	Pozzi, Lucian What Method is Better to Grow Stachys byzantina, a Hydroponics System or an Aquaponics System?	Sabot at Stony Point
11:40-12 PM	Santoso Fenya The Effect of Hydrogen Peroxide on the germination rate of slow bolt cilantro (Coriandrum sativum)	George H. Moody Middle School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Shankhwar, Shaivi: The Effect of Leftover Tea Leaves on Coriandrum sativum Germination Speed	George H. Moody Middle School
1-1:20 PM	Shetty, Saharsh Darsh-The Effect of Biodegradable and Conventional Detergents on Plant Growth	George H. Moody Middle School
1:20-1:40 PM	Vasudev Aditi The Effect of Household Chemicals on the Growth of Chive Plants	George H. Moody Middle School
1:40-2 PM	Vickery, Raymond The Effect of Different Conditions on the Growth Rate of Succulents	Sabot at Stony Point
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Waldman Isaac The Effect of Common Sunscreen Chemicals on the Growth of Bean Plants	Williamsburg Middle School

Botany A (HS BOT-A)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Gaffney Gretchen The Effect of Different Types of Magnesium on Calendula Plant Growth	Clover Hill High School
9:20-9:40 AM	Cheema Manreet, Moreno Alahna, Siddique Laiba- The Effect of Arbuscular Mycorrhizal Fungi on Perennial Ryegrass and Flax Greens Grown in Soil with Varying Concentrations of Microplastics	Governor's School @ Innovation Park
9:40-10 AM	Colasurdo Parker The Effect of Simulated Acid Rain on the Growth of Nitrogen-Fixing Clover Plants, Pre-Inoculated with Rhizobium Bacteria	Clover Hill High School
10-10:20 AM	Coleman Jacob At What Acidity Level Does the Germination Rate of Pinto Bean Seeds Decline Below 50%?	Washington-Liberty High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Cosner Landon The Effect of Various Types of Homemade Fertilizer, Applied to Soil from Four Different Virginia Counties, on Pole Bean Plant Growth	Clover Hill High School
11-11:20 AM	Criss, KC on The Effect of Different Roasts of Coffee Grounds, Added to Soil, on Cilantro Growth	Clover Hill High School
11:20-11:40 AM	Earsing Jamie The Effect of Copper Pollution on Glycine Max	Central Virginia Governor's School
11:40-12 PM	Edsall Alba- The effect of the percentage of polystyrene microplastics in soil on the root length of Raphanus sativus plants	Washington-Liberty High School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Bhimjiani Bansi The Effect of Dietary Supplements on Agrobacterium tumefaciens in Pansies	Mills E Godwin High School
1-1:20 PM	Haq Mishaal The Effect of Isopropyl Alcohol on Seed Scarification	Mills E Godwin High School
1:20-1:40 PM	Harrison Sarah Lawson The Effect of Caffeine on the Growth and Development of Glycine max	Central Virginia Governor's School
1:40-2 PM	Jethava Ayan, The Effect of Time in Magnetic Field on Dill Plant Growth	Mills E Godwin High School

Botany B (HS BOT-B)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Lowery Chessa Arbuscular Mycorrhizal Fungi as Plant Probiotics	Chesapeake Bay Governor's School
9:20-9:40 AM	Mahajan Aashay The Effect of Water Stress on the Weight of Poaceae	Mills E Godwin High School
9:40-10 AM	Malik Zainah The Effect of Different Fertilizers on the Growth of Hydroponic Basil Plants	Mills E Godwin High School
10-10:20 AM	Nareddy Tanvi The Effect of Water Conductivity on Vigna radiata Germination Speed	Mills E Godwin High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Patel Ansh The Effect of Light Color on the Transpiration Rate of Kalanchoe pinnata	Clover Hill High School
11-11:20 AM	Raman Rohan The Effect of Varying Ratios of Bio-Enzymes Produced by Fermentation on Tomato Plant Height, Number of Leaves, and Weight of Fruit	Clover Hill High School
11:20-11:40 AM	Siddabattula Siddarth The Effect of Mycorrhiza Concentration on Soil	Mills E Godwin High School
11:40-12 PM	Sooda Saanvi The Effect of Household Fertilizers alongside Gibberellins on Fenugreek Height	Mills E Godwin High School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Sriniaiyer Sudarshan The Effect of Different Light Intensities on Raphanus Sativus Plant Growth	Mills E Godwin High School
1-1:20 PM	Tasker Jacob The Effect of Inorganic and Organic Fertilizers on Glycine max Biomass and Nutrient Composition	Central Virginia Governor's School
1:20-1:40 PM	Wang Andrew Effects of Transcription Factor WUSCHEL on the Regeneration of Arabidopsis thaliana	Blacksburg High School
1:40-2 PM	Wearmouth Isla The Effect of Aquaponic Farming, in Comparison to Nitrate-Fertilized Soil, on the Growth of Lettuce Plants	Washington-Liberty High School

Chemistry A (HS CHM-A)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Akbar Zahra The Effect of Active Carbon on the Amount of Chlorine Present in Water	Mills E Godwin High School
9:20-9:40 AM	Chahil Tara The Effect of Different Natural Juices Based on pH, on the Electrolyte Concentration	Washington-Liberty High School
9:40-10 AM	Bodman Maggie The Effect of Polaroid Photo Development Temperature on Speed at Which Photos Reach Full Saturation	Clover Hill High School
10-10:20 AM	Cairns Andrew The Effect of Various Materials Used in the Composition of Golf Balls on the Distance the Ball Travels, When Putted	Clover Hill High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Bandla Shriya The Effect of Different NPK Fertilizers on Sunflower Growth	Mills E Godwin High School
11-11:20 AM	Cheng Shangwen The Effect of Natural vs Synthetic Dye on Color Intensity on the Violet Wavelength	Arlington Tech
11:20-11:40 AM	Dickerson Dylan The Effect of the Protein/Sugar Ratio on the Browning of the Maillard Reaction in Cakes Baked with Whey Protein	Clover Hill High School
11:40-12 PM	Dillon Liana The Effect of Several Methods of Water Treatment (Boiling and Activated Alumina) on Resultant Fluoride Levels in Fluoridated Tap Water	Clover Hill High School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Floom Kate The Effect of the Amount of Red 40 in a Beverage on the Relative Luminance of the Substance	Washington-Liberty High School
1-1:20 PM	Vekony Sophia-Electrophoresis: Building a Chamber for Identifying DNA	Wakefield High School
1:20-1:40 PM	Ebel Emma Testing Hand Sanitizer Alcohol Levels with Gas Chromatography	Southwest Virginia Governor's School
1:40-2 PM	Freeman Anna The Effect of the Amount of Gelling Agent on both Vegan and Non-Vegan Marshmallows	Washington-Liberty High School
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	

