

2021 Virginia Junior Academy of Science (VJAS) Research Symposium Acceptance List - High School All Categories

Category	School Name	First Name	Last Name	Grade	Research Paper Title
Botany (BOT)	Central Virginia Governor's School.	Lily	Doebler	11th	Effects of plastic micro-particles on Helianthus annuus growth
Botany (BOT)	Central Virginia Governor's School.	Beverly	Eborn	11th	The Effect of Added Polyamines on Glycine max Responses to Drought
Botany (BOT)	Central Virginia Governor's School.	Sydney	Fairchild	11th	The effect of different brands of sunscreen on elodea canadensis
Botany (BOT)	Central Virginia Governor's School.	Imaan	Syed	11th	The effects of electricity at different voltages on growth of Ambrosia Hybrid corn plant (Zea mays var. rugosa)
Botany (BOT)	Central Virginia Governor's School.	Arleigh	Wagoner	11th	The Effect of UV-B Intensity on the Floral Pigmentation of Brassica rapa
Botany (BOT)	Chesapeake Bay Governor's School	Abby	Madson	12th	Lichen Abundance and Diversity in Cemetery Environments
Botany (BOT)	Clover Hill High School	Benjamin	Schneider	10th	The Effect of Using Black Soldier Fly Larvae in Composting on Resulting Plant Height
Botany (BOT)	Governor's School@Innovation Park	Maya	Lennon	12th	The Impact of Invasive species English ivy (Hedera helix) on the Nitrogen, Phosphorous, Potassium level and pH Balance of Native Soil
Botany (BOT)	Mills E. Godwin High School	Elyse	Lanquaye	12th	
Botany (BOT)	Mills E. Godwin High School	Bhavana	Adhikari	11th	The Effect of Various Allelopathic Plants on the Suppression of Taraxacum officinale
Botany (BOT)	Mills E. Godwin High School	Veda	Akula	10th	The Effect of Smoke Exposure on the Transpiration Rate of Ocimum basilicum
Botany (BOT)	Mills E. Godwin High School	Maria	Angel Zamora	11th	The effect of lipid second messenger Phosphatidic Acid (PA) on Spinach (Spinacia oleracea) under salt stress.
Botany (BOT)	Mills E. Godwin High School	Riya	Chawla	10th	The Effect of Natural Fertilizers on Nutrition of Beta vulgaris.
Botany (BOT)	Mills E. Godwin High School	Joey	Chen	10th	The Effect of Dextrose Solutions on Raphanus sativus
Botany (BOT)	Mills E. Godwin High School	Nachaal	Chidambaram	9th	The Effect of Different Worms on the Growth of Tagetes Patula
Botany (BOT)	Mills E. Godwin High School	Pranav	Chintkuntlawar	9th	The Effect of Various NPK fertilizers on Spinach Plant Growth
Botany (BOT)	Mills E. Godwin High School	Estelle	He	11th	The Effect of Mangroves and Limestone Powder on the pH of Water
Botany (BOT)	Mills E. Godwin High School	Julia	Hudgins	10th	The Effect of Vitamin C on Raphanus sativus Plants
Botany (BOT)	Mills E. Godwin High School	Anika	Makarla	10th	Investigating Sound on the Effect of Music Genres on Growth of Vigna radiata and Solanum lycopersicum.
