

Submission Name	First Name	Last Name	School Name
<b>Botany</b>			
Samuel Laneve- The Effect of Different Water Types on the Growth of Tagetes erecta	Samuel	Laneve	Central Virginia GS
Ciara Nauful- Comparing Effects of Auditory Environment on Helianthus annuus	Ciara	Nauful	Central Virginia GS
Mackenzie Cauthorn- Does Using the Sidedressing Method Increase the Growth and Yield of Corn?	Mackenzie	Cauthorn	Chesapeake Bay GS
William McGee- The Effects of Broadcast Seeding on Secale cereal Growth and Abundance	William	McGee	Chesapeake Bay GS
Vi Chau- The Effect of Varying Ratios of Nitrogen, Phosphorus, Potassium, and Calcium, in Homemade Fertilizer, on Plant Growth of Poa Pratensis.	Vi	Chau	Clover Hill HS
Zahra Akbar- The Effect of Different Preservatives on the Lifespan of Roses	Zahra	Akbar	Mills Godwin
Steven Appiah-Yeboah- The Effect of Trimming Various Lengths Below a Terminal Bud on the Resultant Lengths and Number of Lateral Branches	Steven	Appiah-Yeboah	Clover Hill HS
Radhika Bharambe- The Effect of Temperature Abuse on Vitamin C Content in Spinach	Radhika	Bharambe	Mills Godwin
Tanvi Ganti- The Effect of Trace Elements on the Growth of Excessively Nitrogen Fertilized Antirrhinum majus Sprouts	Tanvi	Ganti	Mills Godwin
Shreel Golwala- The Synthesis of Effects of Agricultural Pesticides on Filamentous Algae	Shreel	Golwala	Mills Godwin
Daniella Jeyasingh- The Effect of Natural Insecticides on Army Worm infested Grass	Daniella	Jeyasingh	Mills Godwin
Jerin Jose- The Effect of Added NPK Nutrients on Radish Root Mass	Jerin	Jose	Mills Godwin
Nihita Korrapati- The Effect of Soaking Cabbage Seeds in Various Chemicals on Germination	Nihita	Korrapati	Mills Godwin
Aayush Kulkarni- The Effect of Different Inorganic Nanoparticles on the Chlorophyll Content of Spinacia oleracea	Aayush	Kulkarni	Mills Godwin

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Emma Matos- The Effect of Differing Intensities of Acid Rain Neutralizer on Plant Growth	Emma	Matos	Mills Godwin
Madison Mussatt- Effect of Homemade Fertilizers on Lobularia Maritima Growth	Madison	Mussatt	Mills Godwin
Alexandra Nguyen- The Effect of Watering and Chemicals on Mint Health	Alexandra	Nguyen	Mills Godwin
Quynh Nguyen- The Effect of Bacillus subtilis CU1 on Root Growth in Mung Beans under Drought Stress	Quynh	Nguyen	Mills Godwin
Ayush Pal- The Effect of Tactile Stimulation on the Chlorophyll Concentration of Morning Glories	Ayush	Pal	Mills Godwin
Roseanna Saunders- The Effect of Varying Numbers of Orbeez, Added to Soil, on Plant Growth (cm)	Roseanna	Saunders	Clover Hill HS
Siddarth Siddabattula- The Effect of Pruning Length on Branch Growth (cm)	Siddarth	Siddabattula	Mills Godwin
Varun Yeri- Neutralization of Acid Rain Effects on Radish Crop	Varun	Yeri	Mills Godwin
Meribel Pan, Sharmila Balaji- The Allelopathic Effect of Butternut Squash on Germination and Growth of Morning Glory and Sweet Corn	Meribel	Pan	Roanoke Valley GS
Seth Richards, Thomas Joyce III - The Effect of the AtUNC-93 Gene on Abiotic Stress Response in Arabidopsis thaliana	Seth	Richards	Roanoke Valley GS
Katherine Cross,Sophia Schumaecker- Transient Genetic Transformation of Cuscuta Campestris Using Arginine-functionalized Nanohydroxyapatites as a Plasmid Delivery Vector	Sophia	Schumaecker	Roanoke Valley GS
Jacob Coleman- The Effect of Acid Rain on the Germination of Different Types of Bean Seeds	Jacob	Coleman	Washington-Liberty
Alba Edsall- The Effect of pH Level of Simulated Acid Rainwater on the Shoot Length of Soybeans	Alba	Edsall	Washington-Liberty
Emma Hemsch- The Effect of Water Stress on the Rate of Transpiration of Pisum sativum	Emma	Hemsch	Washington-Liberty

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Daisy Maxwell- The Effect of Sunscreen on Elodea canadensis	Daisy	Maxwell	Washington-Liberty
Mia Pisacane- The Effect of Different Watering Levels on the Germination Rate and Root Length of Lettuce Seedlings	Mia	Pisacane	Washington-Liberty
Gabriella Venezia- The Effect of pH on Bean Germination	Gabriella	Venezia	Washington-Liberty
Isla Wearmouth- The Effect of Aquaponic Farming, in Comparison to Irrigation and Hydroponic Farming, on the Height of Lettuce Seeds	Isla	Wearmouth	Washington-Liberty
<b>Chemistry</b>			
Natalie Bowen- Cross-Species Conservation of Embryonic Transcription Genes in Drosophila melanogaster and Species of Mosquito	Natalie	Bowen	Alexandria City
Carson Gilmore- Comparing Disintegration Rates of Maltodextrin and Hypromellose	Carson	Gilmore	Blacksburg HS
Jodilee Irby- Influence of Fiber Reactive Dyes on the Ultraviolet Protection Factor of Cotton and Linen Fabrics	Jodilee	Irby	Central Virginia GS
Autumn Will- The Most Accurate Method of Maintaining Fingerprint Integrity	Autumn	Will	Central Virginia GS
River DeFrancesco- The Effect of the Amount of Sunlight Exposure on Aging in Wood, Measured by Change in Color	River	DeFrancesco	Clover Hill
John Jurgens- The Effect of Different Materials of Cathodes on the Voltage Output of a Salt Battery	John	Jurgens	Clover Hill
Stanley Craig- How simulated aquatic acidification dissolves freshwater Viviparus georgianus snail shells	Stanley	Craig	Collegiate
Sriyutha Morishetty- The Effect of Dietary Components on the Absorption of Acetaminophen	Sriyutha	Morishetty	Maggie Walker GS
Nachaal Chidambaram- The Effect of Heat from Hair Straightening on Hair Porosity	Nachaal	Chidambaram	Mills Godwin
Mohnish Gopalan- The effect of aerosol propellants on gas pressure	Mohnish	Gopalan	Mills Godwin