2:20-2:40 PM	Goff Abby A Comparison of the Durability of Commercial Glues and a Wheat Protein-Based Adhesive	Central Virginia Governor's School
--------------	---	------------------------------------

Chemistry B (HS CHM-B)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Gross, Jordan Hydropower's Effect on Greenhouse Gas Emissions	Collegiate School
9:20-9:40 AM	Hellman Arianna The Effect of Different Methods of Insulation and Cooking on the Height of Cake Domes	Washington-Liberty High School
9:40-10 AM	Jacocks Spencer The Effect of Different Behr Price Points on the Stain Resistance of the Paint	Clover Hill High School
10-10:20 AM	Uhl Amelia The Effect of Price on Microplastic Content in Water Bottles	Central Virginia Governor's School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Kyle Edwin A Novel High-throughput Screening Method to Identify Fluoride-ion-conducting Materials	Academies of Loudoun
11-11:20 AM	Labert, Reagan- Comparison and Analysis of the Compositions of Commercial Kombucha Products	Ocean Lakes High School
11:20-11:40 AM	Mitchell, Eden of Differences in the Presence of Aluminium, Lead, and Arsenic in Foundation for Various Skin Shades	Southwest Virginia Governor's School
11:40-12 PM	Paulk, Caitlin - Creation of Alginate Beads to find Optimal Release of Catalase with Stimuli Responsive Capabilities	Governor's School @ Innovation Park
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Richards Seth The Bioremediation of Perfluorooctanoic Acid by Pseudomonas putida	Roanoke Valley Governor's School
1-1:20 PM	Shariff Asiya The Effect of Plasticizer on pH of SODIS Purified Water	Mills E Godwin High School
1:20-1:40 PM	Sneed Sophia The Effect of Cadmium-Based Paint, Exposed to Various Humidity Levels, on Change in Color of a Painting, Measured Using ImageJ Software	Clover Hill High School
1:40-2 PM	Kopylev Rina the Effect of Candle Wax Material on Burn Rate and Soot Production	Washington-Liberty High School

Engineering A (HS EGR-A)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Anderson Karin The Effect of Metallic Foil and Different Geometric Shapes on Light Reflection	Washington-Liberty High School
9:20-9:40 AM	Ali, Aun, GPUs vs. CPUs with Deep Neural Networks and Matrix Multiplication	Blacksburg High School
9:40-10 AM	Allen Ema Enhancing Sustainability in Parking Areas	Chesapeake Bay Governor's School
10-10:20 AM	Aklil, Hanna - The Creation of Longer Lasting Concrete--An Analysis on the Infusion of Bacteria and Aggregates Into Cement Concrete to Increase Durability at Varying Temperatures by Examining the Substances Following Water Absorption	Governor's School @ Innovation Park
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Avrutin Maxim Study of Diodes Made of Different Semiconductor Materials as Temperature Sensors	Mills E Godwin High School
11-11:20 AM	Baldwin Paige Development and Testing of a New Method for measuring nearshore Turbidity- the 3D Coastal Comparator	Chesapeake Bay Governor's School
11:20-11:40 AM	Bierman Micah The Effect of Various Soundproofing Materials on Decibel Level	Washington-Liberty High School
11:40-12 PM	Carwile Hayden An Analytical Study of Water Hammer and the Effect of Different Valves	Central Virginia Governor's School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Chaudhuri Pooshan Study of the movement of Superparamagnetic Iron Oxide coated Cucumis sativus cell clusters in presence of a Magnetic Field	Maggie L Walker Governor's School for Government and International Studies
1-1:20 PM	Cossman Haley The Effect of Different Forms of Plastic Waste on The Compressive Strength of Concrete	Central Virginia Governor's School
1:20-1:40 PM	Davis Devon The Effect of Shielding Materials on Blocking Gamma Radiation	Central Virginia Governor's School
1:40-2 PM	Gallagher Mason The Effect of the Wind Turbine Blade Angle on Energy Production	Central Virginia Governor's School

Engineering B (HS EGR-B)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Gregoriou, Nicholas- Brass Instrument Mouthpiece Design and Lip Reed Acoustics	Ocean Lakes High School
9:20-9:40 AM	Gupta Krish - Aquatic Plants based Water Filtration	Washington-Liberty High School
9:40-10 AM	Hedrick Christopher The Effect of Ratio of Ash to Cement, When Used to Make Cement Brick, on the Compressive Strength of the Brick	Clover Hill High School
10-10:20 AM	Hemsh Emma The Effect of the Catholyte on the Power Produced by a Microbial Fuel Cell	Washington-Liberty High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Kambhampaty Kedar Effect of Algorithm Choice on Automated Face-Detection in Images of Occluded Faces	Washington-Liberty High School
11-11:20 AM	Hunley Lincoln The Effect of Interior Padding Material on the Impact Absorption of American Football Helmets	Central Virginia Governor's School
11:20-11:40 AM	Mason Micajah The Effect of Degradation on a Full Synthetic versus a Conventional Motor Lubricant's Tribological Performance	Central Virginia Governor's School
11:40-12 PM	Meyer Catherine The Effect of Electrical Resistance on the Energy Output from a Hydropower Turbine	Central Virginia Governor's School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Milhorn Erika The Effect of Vertical Oscillation and Cycles per Minute on the Effective Detection of a 24 GHz Device	Central Virginia Governor's School
1-1:20 PM	Morford Cooper Which Green Insulation is the Most Practical when Considering Cost, Thermal Efficiency, and Embodied Carbon?	Central Virginia Governor's School
1:20-1:40 PM	Morris Layton What Car Windshield Angle Produces Maximum Image Sharpness?	Central Virginia Governor's School
1:40-2 PM	Narayanan Prakash Dhruv Exploring the perception of Blockchain technology through sentiment analysis of media content	Deep Run High School

Engineering C (HS EGR-C)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Rao, Samvrit & BOREAS: Innovating Respiratory Care Through Telemedicine	Thomas Jefferson High School for Science and Technology
9:20-9:40 AM	Race, Robert- Effects of Thermodynamic Processes on Aerospace Materials and their Properties	Ocean Lakes High School
9:40-10 AM		
10-10:20 AM	Shindler Grant The Effect of Propeller Design on Amount of Net Force	Clover Hill High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Southall Benjamin The Effect of Humidity on Solar Panel Efficiency	Central Virginia Governor's School
11-11:20 AM	Spickard Abigail Effect of Heat Dissipation Techniques on Peltier Device Based Atmospheric Water Generator Performance	Central Virginia Governor's School
11:20-11:40 AM	Sridhar Sriya Utilizing Flow Cytometry to Evaluate the Sanitization of a 96 Well Plate by the Opentrons Liquid Handling Robot	Blacksburg High School
11:40-12 PM	Vithoukias Tess The Effect of Different Filtration Methods on the Amount of Microplastics in Drinking Water	John Randolph Tucker High School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Wynnyk Georgianna The Effect of Different Eco-Friendly Oil Treatments on the Strength of Pine Wood	Central Virginia Governor's School
1-1:20 PM	Xu Joyce A microfluidic paper-based bioreceptor utilizing colorimetric properties for detection of D-Glucopyranose in epidermal sweat	Mills E Godwin High School
1:20-1:40 PM	Yarbrough Sam The Effect of Blade Angle on Water Turbine Energy Production	Central Virginia Governor's School
1:40-2 PM	Zhou Brian Using Novel Constraint-Guided Models to Predict Kinematic Gait Outcomes on an Underwater Flapping Fin Propulsion System	Thomas Jefferson High School for Science and Technology