Botany (BOT)	Mills E. Godwin High School	Ankita	Mandal	9th	The Effectiveness of Natural Medicinal Essential Oils as Cleaning Products
Botany (BOT)	Mills E. Godwin High School	Nishaanth	Mulpuru	11th	The Effect of Different Pesticides Containing Heavy Metals on the Transpiration Rate of Vigna unguiculata
Botany (BOT)	Mills E. Godwin High School	Angela	Nguyen	11th	The effect of different antioxidants on the protection of free radicals in Vigna radiata seed germination
Botany (BOT)	Mills E. Godwin High School	Hemanth	Nimmagadda	9th	The Effect of Temperature of Water on Capillarity
Botany (BOT)	Mills E. Godwin High School	Sriharsha	Sambangi	9th	The Effect of Different Soil and Bean Combinations on Electricity Production
Botany (BOT)	Mills E. Godwin High School	Meyyammai	Subramanian Periyakaruppan	9th	The Effect of Climate Change on Seed Germination
Botany (BOT)	Mills E. Godwin High School	Aquib	Syed	9th	The Effect of Various Hygroscopic Humectants on Seed Germination Day
Botany (BOT)	Mills E. Godwin High School	Ryan	Taylor	11th	The Effect of Aqueous Calcium Concentrations on the Germination of Pisum sativum
Botany (BOT)	Mills E. Godwin High School	Diana	Trutia	10th	The Effect of Magnetism on Crop Survival During a Simulated Drought
Botany (BOT)	Mills E. Godwin High School	Nivriti	Vanga	9th	The Effect of Magnesium Sulfate on Epipremnum Aureum's Radicle Growth
Botany (BOT)	Roanoke Valley Governor's School	Carson	Ray	9th	The Synergistic Allelopathic Effects of Extracts from Two Invasive Species on Germination and Growth of R. sativus
Botany (BOT)	Washington-Liberty High School	Daniel	Han	9th	
Botany (BOT)	Washington-Liberty High School	Sassan	Fiske	10th	The Effect of Different Amounts of Greywater Filtration on the Growth Rate of Radishes
Botany (BOT)	Washington-Liberty High School	Estee	Ruiz	10th	
Botany (BOT)	Washington-Liberty High School	Matthew	Huson	10th	The Allelopathic Effect of Allelochemicals such as Juglone in Juglans Nigra On Zea Mays and Glyphosate Resistant Weed Amaranthus Retroflexus
Botany (BOT)	Washington-Liberty High School	Noor	Long	9th	The Effect of the Contaminant on the Growth of the Radish Plant

Category	School Name	First Name	Last Name	Grade	Research Paper Title
Chemistry (CHM)	Central Virginia Governor's School.	Hannah	Kim	11th	The Effect of Cooking on Vitamin C Concentration
Chemistry (CHM)	Clover Hill High School	Raneem	Basir	10th	The Effect of Different Types of Wood on Maximum Temperature Yield
Chemistry (CHM)	Clover Hill High School	Cherish	Bland	10th	The Effect of Different Levels of Ammonia on Absorption of Hair Color During the Dyeing Process
Chemistry (CHM)	Clover Hill High School	Macy	Kin	10th	The Effect of Making Ice Cream with Dairy Products of Various Butterfat Percentages on the Melting Time of Ice Cream
Chemistry (CHM)	Governor's School@Innovation Park	Logan	Dwyer	11th	THE ILLUMINATION OF DIFFERENT CHEMICAL ADDITIVES ON ROAD MARKINGS
		Jack	Pierce	11th	
		Rajitha	Anbu	11th	
Chemistry (CHM)	Governor's School@Innovation Park	Aatish	Sethi	11th	A New Treatment? An Analysis of the Effect of Known Phytochemicals on SARS-CoV-2 Pathogenesis
		Jasmine	Agyepong	11th	
Chemistry (CHM)	H.B. Woodlawn	Julia	Brodsky	10th	Optimization of an Electrocoagulation System for the Removal of Polyatomic Ions from Water
Chemistry (CHM)	Mills E. Godwin High School	Victoria	Bui	11th	The Effect of Active Ingredient on Ultraviolet Radiation Protection
Chemistry (CHM)	Mills E. Godwin High School	Misthi	Choksi	9th	The Effect of Cleaning Solution on Rust on Nails
Chemistry (CHM)	Mills E. Godwin High School	Sydney	Coffman	11th	The Effect of Genetic Pool Testing on Result Reliability
Chemistry (CHM)	Mills E. Godwin High School	Zaid	Contractor	10th	Optimizing Direct Air Capture Through Using Infrared-Promoted Vibrational Behaviors of Greenhouse Gases: A Computationally-assisted Analysis
Chemistry (CHM)	Mills E. Godwin High School	Laken	Evans	9th	The Effect of Ripening on Ascorbic Acid in Capsicum annum
Chemistry (CHM)	Mills E. Godwin High School	Abhilash	Mangamuri	9th	The Effect of Different Pill Capsules on Capsule Opening Time
Chemistry (CHM)	Mills E. Godwin High School	Arjun	Modi	9th	The Effect of Various Household Remedies on Neutralizing Stomach Acid
Chemistry (CHM)	Mills E. Godwin High School	Thanvi	Parupati	9th	The Effect of the Form of Heat Resistant Product on the Heat Damage of the Hair.