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Saaleh Khan- The effect of different salts on corrosion of iron	Saaleh	Khan	Mills Godwin
Arjun Modi- The Effect of Starches on Digestion Time Utilizing Salivary Amylase	Arjun	Modi	Mills Godwin
Carter Neuman- The Effect of Biowaste Type on Biogas Production	Carter	Neuman	Mills Godwin
Thanvi Parupati- The Effect of Sunscreen Types on Planarian Regeneration Following UV Ray Exposure	Thanvi	Parupati	Mills Godwin
Yana Shah- The Effect of Various Hydrophobic Substances on a Water Droplet's Contact Angle on a Cloth Mask	Yana	Shah	Mills Godwin
Meyyammai Subramanian Periyakaruppan- Effect of Air Pollution on Hair	Meyyammai	Subramanian Periyakaruppan	Mills Godwin
Parvathi Tadi- The Effects of Salt Water on the Rate of Corrosion of Metal	Parvathi	Tadi	Mills Godwin
Tuong Vo- The Effect of Cooking Method on Folate Content of Spinach	Tuong	Vo	Mills Godwin
Kaitlin Ervine- Effectiveness of Rust Removers	Kaitlin	Ervine	Southwest Virginia GS
Lauren Kwak- The Degradation of Epinephrine Concentration When Exposed to Extreme Temperatures	Lauren	Kwak	Southwest Virginia GS
Haley Baasansukh- The Effect of Different Solvents on the Retention Factor of Photosynthetic Plant Pigments	Haley	Baasansukh	Washington-Liberty
Gabrielle Cordero- The Effect of Detergent Products Containing Sodium Percarbonate on Luminol Efficacy	Gabrielle	Cordero	Washington-Liberty
Tess Davies- The Effect of Type of Drink on the Amount of Electrolytes	Tess	Davies	Washington-Liberty
Sarah Eichorn- The Effect of Paper Type in Acidic or Neutral Solution on the Degradation of Paper Strength	Sarah	Eichorn	Washington-Liberty
Anna Freeman- The Effect of the Amount of Heavy Cream on the Density of Caramels	Anna	Freeman	Washington-Liberty
Arianna Hellman- The Effect of the Type of Sugar or Sugar Substitute on the Height of a Cupcake	Arianna	Hellman	Washington-Liberty

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Simran Kulkarni- The Effect of Temperature on Blue Light Luminous Intensity	Simran	Kulkarni	Washington-Liberty
Noor Long- The Effect of the Location of the Soil on its pH Level	Noor	Long	Washington-Liberty
Evelyn Ortuno- Average Mass(g) of Beef Liver Dissolved in Different pH Levels	Evelyn	Ortuno	Washington-Liberty
Anna Pritchard- The effect of types of stain removal substances on cotton fabric treated with soy sauce	Anna	Pritchard	Washington-Liberty
Addison Rosen, Chloe Buarer - What is the effect of various leavening agents on the density (gms) of baked bread?	Addison	Rosen	Washington-Liberty
<b>Engineering</b>			
Brock Duma- An Optimized Whitewater Helmet Prototype Designed Using a Newly Developed Helmet STAR Evaluation System and 3D Printing	Brock	Duma	Blacksburg HS
Richard Houchens- The Effect of Wind Speed and Blade Amount on the Efficiency of a Wind Turbine	Richard	Houchens	Central Virginia GS
Harris Ilyas- The Effect of Temperature on Lithium Ion Batteries	Harris	Ilyas	Central Virginia GS
Bailey Morris- The Effect of Altering Input Water Pressure on the Power Production of Hydroelectric Turbines	Bailey	Morris	Central Virginia GS
Malanie Myaing- The Effect of Tensile Strength on Sustainable Textiles	Malanie	Myaing	Central Virginia GS
Marcus Obligacion- The Effect of Temperature on the Tensile Strength of 6061 Aluminum	Marcus	Obligacion	Central Virginia GS
Gabrielle Carter- The Difference in Run-Times Between Solar and Gas-Powered Lawnmowers	Gabrielle	Carter	Chesapeake Bay GS
Anooshka Pendyal- A Novel Application of Different-Sized Deep Residual Networks (ResNet) to Breast Cancer Identification	Anooshka	Pendyal	Deep Run HS
JinSun Lee- Analyzing COVID-19 Data: First-Hand Experience of Becoming a Data Scientist	JinSun	Lee	Douglas Freeman

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Naman Agarwal- A Low-Cost Deep Learning Solution for Early Detection of Lettuce Stress in Indoor Farms	Naman	Agarwal	Governor's School @ Innovation Park
Anish Aradhey- Demonstration and Accuracy of Machine Learning for Sorting Recyclables	Anish	Aradhey	Harrisonburg
Noah Gabriele- Adapted Board Game for the Visually Impaired	Noah	Gabriele	Harrisonburg
Bethany Hinshaw- Automated Mask Detection Using Raspberry Pi and Tensorflow	Bethany	Hinshaw	Harrisonburg
Oakley Massey- Comparison of Cardiac Segmentation Methods for Use in Congenital Heart Disease Corrective Surgeries	Oakley	Massey	Laurel Springs
Sriharsha Sambangi- Design of Magnetic Heat Exchanger regenerators for Active Magnetic Refrigeration	Sriharsha	Sambangi	Mills Godwin
Raymond Wen- The Effect of Electricity on Imitation Blood Flow in Gel	Raymond	Wen	Mills Godwin
Carson Ray- OmniNet: Brain-Based General AI Solutions for Robust Multi-Task Learning	Carson	Ray	Roanoke Valley GS
Karin Anderson- The Effect of 3D Geometric Shapes on Light Scatter	Karin	Anderson	Washington-Liberty
Leonardo Fall- The Effect of Different 3-Dimensional Shapes on the Accuracy and Precision of an Ultrasonic Sensor	Leonardo	Fall	Washington-Liberty
Solomon Galpern- Science Fair The Effect of Blade Angle and Fan Speed on Energy Produced by a Wind Turbine Kit	Solomon	Galpern	Washington-Liberty
Anfal Hosen- Crack The Cipher	Anfal	Hosen	Alexandria City
Caleb Greene- The Effect of Material and Density on 3D Printed Structures for Hand Protections	Caleb	Greene	Chesapeake Bay GS
Dawson Richards- Evaluating the Use of Biomimetic Serration in FDM Drone Propellers for Low-Noise Applications	Dawson	Richards	Southwest Virginia GS
Eyuel Berhanu- The Effect of Hull Design on Drag	Eyuel	Berhanu	Washington-Liberty