Environmental & Earth Science A (HS ENV-A)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Adhi Roayba The Effect of Food-Grade Flocculants on the Aggregation of Simulated Microplastics in Polystyrene-Contaminated Water	Washington-Liberty High School
9:20-9:40 AM	Bartl Alex Effect of Modifying Sorbents on Oil Sorption	Washington-Liberty High School
9:40-10 AM	Alderson Anna The Effect of Lumbricus terrestris on Zinc Contaminated Soil	Central Virginia Governor's School
10-10:20 AM	Andrews William, Ascari Clavio-Effect of Different Fertilizers on the Vegetative Propagation of Allium cepa and to Address Food Waste and Climate Change	Collegiate School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Ariunbayasgalan Maral, Abdelbagi Hanan-The Effect Of Different Levels Of Moisture In Grass On the Absorption Rate	Washington-Liberty High School
11-11:20 AM	Ascoli Andrew Hidden Contribution of Sodium Sulfate on Cyanobacteria and Eutrophication	Collegiate School
11:20-11:40 AM	Barnett Drew The Effects of Pollution Source on Microplastic Concentration in the James River Watershed	Central Virginia Governor's School
11:40-12 PM	Albathigi Eissa The Effect of Number of Plants in a Model Room on the Temperature of the Room	Clover Hill High School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Bharambe Radhika The Effect of Copper Sulfate on Invertase Activity	Mills E Godwin High School
1-1:20 PM	Callis Jefferson The Effect of Redlining on Soil Microbial Diversity	Roanoke Valley Governor's School
1:20-1:40 PM	Cantrell Jacob The Effect of Lead Acetate on D. Magna Population Stability	Central Virginia Governor's School
1:40-2 PM	Cozette Olivia The Effect of Different Locations of the Susquehanna River relative to the Conowingo Dam on the Concentrations of Different Chemicals	Washington-Liberty High School
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Dodge Anna The effect of Lemna minor vs. Eichhornia crassipes on the remediation of crude oil from water.	Central Virginia Governor's School

2:40-3 PM	Dunford Shane The Cathodic Corrosion Protection Capabilities of Sacrificial Anodes in Coastal Areas	Southwest Virginia Governor's School
3-3:20 PM	Eberly Lincoln Effect of Acid Rain on Limestone	Washington-Liberty High School

Environmental & Earth Science B (HS ENV-B)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Eichers Julian The Effect of Harmful Algal Blooms on the Population of North Atlantic Right Whales	Arlington Tech
9:20-9:40 AM	Erwin Chelsea Detection of Microplastics in the Virginia Peninsula	Hampton Roads Academy
9:40-10 AM	Eubanks Annie The Effect of Ammonium Hydroxide on Freshwater Algal Biomass	Mills E Godwin High School
10-10:20 AM	Freer Flora The Effect of Water Depth in the Swift Creek Reservoir on the Amount of Microplastics Collected at Various Depths	Clover Hill High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	George Sherlin The Effect of Various Antioxidants on the Growth of Medicago sativa in a Saline Environment	Mills E Godwin High School
11-11:20 AM	Graulich Erik The Effect of Biocide Type and Concentration on Hull Fouling and Exposed Estuarine Crustaceans	Chesapeake Bay Governor's School
11:20-11:40 AM	Harrow Courtney Finding A New Home For Chesapeake Bay Oyster Spat	Chesapeake Bay Governor's School
11:40-12 PM	Haydon Holly Iron and Copper Concentration Effects on Brine Shrimp Hatching and Mortality	Chesapeake Bay Governor's School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Heimbach Payton The Effect of Triclosan on The Mortality Rate of Daphnia Magna	Central Virginia Governor's School
1-1:20 PM	Hendrix Jacey Is the Radford Army Ammunition Plant Polluting the New River?	Southwest Virginia Governor's School
1:20-1:40 PM	Kambham Rishab The Effect of Air Particle Size on Air Filter Efficiency	Mills E Godwin High School
1:40-2 PM	Kamujula Anika The Effect of Varying Concentrations of Copper on Spirulina Growth	Mills E Godwin High School
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Korrapati Nihita The Effect of Various Water Contaminants on the Corrosion of Iron	Mills E Godwin High School
2:40-3 PM	Lal Shreya The Effect of Exposure to Activated Sludge Bacteria on PET	Mills E Godwin High School
3-3:20 PM	Lateef, Hamza - Mapping Changes in Particulate Pollution and Plant Health in the Indian Sub-Continent During the COVID-19 pandemic	Governor's School @ Innovation Park

Environmental & Earth Science C (HS ENV-C)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Merritt Phobe The Effect of Acid Rain on Microgreen Radish Seed Germination	Washington-Liberty High School
9:20-9:40 AM	O'Casey Siobhan, Ridgeway Natalia-The Effect of Oysters on the Filtration of Water	Washington-Liberty High School
9:40-10 AM	Makineni Grihith The Effect of Different Filters on Substance Amount in Water	Mills E Godwin High School
10-10:20 AM	Mayer Joshua Comparing the Growth, Mass, and Survival Rate of Oysters Raised Using the Standard and RAS Methods	Chesapeake Bay Governor's School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Loos Wesleigh The Effect of Heat Stress on Solanum lycopersicum L.	Central Virginia Governor's School
11-11:20 AM	Miller Kayleigh The Impact of Shoreline Hardening on Nearshore Fish Populations	Chesapeake Bay Governor's School
11:20-11:40 AM	Morford Riley-Comparing Biosorption Capabilities of Lead (II) Acetate Trihydrate by Spirulina platensis and Chlorella vulgaris	Central Virginia Governor's School
11:40-12 PM	Morris Khalia-Impact of Beaver Dam on Water Quality	Chesapeake Bay Governor's School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Nanduru Ananya The Effect of Titanium Dioxide (TiO ₂) on the Levels of Dissolved Oxygen Produced by Thalassiosira	Mills E Godwin High School
1-1:20 PM	Nguyen Quynh Using Activated Charcoal Powder as an Eco-Friendly Sorbent for Oil Spillage Treatment	Mills E Godwin High School
1:20-1:40 PM	Madison Mussatt The Effect of Ultraviolet Filter Chemicals on Planarian Health	Mills E Godwin High School
1:40-2 PM	Ortuno Evelyn Finding a Buffer Solution to Protect Limestone from Acidic Rain	Washington-Liberty High School
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Paine James Testing the Efficacy of an Aquatic Aerator	Southwest Virginia Governor's School
2:40-3 PM	Patel, Aarav - Research of The Novel Production of Organic-Based Amino Acid Incorporated CO ₂ Absorbing Hydrogels	Governor's School @ Innovation Park
3-3:20 PM	Pickard Elle Determination of Per- and Polyfluoroalkyl Substances, Nitrates, and Phosphates in Different Locations on the Potomac River	Washington-Liberty High School