Chemistry (CHM)	Mills E. Godwin High School	Daniel	Philip	11th	The Effect of Type of Catalyst on Efficiency of Water-Splitting with an Application Towards Solar Energy
Chemistry (CHM)	Mills E. Godwin High School	Heera	Rajiv	10th	The Effect of Color on Levels of Vitamin C in Bell Peppers
Chemistry (CHM)	Mills E. Godwin High School	Trisha	Taparia	11th	The Effect of Different Levels of Oxygen on the Exothermic Oxidation of Iron Powder
Chemistry (CHM)	Mills E. Godwin High School	Christina	Wen	10th	The Effect of Water pH on Copper Oxidization Using Pennies
Chemistry (CHM)	Wakefield High School	Olivia	Bartrum	9th	The Effect of pH on the Solubility of Acetaminophen
Chemistry (CHM)	Wakefield High School	Naomi	Lindsay	10th	The Effect of Different Types of Sugar on the Vitamin C Concentration of Fresh-Squeezed Orange Juice
Chemistry (CHM)	Washington-Liberty High School	Haley	Baasansukh	9th	The Effect of Mordant on the Weight of Yam
Chemistry (CHM)	Washington-Liberty High School	Richard	Chen	9th	The Effects of Antifungal Agents on the CO2 Production of Baker's Yeast
Chemistry (CHM)	Washington-Liberty High School	Ramon	Dayan	10th	The effect of Fruit on the Alcohol level of Kombucha

Engineering (EGR)	Blacksburg High School	Brock	Duma	11th	Whitewater Helmet STAR: Evaluating the Biomechanical Performance and Risk of Head Injury for Whitewater Helmets
Engineering (EGR)	Blacksburg High School	Victoria	Midkiff	12th	Finding a Correlation Between Temperature and Melt Pool Size in Laser Additive Manufacturing
Engineering (EGR)	Central Virginia Governor's School.	Ethan	Gardner	11th	Effect of Plastic Additives on the Compressive Strength of Concrete
Engineering (EGR)	Central Virginia Governor's School.	Will	Gregory	11th	The Effect of Parabolic Reflectors Constructed of Household Materials on the Signal Strength of a Router
Engineering (EGR)	Central Virginia Governor's School.	Grant	Helm	11th	Effect of Varying Temperatures on The Performance of a Passive Suspension System with a Nonlinear Air Spring in a Seismic System
Engineering (EGR)	Central Virginia Governor's School.	Teddy	Liu	11th	Cost Effective Setup For Testing Mask Efficacy
Engineering (EGR)	Central Virginia Governor's School.	Ina	Lynch	11th	Comparing Sustainable Materials as Filters for Aqueous Dye Solution
Engineering (EGR)	Central Virginia Governor's School.	Jarred	Newcomb	11th	The Effect of Fiber Orientation on the Flexural Properties of Carbon Fiber Reinforced Polymer
Engineering (EGR)	Central Virginia Governor's School.	Jade	Personna	11th	Using Piezoelectricity to Create a Self-Powered Calculator.
Engineering (EGR)	Central Virginia Governor's School.	Taryk	Saidou	11th	The Effect of Different Cooling Systems on the Voltage Generated of a Fixed Angle Solar Panel
Engineering (EGR)	Central Virginia Governor's School.	Andrew	Tabor	11th	The Effect of Various Sleeve Materials on the Force Exerted and Percent Contraction of Pneumatic Artificial Muscles
Engineering (EGR)	Central Virginia Governor's School.	Frank	Wright	11th	Effect of Pelletized Plastic On Asphalt Compressive Strength
Engineering (EGR)	Chesapeake Bay Governor's School	Hunter	Maul	12th	A comparison of different percents of ethanol mixed with different octanes on small combustion engine run times.