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Gwyneth Liu- Novel Model of an Adaptive Wave Energy Converter with Spectral Analysis-based Sea State Classification	Gwyneth	Liu	Mills Godwin
Jayla Adkins- The Effect of Simulated Wingspan on the Distance a Softball is Thrown	Jayla	Adkins	Clover Hill
Joseph Lipanovich- The Effect of Using Varying Numbers of Mirrors, in Conjunction with Solar Panels, on the Amount of Electricity Produced	Joseph	Lipanovich	Clover Hill
Laasya Konidala- Automated ROI Detection for Glioma Severity Prediction	Laasya	Konidala	Mills Godwin
Madeline Powell- Effectiveness of Material Thickness on Blocking Gamma Radiation	Madeline	Powell	Central Virginia GS
Namit Chandra Nallapaneni- The Effect of Method on Microplastic Collection Efficiency	Namit Chandra	Nallapaneni	Mills Godwin
Raphael Sanchez- The effect of Tuned Mass Dampers on Super-Slender Buildings affected by Vortex Shedding	Raphael	Sanchez	Washington-Liberty
Weslie Rosenberg- The Effect of Spidron Design on Preventing Breakage, When Used in Packaging.	Weslie	Rosenberg	Clover Hill
<b>Environment Science</b>			
Hannah Mikolop- How Does the Amount of Crumb Rubber on Soil Affect Plant Growth?	Hannah	Mikolop	Alexandria City
Anne Sullivan- Does Corporate Pollution Pay: Evaluating the Relationship Between Profits and Greenhouse Gas Emissions Among Top Petroleum Companies	Anne	Sullivan	Alexandria City
Erika Miyazaki- Environmental Fate and Impact of Commonly Used Disinfection Wipes	Erika	Miyazaki	Blacksburg HS
Béla Williams- Effect of Biochar on Bioavailable Nitrogen and Phosphorus in Food Waste Compost	Béla	Williams	Blacksburg HS
Burke Bankston- The Effect of Hydrophobic Coatings on the Efficiency of Solar Panels	Burke	Bankston	Central Virginia GS
Jacob Clevenger- The Effect of Different Bio Wastes on Their Potential as Biofuels	Jacob	Clevenger	Central Virginia GS
Devan Funke- The Effects of Location and Weather Conditions on Water Quality Indicators	Devan	Funke	Central Virginia GS

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Anna Grohs- Comparing Polystyrene Adhesive to Commercial Glues	Anna	Grohs	Central Virginia GS
Audrey Johnson- Pseudomonas protegens' Effect on Crop Yield in High Salinity Environments	Audrey	Johnson	Central Virginia GS
Micah Johnson- The Effects of Mycorrhizal Fungi on Glycine max Grown in Nutrient Deficient Soil	Micah	Johnson	Central Virginia GS
Camille Marraccini- The use of natural plant based products for insulation on model homes compared to standard artificial insulation.	Camille	Marraccini	Central Virginia GS
Nathan Neblett- The Effects of Sucralose on Lemna minor	Nathan	Neblett	Central Virginia GS
Abigail Proffitt- The Effect of Climate Change on Rated Storms	Abigail	Proffitt	Central Virginia GS
Ariel Wang- Examining relationships between microplastic size and Lumbricus terrestris transport	Ariel	Wang	Central Virginia GS
Conner Benson- Comparison of Benthic Index of Biotic Integrity in Popes and Buckner Creek During the Late Fall	Conner	Benson	Chesapeake Bay GS
Allison Blake- in Tornado Strength, Frequency and Location in Virginia with Changing Climate	Allison	Blake	Chesapeake Bay GS
Wyatt Evans- The Comparison of Freshwater Pond Ecosystems with Various Levels of Human Influence	Wyatt	Evans	Chesapeake Bay GS
Arianna Fortune- Edge Effects of Forests	Arianna	Fortune	Chesapeake Bay GS
Kiersten Hannah- The Effects of Bycatch Reduction Devices on Crab Catch Rate	Kiersten	Hannah	Chesapeake Bay GS
Brenna Hendrix- The Effect of Oyster Reef Restoration on New Recruitment to Nearby Shoreline Habitat	Brenna	Hendrix	Chesapeake Bay GS
Ella Indseth- Bioremediation of Fish Polluted Water by the Macroalgae Chaetomorpha linum	Ella	Indseth	Chesapeake Bay GS
Payton Jones- Using CO2 as a Proxy to Track Ventilation Rates	Payton	Jones	Chesapeake Bay GS
Sean Kenny- The Effects of Urban Development and Riparian Buffers on Water Quality in an Urban Stream	Sean	Kenny	Chesapeake Bay GS
Steven Lilly, Jr.- Effluent's Effect on the Environment	Steven	Lilly, Jr.	Chesapeake Bay GS



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Kyle Reviello- The Performance of a Gas Turbine Engine Using Fossil Diesel vs Two Different Biodiesels	Kyle	Reviello	Chesapeake Bay GS
Hallie Shackelford- The Average Species Richness of Living Shorelines Versus Man-Made Shorelines	Hallie	Shackelford	Chesapeake Bay GS
Joice Small- Examining Epiphytic Growth on Submerged Aquatic Vegetation	Joice	Small	Chesapeake Bay GS
Amaya Thacker- The Effect of Fishing and Shipping Activity on Blue Shark Distribution	Amaya	Thacker	Chesapeake Bay GS
Dylan White,Sara Chaves Beam- Characterization and Comparison of Two Macroalgal Communities in the Lower Chesapeake Bay	Dylan	White	Chesapeake Bay GS
Bladen Williams- Living shorelines, what do they really provide?	Bladen	Williams	Chesapeake Bay GS
Aleksandra Witkowski- The Decomposition Rates of Wooden vs. Plastic vs. Biodegradable Plastic" Coffee Stirrers in Different Sediment Conditions"	Aleksandra	Witkowski	Chesapeake Bay GS
Joshua Eaton- The Effect of Acetaminophen Concentration (mg/mL) on the Reproductive Rate of the Philodina Rotifer	Joshua	Eaton	Clover Hill
Lauren Ferrell- The Effect of Simulated Rain and Wind on Weathering of a Clay Sculpture	Lauren	Ferrell	Clover Hill
Aden Kim- The Effect of Water Flow Rate (L/h) on Reproductive Rate of Duckweed (fronds/week)	Aden	Kim	Clover Hill
Emma McDaniel- The Effect of Pistia stratiotes and Ceratophyllum demersum on Efficiency at Removing Copper Ions From Water	Emma	McDaniel	Clover Hill
Austin Phan- The Effect of Varying Amounts of Juglone Solution on the Growth Rate of Trifolium repens	Austin	Phan	Clover Hill
Ray Roberts- The Effect of Pond Location and Use on Diversity and Number of Organisms Present in each Pond per Milliliter Sample	Ray	Roberts	Clover Hill
Abigail Taylor- The Effect of Water flow, In Naturally Occurring Bodies of Water, on the pH Level	Abigail	Taylor	Clover Hill