Environmental & Earth Science D (HS ENV-D)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Puckett Kennedy Changes in Pyrocystis fusiformis Bioluminescence According to Light Intensity	Central Virginia Governor's School
9:20-9:40 AM	Rao Aarushi The Effect of Metallic and Biopolymer Coagulents on Microplastic Extraction in Water	Mills E Godwin High School
9:40-10 AM	Rizvi Zahra Flowing into the Future: Addressing Urbanization's Impact on Water Quality in the Chesapeake Bay	Grafton High School
10-10:20 AM	Roncka Madeleine The Effect of the Type of Water on the Turbidity	Yorktown High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Royster Lucas The Effect of Organic Pesticides on the Ladybug Hippodamia convergens	Mills E Godwin High School
11-11:20 AM	Sagatov Alina What Time Period Creates the Most Amount of Biofuel in the Least Amount of Time	Washington-Liberty High School
11:20-11:40 AM	Shapiro Frances The Effect of Type of Cover Crop on Water Runoff and Soil Erosion	Washington-Liberty High School
11:40-12 PM	Silva Leila The Effect of Green Roofing on Solar-Cell Performance	Yorktown High School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Smith Caroline Effect of Chemical Fertilizers on the Biofertilizer Water Fern, Azolla: A Research Study on a Phosphorus-limited and Nitrogen-fixing Mutualism	Collegiate School
1-1:20 PM	Subramanian Srinidhi, The Effect of Differing Water Sources on the Efficiency of TSP Flocculant	Mills E Godwin High School
1:20-1:40 PM	Thomason Brandon Effects of Ecologically Relevant Concentrations of Microplastics on Photosynthetic Pigments of Nannochloropsis microalgae	Collegiate School
1:40-2 PM	Valdez Julissa Comparing Detergents Impacts on Brine Shrimp Hatching and Survival	Chesapeake Bay Governor's School
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Wilder Jack Testing the Public's Knowledge About Commonly Foraged Mushrooms	Southwest Virginia Governor's School

2:40-3 PM	Zakriya Emaad The Effect of Various Particle Pollutants and Organic Air Filters on the Efficiency of a Photovoltaic Cell	Mountain View High School
3-3:20 PM	Ziegler Sofia The Effect of Artificial Turf Field Usage on Particulate Matter in the Air	Central Virginia Governor's School
3:20-3:40	Wang Oliver Low-Cost Electrostatic Method for Efficient Cleanup of Oil	Thomas Jefferson High School for Science and Technology

Note: 1 Middle School Math: Patterns & Relationships (MS MP) project is in this section (9 AM presentation).
 High School Math projects start at 9:20 AM.

Mathematics: Theoretical & Modeling (HS MTM)		
Please convene by 8:45 AM for Announcements		
	Student Name(s) & Paper Title	School
9-9:20 AM	Balasubramanian Rishvanth-The Effect of Unorthodox methods In Comparison to Standard Methods of Algebra and Higher on Significance of The Results Obtained by Applying it to The Collatz Conjecture	George H. Moody Middle School
9:20-9:40 AM	Kumar Devesh Coolidge: A Novel Regularization Method to Revolutionize Neural Networks	Maggie L. Walker Governor's School
9:40-10 AM	Montgomery Oscar Effects of School Size on Cross Country Runners' Speed	Southwest Virginia Governor's School
10-10:20 AM	Naveen Philip FASFA: A Novel Next-Generation Backpropagation Optimizer	Mills E Godwin High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Pal Ayush The Effect of Genetic Sequence Vectorization Methods on the Accuracy of Promoter Sequence Classification using NLP Techniques	Mills E Godwin High School
11-11:20 AM	Pendyal Anooshka Optimizing Quantum Annealing to Advance Graph Coloring Algorithms	Deep Run High School
11:20-11:40 AM	Qi Hannah Diagnosis of Melanoma Skin Cancer Using Convolutional Neural Networks	Central Virginia Governor's School
11:40-12 PM	Reitzel Davis Exploring Collatz Conjecture	Southwest Virginia Governor's School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Schwehr Zachary Brain Tumor Segmentation and Classification Based on Deep Learning, Attention Mechanisms, and Energy-Based Uncertainty Predictions	Mills E Godwin High School
1-1:20 PM	Tadinada Abhinav Optimization of Distance Heuristics for Use in a Conflict-Based Search Path-Finding Algorithm	Mills E Godwin High School
1:20-1:40 PM	Yadala Venkata Naga Sai Kaushik Modeling the Eradication and Spread of Poliomyelitis in Relation to Hesitancy in Vaccine Acceptance	Central Virginia Governor's School

Medicine & Health A (HS MDH-A)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Akanmu Mercy Differences in the physical and structural changes during microglial activation in pediatric and adult glioma models.	Blacksburg High School
9:20-9:40 AM	Ambati Vidya, Haloperidol inhibits Inflammasome Activation and Reduces the Risk of Rheumatoid Arthritis	Albemarle High School
9:40-10 AM	Bartrum Olivia Analysis of Anti-Inflammatory Compounds in Drug Absorption and Calculated Transdermal Permeability Utilizing the Parallel Artificial Membrane Permeability Assay	Wakefield High School
10-10:20 AM	Brown James Correlation of Different Exercises to Performance Level in Rock Climbing	Central Virginia Governor's School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Cairns Nathan The Effect of Material Color and Type of Material on Amount of UV Radiation Blocked	Clover Hill High School
11-11:20 AM	Craig Stan Effect of Speech Targets Used by Stutterers to Achieve Fluency on the Reactions of Non-Stutterers	Collegiate School
11:20-11:40 AM	Dehring, Milania - Dugesia dorotocephala as a novel animal model to replicate abstinence-related withdrawal symptoms after prenatal nicotine exposure in neonates	Governor's School @ Innovation Park
11:40-12 PM	Dieguez Kenshu The Impact of the Type of Pre-Trained CNN Model on the Accuracy of Classifying COVID-19 from Lung X-Rays	Yorktown High School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Gagen Avery The Antimicrobial Efficacy of Various Active Ingredients in Face Washes on Propionibacterium acnes	Central Virginia Governor's School
1-1:20 PM	Huizar Evan The Effect of Acute Exercise on Human Hearing	Mills E Godwin High School
1:20-1:40 PM	Jagels Sophia The Effect of Alternative Natural Laxatives on Stomach Acid pH	Mills E Godwin High School
1:40-2 PM	Janes, Violet-The Effect of Patient Age on Bracket Failures	Mills E Godwin High School