(More EGR next page)

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Engineering (EGR)	Clover Hill High School	Zachary	Burgess	10th	The Effect of Varying the Thickness-to-Chord Ratio of an Airfoil and the Pitch of the Blades on a Wind Turbine on the Turbine's Electrical Output
Engineering (EGR)	Clover Hill High School	Michael	Hunter	10th	The Effect of the Front Angle of a Carbon Dioxide Powered Car (degrees) on the Speed of the Car(m/s)
Engineering (EGR)	Clover Hill High School	John	Jensen	10th	The Effect of Wingspan Length on Distance a Balsa Wood Glider Travels
Engineering (EGR)	Clover Hill High School	Richard	Jones	10th	The Effect of Anti-aliasing Method Used on Speed of Video Output
Engineering (EGR)	Clover Hill High School	Katelynn	Menjivar	10th	The Effect of Hair Conditioner on Cheerleading Bow Dimensions and Rate of Color Fading Based on UV Index
Engineering (EGR)	Clover Hill High School	Andrew	Omdorff	10th	Effect of Aspect Ratio of Aerofoil on Downforce Produced by Aerofoil
Engineering (EGR)	Clover Hill High School	Ishita	Patel	10th	The Effect of Various Earthquake Resistance Methods on Reducing Movement of a Wooden Structure During a Simulated Earthquake
Engineering (EGR)	Clover Hill High School	Caleb	Peake	10th	The Effect of Lining a Sound Box with Various Materials on the Intensity and Duration of the Sound Created
Engineering (EGR)	Clover Hill High School	Carter	Ramkey	10th	The Effect of Various Concrete Additives on the Structural Integrity of Concrete
Engineering (EGR)	Clover Hill High School	Sarah	Wilms	10th	The Effect of Various Existing Algorithms on Success at Correctly Identifying Emotions by Facial Expressions
Engineering (EGR)	Deep Run High School	Joshua	Alexander	12th	Validation of semi-automatic computational methods for the assessment of stiffness and deformation of the thoracic aorta from magnetic resonance imaging
Engineering (EGR)	Governor's School@Innovation Park	Sejal	Sharma	11th	People Spotter
		Jennine	Faruque	11th	
		Kalea	Wen	11th	
Engineering (EGR)	Harrisonburg High School	Mia	Constantin	12th	Small Scale Vertical Farming
		Elizabeth	Quimby	12th	
Engineering (EGR)	Maggie L. Walker Governor's School	Devesh	Kumar	9th	The Effect of Different Sorting Algorithms on Program Runtime
Engineering (EGR)	Maggie L. Walker Governor's School	Carson	Wang	10th	Risk-Adjusted Return Analysis of Asset Allocation Strategies for Retirement Savings
Engineering (EGR)	Mills E. Godwin High School	Nitin	Kanuri	11th	Trainable WEKA Segmentation Tool Machine Learning-Enabled Segmentation on Features of Orthopantomograms
Engineering (EGR)	Mills E. Godwin High School	Laasya	Konidala	10th	A Novel Integrative WSI-Based Framework For Breast Cancer Molecular Classification
Engineering (EGR)	Mills E. Godwin High School	Gwyneth	Liu	10th	Non-Invasive Enhancement of Bionic Vision for Patients of Photoreceptor Degeneration through Computer Vision Techniques
Engineering (EGR)	Mills E. Godwin High School	Grace	Loos	10th	Automobile Window Tinting on the Transmission of Ultraviolet-A Radiation and Laterality of Skin Cancer Analysis
Engineering (EGR)	Mills E. Godwin High School	Namit	Nallapaneni	11th	The Effect of Car Seat Safety Devices on Body Pressure
Engineering (EGR)	Mills E. Godwin High School	Chirayu	Nimonkar	11th	The Effect of Rat Brain Phantom Construction on Mimicry of the True Brain Model
Engineering (EGR)	Mills E. Godwin High School	Annabel	Puritz	11th	The Effect of Ultraviolet Light on Thermoplastic Tensile Strength
Engineering (EGR)	Mills E. Godwin High School	Roshan	Sarangi	11th	Effect of number of symptoms on the accuracy of the Naïve Bayes classifier for diagnosis of Heart Disease
Engineering (EGR)	Mills E. Godwin High School	Rishav	Sen	10th	The Effect of CPU and GPU Based Parallel Processing on the Execution Time of Different Types of Computational Workloads
Engineering (EGR)	Mills E. Godwin High School	Fareed	Sheriff	12th	ELMOPP: An Application of Graph Theory and Machine Learning to Traffic Light Coordination
Engineering (EGR)	Mills E. Godwin High School	Ardenne	Sklavos	12th	The Effect of Flaps on Aircraft Landing Distance
Engineering (EGR)	Ocean Lakes High School Mathematics and Science Academy	Samuel	Cutler	12th	Simulating the Feasibility of a Chlorophyll-Based Photovoltaic Cell Design