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Treasure Brown, Walker Smith - Effect of Diammonium Phosphate Fertilizer on the Growth and Development of Lemna minor	Treasure	Brown	Collegiate
Lauren Handley- How differing soil temperatures and Rhizobia introduction affect symbiotic nodule formation and growth in peas (Pisum sativum)	Lauren	Handley	Collegiate
Anju Natarajan- Assessing Structural Differences Between Gall and Non-gall Solidago altissima	Anju	Natarajan	Collegiate
Jennine Faruque, Nawah Ahmad, Sejal Sharma- Direct Air Capturer: The Effect of a Direct Air Capturer on the Reduction of Carbon Dioxide	Sejal	Sharma	Governor's School @ Innovation Park
Yash Saxena- The Effect of Different Machine Learning Algorithms on Water Detection	Yash	Saxena	Maggie L Walker GS
Corrina Peachey- Breaking the Climate Change Communication Barrier: The Sonification of Speleothems	Corrina	Peachey	Massanutten Regional GS
Joshua Althaus- The Effect of Carbon Sinks on CO2 Levels in The Air.	Joshua	Althaus	Mills Godwin
Bansi Bhimjiani- The Effect of Electromagnetic Fields on Spirogyra Algae Cells	Bansi	Bhimjiani	Mills Godwin
Anna Dang- The Effect of Ocean Acidification on Changes in Shell Mass	Anna	Dang	Mills Godwin
Shriya Deshpande- The Effect of Hygiene Products on Daphnia Magna Heart Rate	Shriya	Deshpande	Mills Godwin
Henry Guo- The Effect of Sources of Water on Bacteria Growth	Henry	Guo	Mills Godwin
Jackson Haught- The Effect of Real-World Oxybenzone Concentration on Lepidium sativum Growth	Jackson	Haught	Mills Godwin
Samyukta Iyer- The Effect of Aluminum Sulfate on the Bacterial Colony Count	Samyukta	Iyer	Mills Godwin
Violet Janes- The Effect of Richmond Water Chemicals on Fabric Bleaching	Violet	Janes	Mills Godwin
Diya Johar- The Effects of Environmentally Friendly Cleaning Products on Lumbricina Deaths	Diya	Johar	Mills Godwin

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Samantha Lionberger- The Effect of Tree Species on Leaf Burn Rate	Samantha	Lionberger	Mills Godwin
Hemanth Nimmagadda- The Effect of Purification Method Used on Water Quality	Hemanth	Nimmagadda	Mills Godwin
Arvind Rajesh- The Effect of Various Quantities of Silver Nanoparticles on the Regenerative Capabilities in <i>Dugesia Tigrina</i>	Arvind	Rajesh	Mills Godwin
Aquib Syed- The Effect of Iron-Oxide-Induced Electromagnetic Filtration on Agglomerated Microplastic Extraction	Aquib	Syed	Mills Godwin
Vimridh Vasudev- The Effect of Pollutants on <i>Trigonella foenum-graecum</i> Growth	Vimridh	Vasudev	Mills Godwin
Anish Viswanath- The Effect of Earthworms on the Erosion of Soil	Anish	Viswanath	Mills Godwin
Joyce Xu- The Effect of Fibers on Absorption of a Hydrocarbon Mixture	Joyce	Xu	Mills Godwin
Alice Zhang- The Effect of Aeration on Blue-Green Algae Growth	Alice	Zhang	Mills Godwin
Emaad Zakriya- The Effect of Organic Vs. Inorganic Fertilizers on the Nitrogen Concentration in Runoff	Emaad	Zakriya	Mountain View
Amna Zakriya- The Correlation Between the Intensity/Quantity of Solar Flares and Natural Disasters on Earth	Amna	Zakriya	Mountain View
Cynthia Lin- The Development of an Interactive Green-Space Planning Tool for Mitigating Heat Islands in Lynchburg, VA	Cynthia	Lin	Roanoke Valley GS
Kathryn Feldmann, Penelope Roberts- The Effect of <i>Aspergillus niger</i> and <i>Aspergillus brasiliensis</i> on the Decomposition Rate of Low-Density Polyethylene Plastic	Penelope	Roberts	Roanoke Valley GS
Shane Dunford- Cathodic Corrosion Protection Capabilities of Sacrificial Anodes in Different Types of Soil	Shane	Dunford	Southwest Virginia GS

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Seonbin Song- Examining the Relationship between Demographic Factors and a Southwestern Virginian Household's Carbon Footprint	Seonbin	Song	Southwest Virginia GS
Grace Abbott- The Effect of Agricultural Runoff on Water Quality	Grace	Abbott	Washington-Liberty
Elina Coutlakis,Elizabeth Adams- The Effect of California Wildfires on Bird Populations	Elizabeth	Adams	Washington-Liberty
Ella Cohen- Effect of Humidity (in %) on Sugar Content of the Musa Acuminata After 6 Days (in Brix)	Ella	Cohen	Washington-Liberty
Kara Felker- What is the correlation between the temperature anomaly in Virginia and the occurrence of Brown-headed Nuthatches (Sitta pusilla) in Virginia?	Kara	Felker	Washington-Liberty
Anastasia Kotakis- The Effect of Different Kinds of Roadside Salts on Fescues Grass Plant Growth	Anastasia	Kotakis	Washington-Liberty
Madison Le- The Effect of Different Colored Light on the Growth of Plants	Madison	Le	Washington-Liberty
Abbey Lennox, Sam Short - Can Silica Save The Glaciers?	Abbey	Lennox	Washington-Liberty
Elle Pickard- The Effect of Different Purification Methods on Amount of Bacteria in Water	Elle	Pickard	Washington-Liberty
Ana Sanchez-Armass- Differences in Water Quality in the Washington DC Area	Ana	Sanchez-Armass	Washington-Liberty
Frances Shapiro- The Effect of Soil Particle Size on Water Runoff	Frances	Shapiro	Washington-Liberty
Harriet Shapiro- The Effect of Urban Heat Island Mitigation Strategy on Surface and Atmospheric Temperature	Harriet	Shapiro	Washington-Liberty
Alena Topchy, Sadie Wallander - The Effect of Infrastructure on Dissolved Oxygen in Nearby Streams	Alena	Topchy	Washington-Liberty
Natalie Walker- The Effect of Potomac River's Water Quality on Water Purifacation	Natalie	Walker	Washington-Liberty
Pete Wilcox- How do Combinations of Warm Water and Ammonia Affect Brine Shrimp Hatch	Pete	Wilcox	Washington-Liberty