2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Jose Jerin The Effect of Added Carotenoids on Bacterial Resistance in <i>C. elegans</i>	Mills E Godwin High School
2:40-3 PM	Kelso Myah The Effect of Phenacetin Exposure on Fruit Fly Reproduction	Central Virginia Governor's School
3-3:20 PM	Kumar Deepanshi The Effect of Different Concentrations of Polypropylene and Polyethylene Microplastics on the Heart Rate of <i>Daphnia Magna</i> .	Maggie L. Walker Governor's School for Government and International Studies
3:20-3:40 PM	Kumar Nitya The Effect of Different Concentrations of liquid Melatonin on the heart rate of <i>Daphnia magna</i>	Douglas S. Freeman High School
3:40-4 PM	Li, Rockwell -Swim Smart, Swim Fast: Development and application of a Fitbit app for swim technique study	Ocean Lakes High School

Medicine & Health B (HS MDH-B)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Kim Sean The Effect of Diphenhydramine Hydrochloride on the Regeneration of <i>Dugesia dorotocephala</i>	Central Virginia Governor's School
9:20-9:40 AM	Madison Kaitlin The Enzymatic Activity of Lactase VJAS Paper	Washington-Liberty High School
9:40-10 AM	Mandalapu, Sarayu The Effect of Various Water Resistant Sunscreen Formulas on UV Protection Underwater, Evidenced by the Amount of Color Change in UV Beads After 10 Minutes	Clover Hill High School
10-10:20 AM	Merkel Benjamin The Effect of Spray Sunscreen vs. Lotion Sunscreen on the Change in RGB of UV Beads	Clover Hill High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Mohanty Anna The Effect of Axon Diameter on Heart Rate Variability	Washington-Liberty High School
11-11:20 AM	Moussavi, Layla - Modeling the Effect of Hyperglycemia on Fertility of <i>Caenorhabditis elegans</i>	Governor's School @ Innovation Park
11:20-11:40 AM	Nayak Aarushi The Effect of Glucose as a Dietary Additive on the Lifespan of <i>C. Elegans</i>	Mills E Godwin High School
11:40-12 PM	Nelson Megan The Effect Penicillin has on <i>Staphylococcus epidermidis</i> Versus Homeopathic Ingredients	Central Virginia Governor's School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Patel Ariya A Novel Lateral Flow Immunoassay for the Detection of Parvovirus B19 Antigens in Urine	Southwest Virginia Governor's School
1-1:20 PM	Pendyal Anooshka Utilizing Machine Learning and Tissue Specificity as Markers in Acute Myeloid Leukemia	Deep Run High School
1:20-1:40 PM	Prem, Isha - The Effects of Zinc, Aluminum, & Iron on the Behavior of PTL-1 <i>Caenorhabditis Elegans</i> and Alzheimer's Disease	Governor's School @ Innovation Park
1:40-2 PM	Pritchett Coston The Effect of Zanfel vs. Homemade Herbal Poultice on Percentage of Remaining Urushiol	Clover Hill High School

2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Rader Sydney A Study on the Potential of Vitamin D Deficiency in Adolescents	Chesapeake Bay Governor's School
2:40-3 PM	Robinson Sara Comparing the Effectiveness of Tylenol Products on Dissolving Time	Central Virginia Governor's School
3-3:20 PM	Saleh Jenna The Effect of Foods that Mimic ACE inhibitors on Flame Cell Function of <i>Dugesia dorotocephala</i>	Central Virginia Governor's School
3:20-3:40 PM	Sangle Saniya-The Effect of dietary supplements on the pH of stomach acid	Mills E Godwin High School
3:40-4 PM	Sarkar Nishorgo Effects of Diosgenin, a Regulator of Inflammation, on Inflammatory Markers in Hepatocellular Carcinoma Cells	Mills E Godwin High School

Medicine & Health C (HS MDH-C)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Shah Nisarg The effect of different neurotransmitter and drug concentrations on the reuptake of APP+ in different neurotransmitters	Mills E Godwin High School
9:20-9:40 AM	Shah Yana Data Analysis of Interpretation Errors Made When Reading CT Angiograms of the Head and Neck	Mills E Godwin High School
9:40-10 AM	Singh Tanish Application of a Deep Learning Model for Effective Diagnosis of Osteosarcoma	Mills E Godwin High School
10-10:20 AM	South Caroline The Effect of Over-The-Counter Medicine Coating on the Release Time in a Low pH Environment	Washington-Liberty High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Spahr Janhvi and The Effect of Pandemics on Life Expectancy in Different Regions of the World Since 1950	Washington-Liberty High School
11-11:20 AM	Sureshkumar Ashna The Effect of Petroleum Jelly on Transepidermal Water Loss	Mills E Godwin High School
11:20-11:40 AM	Tawney Andy Repeat Lengths of RS3 Alleles Associated with the Rate of Health-Related Risky Behavior in Young Adults	Southwest Virginia Governor's School
11:40-12 PM	Vanga Nivriti Differential De Novo Sphingolipid Synthesis Protein Expression in NPC1 Mouse Brain Tissue	Mills E Godwin High School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Vasudev Vimridh The Effect of Varying pH using Betaine HCl on the Digestive Catalytic Assimilation of a Gastric Acid Solution	Mills E Godwin High School
1-1:20 PM	Wesley Emily The Effect of Different Amounts of Caffeine Consumption on the Amount and Quality of Sleep	Central Virginia Governor's School
1:20-1:40 PM	Wittman Alejandra The Effect of Various Types of Padding Materials, Inside a Baseball Helmet, on Percentage of Times a Simulated Brain Ruptures Inside the Helmet, and on Force of Impact Measured Inside the Helmet	Clover Hill High School

1:40-2 PM	Wood Lilly A Mutigenerational Study Regarding the Effects of Titanium Dioxide on the Reproductive Rates of <i>Drosophila melanogaster</i>	Central Virginia Governor's School
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Yang Emily The Effect of Sphingolipid Biosynthesis Inhibitors on Cell Viability	Mills E Godwin High School
2:40-3 PM	Yeeun Lee The Impact of Binge Ethanol During Adolescence on Myelin Related Gene Expression	Deep Run High School
3-3:20 PM	Yuan Annie The Effect of Ascorbic Acid on DNA Methylation in HCT-116 Cells	Mills E Godwin High School