Engineering (EGR)	Patriot High School	Naman	Agarwal	10th	An Indoor Farm Scouter Through Time-Based Imaging
Engineering (EGR)	Southwest Virginia Governor's School	Josh	Tomiak	11th	Modeling the Effect of Environment on Collision Detection Runtime
Engineering (EGR)	T C Williams High School	Max	Gordon	11th	Using AI to Detect and Deter Telemarketers
Engineering (EGR)	Thomas Jefferson High School for Science and Technology	Khushi	Garg	10th	IntelliCure: A Novel Deep Learning Platform to Distinguish Morphological Features from Malignant and Benign Endometrial Carcinoma
Engineering (EGR)	Thomas Jefferson High School for Science and Technology	Pravalika	Putalapattu	11th	DORC: Dynamic Operating Room Companion for Surgical Workflow Recognition
Engineering (EGR)	Washington-Liberty High School	Eyuel	Berhanu	9th	The Effect of 3D Printing Material on 3D Print Strength
Engineering (EGR)	Washington-Liberty High School	Ella	McNally	10th	The Effect of Different Wavelengths on the Photovoltaic Electricity Produced
Engineering (EGR)	Western Albemarle High School	Kimball	Sheehan	12th	Investigation of the Tumorcidal Effects of Sonodynamic Therapy in Malignant Glioblastoma Brain Tumors
		Darrah	Sheehan	11th	

Category	School Name	First Name	Last Name	Grade	Research Paper Title
Environmental & Earth Science (ENV)	Arlington Tech	Maya	Sherlick	10th	The Effect of Water Temperature on the Amount of Dissolved Oxygen in Water
Environmental & Earth Science (ENV)	Arlington Tech	Ananya	Sinha	9th	The Effect Of Additives on Melting Ice
Environmental & Earth Science (ENV)	BASIS Independent McLean	Chelsea	Hu	9th	Eastern Skunk Cabbages: A Natural and Sustainable Solution for Combating Bank Erosion
Environmental & Earth Science (ENV)	Blacksburg High School	Seonbin	Song	11th	Budgetary Investment in Environmental Preservation and how it relates to Monetary Damage caused by Natural Disasters from 1988-2019
Environmental & Earth Science (ENV)	Central Virginia Governor's School.	Sara	Holt	11th	The Effects of Naturally Occurring Acids on Scenedesmus sp. Population Growth
Environmental & Earth Science (ENV)	Central Virginia Governor's School.	Eujine	Kim	11th	The Effect of Microplastics in the Form of Glitter on Freshwater Chlorella Algae Growth and pH Levels
Environmental & Earth Science (ENV)	Central Virginia Governor's School.	Ella	Lewis	11th	The Effect of Plastic on the Growth of Raphanus sativus
Environmental & Earth Science (ENV)	Central Virginia Governor's School.	Lauren	Noel	11th	Effect of Glycerol on the Reproduction Rate of Daphnia magna
Environmental & Earth Science (ENV)	Central Virginia Governor's School.	Jeffrey	Wooters	11th	Comparing the Effectiveness of Various Sorbents at Remediating Oil Pollution
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Sydney	Bakir	12th	Baby Got Leatherback! Anthropogenic Effects on Sea Turtle Nesting and Reproduction in North Carolina
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Isaac	Barber	12th	Atlantic, Caribbean and Great Barrier Reef Coral Bleaching as a Function of SST
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Kylie	Bery	12th	Can 3D Printed Substrates Provide a Suitable Substrate for Fouling Organisms in the Lower Chesapeake Bay Estuary?
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Nelson	Bonilla	12th	The Effect of Water Turbulence on Microalgae Growth
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Olivia	Brocklebank	12th	An Analysis of Fire Call Frequencies During Severe Storm Events in a Rural Area
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Katherine	Brooke	12th	Salinity and Temperature Effects on the Growth of Diploid Oysters in the Lower Rappahannock River
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Margaret	Collins	12th	A Comparison of Littoraria Irrorata Populations Along the Rappahannock River
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Amar	Dunham	12th	Stress Levels of Mummichogs in Response to Noise
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Clayton	Garrett	12th	Does Our Bay and Surrounding Water Areas Produce Enough Wind Energy that Building Wind Turbines Would be Efficient in Our Area?