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Abraham Wisner- Measuring the Effect of Bacopa Caroliniana, Ceratophyllum Demersum, and Vallisneria Americana on Phosphorus Levels in Water	Abraham	Wisner	Washington-Liberty
<b>Math: Theoretical &amp; Modeling</b>			
Shoshana Elgart- A New Approach to Image Stitching: Minimizing Distortion and Computational Costs	Shoshana	Elgart	Blacksburg HS
Samuel Xiang- Changes in pK and ionization state of SARS-CoV-2 spike receptor binding domain upon human ACE2 receptor binding	Samuel	Xiang	Blacksburg HS
Micah Eberz- Analyzing the Relationship Between Serving and Scoring in Table Tennis	Micah	Eberz	Central VA GS
Brooke Li- The Effect of Training Data, Methods, and Neural Network Model on Signature Verification Accuracy	Brooke	Li	Central VA GS
Ariq Amin- The Effect of the Distance of a Liquid Projectile From a Receiver on the Percentage Coverage of Projectile Droplets	Ariq	Amin	Clover Hill
Philip Naveen- Phish - A Novel Hyper Optimizable Activation Function	Philip	Naveen	Mills Godwin
Camellia Sharma- The Effect of Machine Learning Algorithms on Identifying Skin Cancer	Camellia	Sharma	Mills Godwin
Josh Tomiak- Online Machine Learning for SMS Spam Detection	Josh	Tomiak	Southwest Virginia GS
Lillian Sun- De Novo Prediction of RNA-Protein Interactions for Discovery of Tissue-Specific Binding Sites and Study of RNA Gain-of-Function Diseases	Lillian	Sun	Thomas Jefferson HS S&T
<b>Medicine and Health</b>			
Jacqueline Hou- The Effects of Inflammatory Neutrophils on Endothelial Cell Integrity	Jacqueline	Hou	Blacksburg High School
Bailey Carver- Effects of Collagen on the Heart Rates of Daphnia magna	Bailey	Carver	Central Virginia Governor's School
Natalie Hudson- The Effect of Aquatic Therapy on Stroke Patients Recovery	Natalie	Hudson	Central Virginia Governor's School

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Eden Hunter- The Effect of Disrupted Circadian Rhythm on <i>Drosophila melanogaster</i> Lifespan	Eden	Hunter	Central Virginia Governor's School
Justin Kim- The Effect of <i>Bacillus cereus</i> on the Central Nervous System of <i>Dugesia tigrina</i>	Justin	Kim	Central Virginia Governor's School
Beall Roberts- The Effect of Fast Food Consumption on Pain with Menstruation	Beall	Roberts	Central Virginia Governor's School
Madysen Davis,Sara Chaves Beam- The Effect of Laundry Products with Strong Fragrances on the Development of Larval <i>Drosophila melanogaster</i>	Madysen	Davis	Chesapeake Bay Governor's School
Michael Foulkes- The Effects of Footwear on Running Form for Short Distance Runs	Michael	Foulkes	Chesapeake Bay Governor's School
Hadessah Johnson- Compound Screening for Molecular Regulators of ZFP189 Using Luciferase Assay and qPCR	Hadessah	Johnson	Chesapeake Bay Governor's School
Cassie Kincaid- Surgical Sutures and the Effect of pH Levels on Their Tensile Strength	Cassie	Kincaid	Chesapeake Bay Governor's School
Lilly Batthany- The Effect of Length of Time (min) a Mask is Worn" on Distance a Simulated Breath Travels (cm) Through the Mask"	Lilly	Batthany	Clover Hill High School
Abdullah Khurram,Raj Joshi, Benjamin Dries- An Analysis of Clinical Gastrointestinal Side Effects from Analgesics by Measuring Relative Inhibition of Enzymes	Raj	Joshi	Governor's School @ Innovation Park
Maanini Lakshmanan, Bethelle Lanquaye, Chloe Musman- The Effects of Niacinamide, Ascorbic Acid, and Coenzyme Q10 on the Vitality and Mobility of <i>Caenorhabditis elegans</i>	Bethelle	Lanquaye	Governor's School @ Innovation Park
Gabriel Ralston,Hamza Lateef, Tony Bright- Concussion Recovery in Youth Optimized using a Comprehensive App-based Program (CRYO CAP)	Hamza	Lateef	Governor's School @ Innovation Park
Divya Ramakrisnan,Hermela Tadesse,Soneha Datta- The Effect of Natural Plant Extracts on <i>C. elegans</i> as a Means of Limiting UV Radiation Damage	Divya	Ramakrishnan	Governor's School @ Innovation Park
Aashka Shah- Analysis of T cell Recovery in the Early Post-Bone Marrow Transplantation Period	Aashka	Shah	Maggie L. Walker Governor's School

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Sriman Achanta- The Effect of Prolonged Exposure of UVR on Murine Erythrocytes in Vitro	Sriman	Achanta	Mills Godwin High School
Shriyaa Anand- The Effect of LED Lights on Blood Pressure	Shriyaa	Anand	Mills Godwin High School
Pranav Chintkuntlawar- The effect of different antacid medications on stomach pH change	Pranav	Chintkuntlawar	Mills Godwin High School
Anne Eubanks- The Effect of Dimethicone on Transepidermal Water Loss	Anne	Eubanks	Mills Godwin High School
Sherlin George- The Effect of Ripening of Citrus sinensis on the Decay of Tooth Enamel	Sherlin	George	Mills Godwin High School
Sophia Jagels- The Effect of Plant-Based Sunscreen Ingredients on Ultraviolet Index Reduction	Sophia	Jagels	Mills Godwin High School
Akul Miriyala- The Effect of Different Types of Whitening-Toothpaste on Enamel Hardness	Akul	Miriyala	Mills Godwin High School
Round 1 Medicine & Health (MDH), Round 2 Medicine & Health (MDH), Sponsors- The Effect of Antacids on the pH of Stomach Acid	Aarushi	Nayak	Mills Godwin High School
Snehitha Ravilla- The Effect of Syringe Design on Medicine Injection Effectiveness	Snehitha	Ravilla	Mills Godwin High School
Saniya Sangle- The Effect of Amount of Sleep on Memorization Ability	Saniya	Sangle	Mills Godwin High School
Nishorgo Sarkar- The Effect of Fenugreek (Trigonella foenum-graecum) Extract on HCC Cell Proliferation	Nishorgo	Sarkar	Mills Godwin High School
Zachary Schwehr- The Effect of Vitamin Type on Cellular Regeneration	Zachary	Schwehr	Mills Godwin High School
Nivriti Vanga- The Effect of Chelated Mineral Supplements on Absorption	Nivriti	Vanga	Mills Godwin High School
Emily Yang- The Effect of High-Glucose Diets on Caenorhabditis elegans Lifespan	Emily	Yang	Mills Godwin High School
Christina Okenquist, Ella Bryant- The Effect of RNA Interference on the Apoptosis of Small Cell Lung Carcinoma	Ella	Bryant	Roanoke Valley Governor's School