Microbiology & Cell Biology A (HS MCB-A)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Ackleson Emma The Effect of Medical Scrub Compositions on the Conduciveness for Bacterial Growth	Washington-Liberty High School
9:20-9:40 AM	Baldwin Emma: The Effects of Aminoglycoside & Beta-Lactam Antibiotics on <i>S. marcescens</i>	Roanoke Valley Governor's School
9:40-10 AM	Beaumont Nicola The Effect of Salinity on the Growth of <i>Chlorella</i>	H-B Woodlawn Secondary Program
10-10:20 AM	Hassen Nadia The Effects of Toothpaste on Bacterial Growth	Washington-Liberty High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Chandran Ria The Effect of Various Cleansers on Acne (<i>Escherichia coli</i>)	Mills E Godwin High School
11-11:20 AM	Gilmore Carson Effect of Conjugated Linoleic Acid on Structure of Skeletal Muscle	Blacksburg High School
11:20-11:40 AM	Dang Andrew The Effect of Water Concentration on Bacteria Growth	Mills E Godwin High School
11:40-12 PM	Dimaranan, Cedrick -Redesigning the Kirby-Bauer Agar Standards to Improve the Efficacy of Antibiotic Detection	Ocean Lakes High School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Chen Jason Got Milk?: Comparing the Acid Production of <i>Bifidobacterium infantis</i> when Grown in Different Milks	Central Virginia Governor's School
1-1:20 PM	Goody Claire The Effect of the Type of Mouthwash on the Inhibition of <i>Escherichia coli</i> . (<i>E. coli</i> .)	Washington-Liberty High School
1:20-1:40 PM	Hanke Helen The effect of mouthwash alternatives on the zone of inhibition of <i>Staphylococcus salivarius</i>	Washington-Liberty High School
1:40-2 PM	Brodsky Anna The Effect of Sound Frequency on the Growth of <i>E. coli</i> K-12	Washington-Liberty High School

Microbiology & Cell Biology B (HS MCB-B)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Nguyen Alexandra The Effect of SPF Moisturizer on S. epidermidis Growth	Mills E Godwin High School
9:20-9:40 AM	Hinton Tyler The Effect of Various Disinfectant Methods on the Decline of Escherichia coli	Central Virginia Governor's School
9:40-10 AM	Nath Sattwik The Effect of Different Compounds on Planaria Regeneration	Mills E Godwin High School
10-10:20 AM	Iyer Samyukta The Effect of Natural Antibiotics on the Inhibition of Escherichia. coli Growth	Mills E Godwin High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Maxwell Daisy Evaluating the Potential of Herb-derived Essential Oils as Natural Antimicrobials	Washington-Liberty High School
11-11:20 AM	Kim Keira The Effect of Polymer Type on Biodegradation Success by the Fungus Aspergillus flavus	Maggie L. Walker Governor's School for Government and International Studies
11:20-11:40 AM	Kriesh Tivare Effect of Switching Magnetic Fields on the Growth Behaviors of Gram-Negative Escherichia Coli Bacteria	Langley High School
11:40-12 PM	Lach-Hab Nadia Effect of E. coli Treatment Type on E. coli Zone of Inhibition	Washington-Liberty High School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Lakshmanan, Maanini - Exploring A Novel Enterobactin Solution In An Iron-Rich Environment With Lactobacillus Acidophilus And Escherichia Coli To Increase Absorption Of Ferric Ions To Help Mitigate Iron Deficiency	Governor's School @ Innovation Park
1-1:20 PM	Kicklighter Josephine Comparing the Effectiveness of Herbal Remedies on the Growth of Streptococcus gallolyticus	Central Virginia Governor's School
1:20-1:40 PM	Hunter Audrey The Effect of Various Types of Disinfectants, Applied to Bacterial Samples, on the Portion of the Plate Covered by Growth, Over Time	Clover Hill High School
1:40-2 PM	Haydon Haley Which Disinfectant Product is Most Effective in Removing Bacteria?	Chesapeake Bay Governor's School

Microbiology & Cell Biology C (HS MCB-C)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Parashar, Aanandi Effect of AGX-51 on Proliferation and Differentiation of Cells with Pulmonary Fibrosis	Hidden Valley High School
9:20-9:40 AM	Peacock Andy Studying Impacts of Glass and Plastic Reusable Water Bottles on Microbial Growth	Central Virginia Governor's School
9:40-10 AM	Seamster Makayla Efficacy of different topical antibiotics against bacteria from Chesapeake Bay water	Chesapeake Bay Governor's School
10-10:20 AM	Shah Aashka Studying the Role of Epigenetic Regulators in the Recovery of Triple-Negative Breast Cancer	Maggie L. Walker Governor's School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Sloan Ryan The Effect of Common Athletic Materials on the Growth of Staphylococcus epidermidis	Central Virginia Governor's School
11-11:20 AM	Smaragdis John The Effect of Different Concentrations of Isopropyl Alcohol in Homemade Hand Sanitizer on Reducing the Growth of Bacteria Commonly Present on Hands	Washington-Liberty High School
11:20-11:40 AM	Wang Matthew The Effect of Brewing Time on the Capability of Green Tea to Suppress Growth of the Number of Fusobacterium nucleatum Colonies	Clover Hill High School
11:40-12 PM	Wadnerkar Pari The Effect of Riboflavin on the Growth of Staphylococcus Epidermis	Mills E Godwin High School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Tolbert Mary Comparing the Effectiveness of Antibiotics on the Growth of the Bacteria E. coli	Central Virginia Governor's School
1-1:20 PM	Zhang Alice The Effect of Subculture Times on the Phenotypic Changes of Primary Aortic Smooth Muscle Cells	Mills E Godwin High School
1:20-1:40 PM	Zhou Monona Investigating the Dynamics of Heat Shock Factors on its Protective Role against Neurodegeneration	Mills E Godwin High School

Physics & Astronomy A (HS PHY-A)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Barker Maggie The Effect of Strike Location of a Tennis Ball on a Tennis Racquet on the Distance a Tennis Ball Travels	Clover Hill High School
9:20-9:40 AM	Ceglarz Susanna The Effect of Various Brands of Chalk Used in Gymnastics on the Amount of Friction the Chalk Provides	Clover Hill High School
9:40-10 AM	Foster Benjamin The Effect of Various Types of Tennis Court Surfaces on the Height of a Tennis Ball Bounce	Clover Hill High School
10-10:20 AM	Frankenberry Henry The Effect of Brand of Tennis Balls on Height of Ball Bounce	Clover Hill High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Ho Xavier The Effect of Various Types of Rosin on Degree of Deviation from Perfect Pitch, Using a Viola	Clover Hill High School
11-11:20 AM	Kennedy Ava Grace The Effect of the Angle of Attack on a Prototype Airfoil	Central Virginia Governor's School
11:20-11:40 AM	Lee Luri The Effect of Angles of Lighting, Hitting a Painting, on the Difference in Color (px), Analyzed Using ImageJ Software	Clover Hill High School
11:40-12 PM	Lewis Delaney The Effect of Infill Percentages on the Structural Integrity to Mass of Material Ratio	Central Virginia Governor's School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Louvet Nicholas The Effect of Different Eddy Current Brake Designs on the Efficiency of Bike Braking	Roanoke Valley Governor's School
1-1:20 PM	McKinney Ronan The Effect of Positioning Within a Galaxy on Star Formation	Central Virginia Governor's School
1:20-1:40 PM	Mhaskar Aryan-Development of Novel Stimulator to Reduce Electromagnetic Interference During Transcranial Magnetic Stimulation	Mills E Godwin High School
1:40-2 PM	Miller Andrew The Effect of a 3d Print's Extrusion Temperature on its Compression Strength	Yorktown High School
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Morris Kelsey The Effect of Swimsuit Material on Water Resistance	Mills E Godwin High School