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Cassy	Hixson	12th	The Effect of Human Activity on Biodiversity in a Freshwater Marsh
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Abigail	Hudgins	12th	The Effect of Organic Compost Tea vs. Chemical Fertilizer on Growth and Fruit Production of Tomatoes
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Madelyn	Junker	12th	Effect of Drift of the Herbicide Dicamba on the Health of SAV in the Estuarine Environment
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Kathryn	Pamell	12th	Sequencing Analysis of Micobial Abundance and Diversity of Different Shorelines in the Lower Chesapeake Bay
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Lauren	Rahn	12th	Catch of the Century!
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Taylor	Rice	12th	The Effect of Rising Water Temperature on the Respiration Rate of Mummichogs, Fundulus heteroclitus
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	John	Robins	12th	Corrosion of Different Fish Hook Coatings Under Estuarine Saltwater Conditions
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Kayla	Schill	12th	Can Man-Made Ponds Serve All of the Ecological Functions of Naturally Formed Ponds?
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Jeremey	Smith	12th	Lunar Effect on Fish Catch Rate
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Eleanor	Veazey	12th	Evaluation of Four Materials for Growing Aquatic Algae to Produce Biofuel
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Lydia	Wallace	12th	It's Not Easy Being Green: Examining Factors for the Growth Rate of Chlorella Vulgaris
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Laura	Walton	12th	How Important is the Shallow Water Refuge for Small Prey Species in the Chesapeake Bay Food Web
Environmental & Earth Science (ENV)	Chesapeake Bay Governor's School	Bay	Wiggins	12th	How the Increasing Microplastic Presence in the Oceans Poses a Threat to Vital Phytoplankton
Environmental & Earth Science (ENV)	Clover Hill High School	Sujhan	Alwin	10th	The Effect of Different Types of Fertilizers on the Regeneration of Lumbriculus Variegatus
Environmental & Earth Science (ENV)	Clover Hill High School	Anita	Bennett	10th	The Effect of Water Source on the Number of Microplastic Particles in the Water
Environmental & Earth Science (ENV)	Dinwiddie High School	Jenna	Beville	12th	A Preliminary Assessment of the Recovery of Stony Creek from Pollution Using Aquatic Macroinvertebrates
Environmental & Earth Science (ENV)	Governor's School@Innovation Park	Ethan	Ky	12th	A Machine Learning Approach to Wildfire Spread Prediction and Risk Assessment
		Santiago	Campos-Merida	12th	
		Pearl	Raichura	11th	
Environmental & Earth Science (ENV)	Governor's School@Innovation Park	Vinay	Bhakthan	11th	The study of microplastic concentrations of soil and water from Northerm Virginia's freshwater bodies and their effect on the growth of Persicaria punctata
		Mehreen	Rahman	11th	

(More ENV next page)

Category	School Name	First Name	Last Name	Grade	Research Paper Title
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Nikhil	Amin	10th	The Effect of Aquatic Plants on Nitrate Reduction in Ecosystems.
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Amulya	Chowdhory	11th	A Study on the Changes in Pollution and Turbidity Affected by Riparian Buffers of Local Lakes after Three Years
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Tamas	Gal	9th	The effect of soil quality on the viability of earthworms.
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Vaidehi	Goyal	10th	The Effect of Waxworms on Plastic Decomposition
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Serena	Grant	12th	The Effect of Biodiversity on Water and Pollution Retention
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Ojas	Joshi	11th	The Effect of Conditional Processing on Atlantic Hurricane Prediction Accuracy
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Ishan	Joshi	10th	The Effect of Different Locations on Background Radiation
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Fahad	Khan	10th	The Effect of Different Filtration Methods on the Consistency and Reduction of Water TDS
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Rohan	Kurup	10th	The Effect of Different Oil Spill Cleanup Methods on the Survival Rate of Brine Shrimp
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Aryan	Mhaskar	9th	The Effect of Different Bio-compatible Coagulants on Microplastic Extraction from Water
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Siddhant	Prakash	10th	The Effect of Soil Location on pH
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Arvind	Rajesh	11th	The Effect of Concentrations of Herb Mixtures on Memory Retention in Dugesia Tigrina
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Snehitha	Ravilla	10th	The Effect of Various Colloidal Metals on Nymphaeaceae Phytoextraction Performance
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Rithvik	Rayala	11th	The Effect of Limonene from Different Extracts of Citrus Fruits on the dissolving Styrofoam
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Cameron	Shama	11th	The Effect of Surface Dynamics on Atmospheric Water Harvesting
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Evan	Tuckley	11th	The effect of Carbon Dioxide on the heat absorption and heat retention of an artificial atmosphere.