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Ayla Lampros, Reese Redford- The Effect of Manzanine A on the Growth of Lung Carcinoma	Ayla	Lampros	Roanoke Valley Governor's School
Lacey Ngo- Assessing and Monitoring Liver Viability Using Raman Spectroscopy and Chemometric Analysis	Lacey	Ngo	Roanoke Valley Governor's School
Maggie Parkhurst- Analysis of Differential Gene Expression in Blood Samples to Predict Alzheimer's Disease	Maggie	Parkhurst	Roanoke Valley Governor's School
Jade Riddle- Evaluating the Effects of Different Insulin Dosing Calculation Methods on Potential Insulin Adherence in Type 1 Diabetes	Jade	Riddle	Southwest Virginia Governor's School
Lynn Tao- Early Breast Cancer Risk Detection: A Novel Framework Leveraging Polygenic Risk Scores and Machine Learning	Lynn	Tao	Thomas Jefferson High School for Science and Technology
Allison Grove, Kathryn Boerckel- The Effect of Correspondence Between Strains of Prevalent Influenza and Strains Included in the Vaccine on the Effectiveness of the Flu Vaccine in 10 Flu Seasons from 2010-2020	Allison	Grove	Washington-Liberty High School
Qiaojing Huang- The Effect of Similarity in Glycoproteins Between the Strains of Influenza Virus and Strains in the Vaccine on the Overall Effectiveness of Flu Vaccines	Qiaojing	Huang	Washington-Liberty High School
Lauren Rylander- The Effect of Educational Intervention on Knowledge of Tissue Donation in High School Students	Lauren	Rylander	Washington-Liberty High School
Jaya Shah- The Effect of Glucose Sensor on the Functioning of an Artificial Pancreas Model	Jaya	Shah	Washington-Liberty High School
Abigail Whiting- The Correlation Between Surface Temperature and Dengue Fever Incidence in Countries in the Americas	Abigail	Whiting	Washington-Liberty High School
<b>Microbiology and Cell Biology</b>			
Katerina Leedy- Elucidating the Subcellular Localization of NLRX1 in Pancreatic Cancer Cells	Katerina	Leedy	Blacksburg High School
Christina Su- Deleting FGF15 disrupts mouse cerebellum structure and excitatory synapse formation	Christina	Su	Cave Spring High School



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Kate Bentov- The Effect of Different Neurotransmitter Solutions on The Growth and Optimization of Physarum polycephalum	Kate	Bentov	Central Virginia Governor's School
Esther Ellis- The Effect of Various Dietary Conditions on the Growth of Streptococcus Mutans	Esther	Ellis	Central Virginia Governor's School
Emma Meehan- Comparing the Effectiveness of Different Sun Protection Products on the Growth of Saccharomyces Cerevisiae	Emma	Meehan	Central Virginia Governor's School
Timothy Patterson- The Effect of Different Carbohydrates on the Growth of Escherichia Coli	Timothy	Patterson	Central Virginia Governor's School
Faith Peerman- Comparing the Antimicrobial Efficacy of Biosynthesized Silver Nanoparticles on S. mutans	Faith	Peerman	Central Virginia Governor's School
Jacob Tiller- The Effect of Liquid Chlorine and Liquid Iodine on Turbatrix aceti survivability	Jacob	Tiller	Central Virginia Governor's School
Lane Eubank- Various Handwashing Techniques and Their Efficiency in Eliminating Micro-bacteria Prevalent in the Human Microbiota	Lane	Eubank	Chesapeake Bay Governor's School
Madison Nelson- The Effects of Usage on Vending Machine Cleanliness	Madison	Nelson	Chesapeake Bay Governor's School
Zain Abed- The Effect of Additives on the Efficiency of Compost in Terms of Temperature, Bacterial Composition, and Nitrogen/Ammonia Levels	Zain	Abed	Clover Hill High School
Amy Asubonteng- The Effect of Various Hand Sanitizers, With Varying Percentages of Alcohol (%), on the Percentage of Bacterial Colonies (%).	Amy	Asubonteng	Clover Hill High School
Isabella Bushey- The Effect of Temperature and Day Length on the Initiation of Anthocyanin on Fall Leaves	Isabella	Bushey	Clover Hill High School
Mary Willis- The Effects of Sugar Mass on Alcohol Concentration Through Fermentation	Mary	Willis	Clover Hill High School

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Alahna Moreno,Anisha Ramakrishnan,Gabriella La Cour- Creating Novel Bacteriophage Solutions as a Preventative Measure for Escherichia coli Biofilm Formation on Elastomer Biomaterials in Medically Relevant Settings in Vitro	Anisha	Ramakrishnan	Governor's School @ Innovation Park
Julia Brodsky- Anti-biofilm activity of isolated bacteriophages for the treatment of multidrug-resistant pulmonary infections	Julia	Brodsky	H-B Woodlawn Secondary Program
Aanandi Parashar- EFFECTIVE DIFFERENT FOOD PRESERVATION METHODS ON ASCORBIC ACID CONTENT OF FRUIT USING A REDOX TITRATION.	Aanandi	Parashar	Hidden Valley High School
Laken Evans- The Effect of Ground Beef Variety on Bacterial Content	Laken	Evans	Mills Godwin High School
Tristan Fields- The Effect of Time on the Number of Bacteria Colonies	Tristan	Fields	Mills Godwin High School
Matthew Gavin- Testing the Antimicrobial Properties of Copper	Matthew	Gavin	Mills Godwin High School
Anika Kashyap- Effect of Probiotic Type on Survivability in Yogurt Making Process	Anika	Kashyap	Mills Godwin High School
Hannah Loos- The Effect of Antifungals on Saccharomyces cerevisiae Survival	Hannah	Loos	Mills Godwin High School
Cameron Myers- The Effect of Different UV Wavelengths on E. coli. K12	Cameron	Myers	Mills Godwin High School
Mihir Pokhriyal- Phenolic Acid vs. Flavonoid on the Inhibition of Escherichia coli K-12	Mihir	Pokhriyal	Mills Godwin High School
Anusree Ponnarasi Marikkannan- The Effect of Mutations in T-cell Epitopes of Nucleocapsid Protein between SARS-COV-2 Variants	Anusree	Ponnarasi Marikkannan	Mills Godwin High School
Rithvik Rayala-The Effect of Antimicrobial Solutions on the Inhibition of the Bacterial Growth of E.Coli	Rithvik	Rayala	Mills Godwin High School
Nisarg Shah- The Effect of Hydrogen Peroxide Concentration on Teeth Deterioration	Nisarg	Shah	Mills Godwin High School