Physics & Astronomy B (HS PHY-B)

Please convene by 8:55 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Neely Hannah The Effect of Depth of a Lacrosse Stick Pocket on the Speed a Lacrosse Ball Travels	Clover Hill High School
9:20-9:40 AM	Ramsey Sarah Determining the Most Effective Shin Guard Brands Against Impact	Central Virginia Governor's School
9:40-10 AM	Rawls Kathleen The Effect of Using Various Types of Rock Climbing Chalk, Applied to Simulated Skin, on the Static Coefficient of Friction Between the Chalked Skin and a Rock	Clover Hill High School
10-10:20 AM	Vena Allegra The effect of Altitude on Muon Flux	Wakefield High School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Sharma Camellia The Effect of Dispensing Mechanism on Drop Precision	Mills E Godwin High School
11-11:20 AM	Webb Joshua The Effect of Cleat Upper Material on Ball Velocity	Central Virginia Governor's School
11:20-11:40 AM	Singleton Christian The Effect of Drumstick Material on Pitch and Length of a Sustained Note	Clover Hill High School
11:40-12 PM	Tibbs Stephen The Relationship Between Fluid Density, Sound Frequency, and Amplitude	Central Virginia Governor's School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Schietinger Colby The Relationship Between Radio Sources and HCN Regarding Star Formation	Central Virginia Governor's School
1-1:20 PM	Viswanath Anish Replicating Mechanical Turbulence with Different Factors	Mills E Godwin High School
1:20-1:40 PM	Siminiceanu Eva, D'Ambrosia Olivia, Van Deusen, Maria-How Tennis Ball Spin Affects Horizontal Distances Traveled Before and After Bouncing	Collegiate School
1:40-2 PM	Wiley Claire Effect of Temperature on Tennis Ball Bounce	Wakefield High School
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Zhou Jingtong The Effect of Various 3D Printed Shoe Tread Patterns on the Amount of Force Required to Move the Patterns across both Dry and Wet Surfaces	Clover Hill High School

Note: 3 Middle School Human Behavior (MS HB) projects are in this section (9, 9:20, 9:40 AM presentations).
 High School Psychology projects start at 10 AM.

Psychology A (HS PSY-A)		
Please convene by 8:45 AM for Announcements		
	Student Name(s) & Paper Title	School
9-9:20 AM	Ahmad, Sajeela, The Effect of Suggestion on Visual Memory in Youth and Adults	Benton Middle School
9:20-9:40 AM	Thorsen Blake The Effect on Different Types of Music on the Percentage of Words Memorized	Williamsburg Middle School
9:40-10 AM	Willford Jori What is the effect of marketing transparency on company trustworthiness?	Thomas Jefferson Middle School
10-10:20 AM	Barnette Laken Evaluating Comfort Levels in Teenage Patients When Talking to a Physician About Sensitive Topics	Southwest Virginia Governor's School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Faulkner Jasmine How does performing impossible tasks affect high achieving high school students' confidence in performing simpler tasks?	Southwest Virginia Governor's School
11-11:20 AM	Callahan Sam Relationships Between Gender and Human Perception	Central Virginia Governor's School
11:20-11:40 AM	Christensen_Caoilainn_Comparative Content and Engagement Analysis of Credentialed and Non-Credentialed Nutrition Professionals on Instagram	Blacksburg High School
11:40-12 PM	Clark Allison Scientific Reading Comprehension and Confidence of Scores on Tests	Southwest Virginia Governor's School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Brigman Abi Childhood Emotional Abuse as a Predictor for Low Self-Esteem as an Adult	Central Virginia Governor's School
1-1:20 PM	Gaines Layla The Effect Color has on Memory	Chesapeake Bay Governor's School

Psychology B (HS PSY-B)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Gheen Ryan The Effect of Social and Economic Political Extremity on Conspiracy Beliefs	Central Virginia Governor's School
9:20-9:40 AM	Gwathmey Laila The Effects of Age and Distance on Your Color Cognition	Chesapeake Bay Governor's School
9:40-10 AM	Zhang Jenny The Effect of Parental Separation on how Their Child Will be in Interpersonal Relationships	Central Virginia Governor's School
10-10:20 AM	Lucas Jordan Will the Rate of Sexual Violence and the Resources a School Provides for It Influence Your College Decision?	Southwest Virginia Governor's School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Mann IvyElizabeth The Effect of COVID-19 Quarantines on High School Student Extroversion	Central Virginia Governor's School
11-11:20 AM	Mistretta Isabelle The Effect of Speaker Accent on Listener Perceptions of Intelligence and Solidarity	Central Virginia Governor's School
11:20-11:40 AM	Perdue Sophie Gender Differences in Perception Using the Rorschach Inkblot Methods	Southwest Virginia Governor's School
11:40-12 PM	Peterson Katherine Effect of Music Genre on Working Memory	Central Virginia Governor's School
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Whaley Claire How Music in Different Keys Can Comparatively Help to Reduce Stress Levels	Central Virginia Governor's School
1-1:20 PM	Le Eva The Effect of Language in Music on High School Students' Focus Ability	Central Virginia Governor's School