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Smita Vijay Arumugam- The Effect of Natural Treatments on the Inhibition of Escherichia coli	Smita	Vijay Arumugam	Mills Godwin High School
Pari Wadnerkar- The Effect of the Concentration of Copper Nanoparticles on the Growth of Escherichia Coli	Pari	Wadnerkar	Mills Godwin High School
Monona Zhou- Live Cell Imaging of the Interactions between an Acetylase and Binding Domain	Monona	Zhou	Mills Godwin High School
Haley Day- The Effect of Environmental Factors on Beta-Carotene Production in Genetically Engineered Yeast	Haley	Day	Roanoke Valley Governor's School
Emma Thielecke, Grace Kahoun- The Use of a Fluorescent pH-Biosensor to Image Yeast Organelles	Grace	Kahoun	Roanoke Valley Governor's School
Eleanor Little- Circadian Rhythmicity of Cellular Healing	Eleanor	Little	Roanoke Valley Governor's School
Emma Abramson- The Effect of Hand Soaps on the Growth of Staphylococcus Epidermidis Bacteria	Emma	Abramson	Washington-Liberty High School
James Anderson- Effect of Antibacterial Hand Soaps and Sanitizers on the Growth of Staphylococcus epidermidis	Lucy	Anderson	Washington-Liberty High School
Caroline Fern, Lucie Leblond - The Effect of Green Tea Concentration on the Amount of Oral Bacteria	Caroline	Fern	Washington-Liberty High School
Helen Hanke- The Effect of Body Wash on the Zone of Inhibition of Staphylococcus epidermidis	Helen	Hanke	Washington-Liberty High School
Anna Mohanty- The Effect of a Staphylococcus epidermidis Infection on the pH of its Medium	Anna	Mohanty	Washington-Liberty High School
Darya Wilson- The Effect of the Coronavirus Pandemic on the Cleanliness of Common Surfaces	Darya	Wilson	Washington-Liberty High School
Myra Clark- The Effect of the Type of Natural Preservative on the Size of the Zone of Inhibition of Escherichia Coli	Myra	Clark	Yorktown High School
Ryan Ermovick- The Effect of Different Methods of Water Treatment on the Growth of Microorganism Colonies	Ryan	Ermovick	Yorktown High School
Bilguun Zolzaya- Dirty Tables: Determining the best antimicrobial metal/material for a table in classrooms or hospitals	Bilguun	Zolzaya	Yorktown High School

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<b>Physics and Astronomy</b>			
Sam Watchman- Mapping the Milky Way: Observations of Galactic Structure from the 21cm Hydrogen Line	Sam	Watchman	Arlington Tech
Erik Midkiff- How do Differing Sensor Systems Respond to Natural Environmental Conditions?	Erik	Midkiff	Blacksburgh High School
Sebastian Amador- Comparison of Star Formation Rate in Spiral versus Elliptical Galaxies	Sebastian	Amador	Central Virginia Governor's School
Sara Lynn Loucks- The Effect of Hand Speed on Stroke Force in Freestyle Swimming	Sara Lynn	Loucks	Central Virginia Governor's School
Kai Styrsky- The Effect of Temperature on the Resistance of Different Metallic Conductors	Kai	Styrsky	Central Virginia Governor's School
Maria Ziegler- The Relationship Between Types of Galaxies and Central Light Intensity of Young Stars	Maria	Ziegler	Central Virginia Governor's School
Sara Chaves Beam, You Gao- Lunisolar Seismology Analysis - Do Tides Affect Earthquake Frequency?	You	Gao	Chesapeake Bay Governor's School
Aaron Sweeney, Sara Chaves Beam- The Effect of Roof Surface Characteristics On Albedo and Temperature	Aaron	Sweeney	Chesapeake Bay Governor's School
Sarah Chretien- The Effect of the Proximity of Celestial Planets on the Number of Sunspots, Solar Flares, and Coronal Mass Ejections (CMEs) Within 11 Years (December 08 - 19).	Sarah	Chretien	Clover Hill High School
Ryan Fang- The Effect of Different Mixtures of Nitrogen and Air, Used in a Bicycle Tire, on Rate of Pressure Over Time	Ryan	Fang	Clover Hill High School
Julie Bainter- The Effect of Price on the Accuracy of Chromatic Tuners	Julie	Bainter	Clover Hill High School
Kalea Wen, Ari Poisik- The Kadomstev-Rosenbluth Initiative	Kalea	Wen	Governor's School @ Innovation Park
Simran Patibanda, Kaylyn Nguyen- The Effect of Rotational Direction on the Power of Relativistic Jets Emitted from Active Galactic Nuclei	Simran	Patibanda	Governor's School @ Innovation Park

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Aryan Mhaskar- Safety of Transcranial Magnetic Stimulation for Parkinson's Patients with Deep Brain Stimulators	Aryan	Mhaskar	Mills Godwin High School
Rishav Sen- Classifying Stars in the GAIA Catalog Using Machine Learning	Rishav	Sen	Mills Godwin High School
Laura Wang- The Effect of Cement Alternatives on Deformations Occurred by Force	Laura	Wang	Mills Godwin High School
Madison Brown- An Analysis of Water Maser Observations Using Next-Generation VLA	Madison	Brown	Roanoke Valley Governor's School
Evan Cline- Most Efficient Knee Angle of a Basketball Shot	Evan	Cline	Southwest Virginia Governor's School
Killian Woods- The Variance in Static and Kinetic Coefficients of Friction of Leathers Used in Work Gloves at Different Levels of Water-Based Moisture	Killian	Woods	Southwest Virginia Governor's School
Olivia Bartrum- Analyzing the Efficacy of Inorganic UV Filters on Their Ability to Block UV-A Light	Olivia	Bartrum	Wakefield High School
<b>Psychology</b>			
Madison Hamlin- The Effect of Birth Order on Intelligence Quotient (IQ).	Madison	Hamlin	Central Virginia Governor's School
John Hoegerl- The Effect of Personality Type on Music Preference	John	Hoegerl	Central Virginia Governor's School
Faith Jacob- Secondary Traumatic Stress in Different Fields of Healthcare Workers	Faith	Jacob	Central Virginia Governor's School
Reese Kennedy- Examining Relationships Between the Stress of Daily Activities and Dreams/Sleep Quality	Reese	Kennedy	Central Virginia Governor's School
Jackson Laughon- The Effect of Distractions On a Golfer's Putting Ability	Jackson	Laughon	Central Virginia Governor's School
Charlotte Maxwell- Fast Fashion Epidemic: Relationships Between Impulse Purchasing and Environmental Impact Considerations	Charlotte	Maxwell	Central Virginia Governor's School
Sarah Miller- Relationships Between Participation in High School Extracurriculars and Future Lifestyles	Sarah	Miller	Central Virginia Governor's School
Jack Pitts- The Relationship Between Color and Long-Term Memory	Jack	Pitts	Central Virginia Governor's School