Statistical Analysis & Inferences (HS SAI)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Banks Hope Overdose Mortality Rates and the Correlation with Poverty Levels and Populations of Persons Drawing from SSDI or SSI in West Virginia	Southwest Virginia Governor's School
9:20-9:40 AM	Bock, Karstan -Gamification on User's Accuracy and Efficacy on an Online Educational Tool	Ocean Lakes High School
9:40-10 AM	Xiao William Accessibility to Urgent Care Services for Disadvantaged Populations An Analysis of Healthcare Disparities	Mills E Godwin High School
10-10:20 AM	Coleman Jackson The Effect of Public Transit Ridership on Carbon Dioxide Emissions	Central Virginia Governor's School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Goodove, Drew -Logistic Regression of State Governmental Regulatory Stances on Cryptocurrency	Ocean Lakes High School
11-11:20 AM	Hovanessian, Ralitsa- Optimizing Cancer Identification and Prognosis based on DNA Methylation Biomarkers through Machine Learning	Ocean Lakes High School
11:20-11:40 AM	Patel Shantanu, Effects of COVID-19 on Mathematical Learning Among Multilingual Students	Independence High School
11:40-12 PM	Lim Daniel Can online schools replace traditional brick-and-mortar schools? Implications from the examination of the relationship between course modality (online vs. in-person) and the SOL pass rates of high schools in Virginia	Douglas Southall Freeman Highschool
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Mandal Ankita Prediction4Protection: A Mobile Machine Learning Web Application in the Prediction of Heart Disease	Mills E Godwin High School
1-1:20 PM	Saxena, Yash - Optimizing A Deep Learning Model for the Prediction of Electric Field Induced by Transcranial Magnetic Stimulation for Traumatic Brain Injury Patients	Maggie L. Walker Governor's School
1:20-1:40 PM	Kirkwood Isabel How the Inaccessibility of Feminine Hygiene Products Affects Low-Income Communities	Central Virginia Governor's School
1:40-2 PM	Wiscarson, Eli - Comparing Giles to Other Counties by Location and Population	Southwest Virginia Governor's School
2-2:20 PM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
2:20-2:40 PM	Cassell Alexis Brand Name vs. Name Brand Products	Southwest Virginia Governor's School

Zoology (HS ZOO)

Please convene by 8:45 AM for Announcements

	Student Name(s) & Paper Title	School
9-9:20 AM	Anand Shriyaa & The Effect of LED Lights on the Hatching Rate of Artemia	Mills E Godwin High School
9:20-9:40 AM	Badhryan Aditya Analysis of Aspartame Consumption Rates via Drosophila Melanogaster Utilizing a Modified Capillary Feeding Assay (CaFE)	Maggie L. Walker Governor's School
9:40-10 AM	Blaszak Bridget The Effect of The Herbicides Diuron and Bromacil on the Survival Rate of Marine Tardigrades in a Saltwater Solution	Mills E Godwin High School
10-10:20 AM	Callahan Victoria The Effects of Caffeine and Caffeine Withdrawals on Reaction Time	Central Virginia Governor's School
10:20-10:40 AM	Break (scheduled Zoom re-start - please re-join using same Zoom link)	
10:40-11 AM	Chatterjee Rimil The Effect of Various Microplastics on the Heart Rate of Daphnia magna	Mills E Godwin High School
11-11:20 AM	Lateef Rania Food for Thought: Can Intermittent Fasting Induced Ketosis Ameliorate Dementia by Decreasing Tau Hyperphosphorylation and Neuroinflammation in Drosophila melanogaster?	Charles Colgan High School
11:20-11:40 AM	Lionberger Samantha The Effect of the Color of Light on the Intensity of Tapetum Lucidum	Mills E Godwin High School
11:40-12 PM	Nally, Madison - Feasting Fruit Flies: Evaluating the Effect of Selected Ayurvedic Plant Extracts on the Mood, Memory, and Fertility of Drosophila melanogaster	Governor's School @ Innovation Park
12-12:40 PM	Lunch & Break (scheduled Zoom re-start - please re-join using same Zoom link)	
12:40-1 PM	Ngo Melody The Effect of Aspartame on the Feeding Rate of Daphnia Magna Exposed to an Appetite Suppressant	Mills E Godwin High School
1-1:20 PM	Rudraraju Aarush-The Effect of Amino Acids on Microplastic Consumption rate by Daphnia Magna	Mills E Godwin High School
1:20-1:40 PM	Smith Brett The Phylogenetic Relationship of Ctenophores with Respect to Other Basal Metazoan Clades	Roanoke Valley Governor's School
1:40-2 PM	Vu, Jenny- Planarian (Dugesia dorotocephala) Memory Retention after the Removal and Regeneration of the Cerebral Ganglia and Various Percentages of Body Tissue	Ocean Lakes High School

Selected Programs of the Virginia Academy of Science

The Virginia Journal of Science is America's fourth largest state academy journal in circulation (after New York, Chicago, and Ohio) and goes to 47 states and 12 countries overseas. A professionally refereed quarterly, The Journal publishes original research articles and research notes in the various disciplines of science, mathematics, and engineering: cross-disciplinary papers on advances in science and technology and their impact on society are invited. Minutes of The Academy and notices are also published. Many significant contributions were first published in The Journal and its articles have a high rate of citation. Authors are allowed the first 15 pages, including figures, without charge (\$50 per page for the 16th subsequent pages). Subscription rates are \$40.00 per year. Selected back issues available.

For additional information, contact Christopher Osgood at cosgood@odu.edu or 757-683-6778.

Virginia Scientists, the Academy's newsletter is published three times yearly and serves to communicate information about the Academy; regional conferences; various state science institutions; organizations, agencies, and corporations; and Virginia's researchers, science educators, and their students. Articles and notices are cordially invited. In addition to members, it is sent to Virginia legislators, selected agencies, and college and university presidents.

For information, contact Sujan HenkanaththeGEDARA at henkanaththeGEDARasm@longwood.edu or 434-395-2731.

The Virginia Junior Academy of Science is one of the Nation's foremost junior academies. In addition to the nationally recognized annual refereed paper competition involving hundreds of volunteers, VJAS and VAS programs reach about 40,000 Virginia secondary students each year. Over \$80,000 in scholarships, prizes, research support grants, and trips to national meetings and events are awarded annually. Scientists and science educators are encouraged to adopt school science programs, classes, and clubs, to provide information on Academy programs and foster new clubs and opportunities for Virginia's youth.

For additional information, contact Susan P. Booth at director@vjas.org.

Fall Undergraduate Research Meeting: In Fall 2001, VAS held the first Fall Undergraduate Research Meeting, which focused on support of undergraduate student research. Subsequently, this meeting has been held on an annual basis. Awards of \$500 are given to each of the five top student proposals chosen by judges. The awardees selected at the Fall Undergraduate Research Meeting will present the results of their research projects at the following year's VAS Annual Meeting. Guidelines for the Fall Meeting will be announced on the Academy website www.vacadsci.org.

To obtain additional information about the Fall Undergraduate Research Meeting, contact Carolyn M. Conway, Associate Executive Officer, Virginia Academy of Science at vasoffice@vacadsci.org or 804-864- 1450.

VAS and VJAS Scientific Research Grants, Awards, Scholarships, Assistantships, etc. are made possible by hundreds of corporate and individual donors who believe in our work to benefit the People of Virginia. Many have found this a meaningful way to memorialize a loved one, support a student's education, or recognize a colleague's work.

To Create an Endowment or Make a Donation, please contact Philip M. Sheridan, Executive Officer, Virginia Academy of Science, at psheridan@vacadsci.org or 804-864-1451.