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Chloe Ro- The Relationship Between Blood Type and Personality	Chloe	Ro	Central Virginia Governor's School
Emaline Basye- Reading vs Video vs Interaction: What is the Most Effective Way to Learn	Emaline	Basye	Chesapeake Bay Governor's School
Gabrielle Brown- Connecting the Dots: A look at the working short-term memory of elementary schoolers	Gabrielle	Brown	Chesapeake Bay Governor's School
McKenna Condrey- The Mental Health Effects of The Coronavirus Pandemic on High School Students	McKenna	Condrey	Chesapeake Bay Governor's School
Arika Gray- The Correlation Between Social Media Usage and Adolescent's General Happiness, Social Satisfaction, and Social Connectedness	Arika	Gray	Chesapeake Bay Governor's School
Kendra Kraisser- The Correlation Between Academic Performance / Grade Satisfaction and Student Stress Levels	Kendra	Kraisser	Chesapeake Bay Governor's School
Aaleya Fowler- Decision-making and Breathing Patterns Affected by Methods of Animal Presentation	Aaleya	Fowler	Collegiate School
Mary Myers- The Effect of Feedback on Students' Pattern Memorization Scores	Mary	Myers	Collegiate School
Misthi Choksi- The Effect of Brain Systems on Perceived Effort of Multitasking	Misthi	Choksi	Mills Godwin High School
Matthew Magtoto- The Effect of Generation on Peer Pressure Induced Vices	Matthew	Magtoto	Mills Godwin High School
Ankita Mandal- The Effect of Social Media During Isolation on Mental Health	Ankita	Mandal	Mills Godwin High School
Colin Mayhew- The Effect of Photographic Presentation on the Visual Appeal of Dog Adoption Candidates	Colin	Mayhew	Mills Godwin High School
Yousif Shakroo- The Effect of Light on Stress	Yousif	Shakroo	Mills Godwin High School
Eric Zhou- The Effect of Bilingualism on the Stroop Task	Eric	Zhou	Mills Godwin High School

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Claire Chang- The Reliability of Digital Divergent Thinking Tests	Claire	Chang	New Horizons Governor's School for Science and Technology
Jessica Long- Music and How it Affects Cognitive-Motor Skills and Relaxation	Jessica	Long	Southwest Virginia Governor's School
Hannah Marrone- STEM Interest Inequality by Gender and Secondary Education	Hannah	Marrone	Southwest Virginia Governor's School
Eden Mitchell- Autonomous Sensory Meridian Response: The Use of Auditory and Visual Stimuli	Eden	Mitchell	Southwest Virginia Governor's School
Harbalbeen Rai- Testing Health Literacy in Females in Southwest Virginia	Harbalbeen	Rai	Southwest Virginia Governor's School
Landon Shepherd- Students Before And After Receiving Information On Portion Sizes Assessment	Landon	Shepherd	Southwest Virginia Governor's School
Madelyn Snow- Testing the Difference in Mental Stimulation Between Playing and Listening to Music	Madelyn	Snow	Southwest Virginia Governor's School
Elijah Tegenkamp- Effects of Playing Video Games on Reaction Time in Adolescents	Elijah	Tegenkamp	Southwest Virginia Governor's School
Kaleigh Temple- Determining the Most Effective Method for Word Acquisition	Kaleigh	Temple	Southwest Virginia Governor's School
Andrew Klinger- The Effect of Different Locations on Face Covering Compliance	Andrew	Klinger	Washington-Liberty High School
<b>Statistical Analysis and Inferences</b>			
Emily Giles- The Effects of Heavy Workloads and Other Factors Upon the Mental Health of Student Athletes	Emily	Giles	Central Virginia Governor's School
Cane Hornberger- The Effect of a New Technology Release on the Stock Market	Cane	Hornberger	Central Virginia Governor's School
Evan Martin- The Effect of Spin Rate on Pitcher and Batter Performance	Evan	Martin	Central Virginia Governor's School
George White- Minority Involvement in Advanced Placement and Dual Enrollment Courses in Virginia High Schools Over Time	George	White	Central Virginia Governor's School
Sidhartha Basu- Statistics Behind Identity Fraud	Sidhartha	Basu	Deep Run High School

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Aiden Jun- Impact of the COVID-19 on Travel Patterns of Neighborhoods in Henrico County, VA	Aiden	Jun	Deep Run High School
Nicholas Hoelting- The Effect of Conditioning on Leg Cramps in Tennis Players	Nicholas	Hoelting	Mills Godwin High School
Sattwik Nath- The Effect of Machine Learning Algorithms on Detecting Apple Freshness	Sattwik	Nath	Mills Godwin High School
Nate Stevenson- Analysis of EU-15 Greenhouse Gas Emissions Under the Kyoto Protocol from 1990-2019	Nate	Stevenson	Mills Godwin High School
William Xiao- The Effect of COVID-19 on the USA House Market	William	Xiao	Mills Godwin High School
Colin Berry- Bringing Truth into Fake News: The Diffusion of Fact-Checked Fake Stories on Twitter	Colin	Berry	Yorktown High School
<b>Zoology</b>			
Rania Lateef- Dozing off with Drosophila: The Effect of Disrupted Circadian Rhythms and Sleep Deprivation on Mortality, Mood, and Addiction	Rania	Lateef	Charles Colgan High School
Nadine Greer- The Effect of Increasing CO2 Levels on Brine Shrimp Hatching Rate	Nadine	Greer	Clover Hill High School
Amanda Tan- How Exposure of Planaria to Choice Chamber Stimuli Affect Behavioral Responses of Resulting Planaria Fragments	Amanda	Tan	Collegiate School
Likitha Appalapuram- The Effect of pH Level on Artemia salina Reproduction Rate	Likitha	Appalapuram	Mills Godwin High School
Kavin Bhurtel- The Effect of Water pH on Hydra Growth and Feeding Rate	Kavin	Bhurtel	Mills Godwin High School
Bridget Blaszak- The Effect of Granular Stabilized Chlorine on the Presence of Regeneration in Dugesia tigrina	Bridget	Blaszak	Mills Godwin High School
Bridget Falgui- The Effect of Magnetism on Planaria Regeneration	Bridget	Falgui	Mills Godwin High School
Ananya Nanduru- The Effect of Various Electrical Light Sources on Positive Phototaxis in Drosophila melanogaster	Ananya	Nanduru	Mills Godwin High School



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Melody Ngo- The Effect of an Appetite Suppressant on Daphnia Magna's Feeding Rate	Melody	Ngo	Mills Godwin High School
Aarushi Rao- The Effect of Antioxidants on Ultraviolet Radiated Stem Cells in Girardia Tigrina	Aarushi	Rao	Mills Godwin High School
Tanish Singh- The Effect of Regenexx Stem Cell Formula on Cellular Regeneration	Tanish	Singh	Mills Godwin High School
Srinidhi Subramanian- The Effect of the Electromagnetic Spectrum on Planaria Regeneration	Srinidhi	Subramanian	Mills Godwin High School
Abhinav Tadinada- The Effect of Various Lights on the Regeneration of Brown Planaria	Abhinav	Tadinada	Mills Godwin High School
Annie Yuan- A Look Inside Planarian Radiation Resistance Across Different Regenerative Stages	Annie	Yuan	Mills Godwin High School