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Hanna	Wirtu	11th	The Effect Of Various Locations In The Greater Richmond Metro Area On Rainwater Quality
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Marshall	Wright	10th	The Effect of Fuel Octane on Carbon Monoxide Emissions
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Rose	Yang	11th	The Effect of COVID-19 Quarantine Measures on AQI of 100 US Cities
Environmental & Earth Science (ENV)	Mills E. Godwin High School	Aaron	Yuan	11th	The Effect of Different Heating Methods on Vitamin C Concentrations in Capsicum annum
Environmental & Earth Science (ENV)	Roanoke Valley Governor's School	Reesa	Devers	11th	The Production of Fabric from Pleurotus eryngii and Ganoderma lingzhi Mycelia
Environmental & Earth Science (ENV)	Roanoke Valley Governor's School	Taylor	Frazier	11th	
Environmental & Earth Science (ENV)	Roanoke Valley Governor's School	Eleanor	Little	10th	Analysis of Microbial Diversity in PCB-Contaminated Environments
Environmental & Earth Science (ENV)	T C Williams High School	Reid	Ridenhour	12th	Ash in Alexandria
Environmental & Earth Science (ENV)	Thomas Jefferson Middle School	Lynn	Tao	10th	The Effect of Impervious Surfaces on Steam Health: a Study of Machine Learning and Multivariate Statistical Analyses
Environmental & Earth Science (ENV)	Wakefield High School	Isla	Carlson	10th	The Effect of Air Pollution on the Efficiency of Solar Panels
Environmental & Earth Science (ENV)	Washington-Liberty High School	Thomas	Ackleson	11th	Modeling Oncoerhynchus nerka Populations Near Pebble Mine, Alaska
Environmental & Earth Science (ENV)	Washington-Liberty High School	Elizabeth	Adams	9th	The Effect of Crumb Rubber on the Height of Tall Fescue Grass
Environmental & Earth Science (ENV)	Washington-Liberty High School	Kathryn	Boerckel	9th	
Environmental & Earth Science (ENV)	Washington-Liberty High School	Allison	Grove	9th	The Effect of Weather Patterns on the Spread of Airborne Plastic
Environmental & Earth Science (ENV)	Washington-Liberty High School	Caroline	Colucia	10th	
Environmental & Earth Science (ENV)	Washington-Liberty High School	Tessa	Muldowney	10th	The Effect of Different Plants on the Amount of Soil Eroded
Environmental & Earth Science (ENV)	Washington-Liberty High School	Eliina	Coutlakis-Hixson	9th	The Effect of Fertilizer on Algae and How it Impacts Dissolved Oxygen in Freshwater
Environmental & Earth Science (ENV)	Washington-Liberty High School	Andrew	Edmondson	10th	The Effect of Conflict on Air Pollution
Environmental & Earth Science (ENV)	Washington-Liberty High School	Sarah	Eichorn	9th	The Effect of Acidity Level on Paper Degradation
Environmental & Earth Science (ENV)	Washington-Liberty High School	Madison	Goeke	10th	A Solution to Plastic Pollution: An Investigation into Microplastic Removal from Water Using Ferrofluid
Environmental & Earth Science (ENV)	Washington-Liberty High School	Maya	Kent	9th	The Effect of Different Nutrients on Plant Growth
Environmental & Earth Science (ENV)	Washington-Liberty High School	Ava	Lansbury	10th	The Effect of the pH of Simulated Acid Rain on Radish Seed Germination
Environmental & Earth Science (ENV)	Washington-Liberty High School	Erin	Leland	10th	The Effect of Population Density on Soil Quality
Environmental & Earth Science (ENV)	Washington-Liberty High School	Lillian	Moo	10th	The Effect of Materials in Compost on Compost Temperature
Environmental & Earth Science (ENV)	Washington-Liberty High School	Ellie	Potts	10th	Effect of Soil Acidity on Rate of Decomposition of Paper
Environmental & Earth Science (ENV)	Washington-Liberty High School	Zachary	Roman	9th	The effect of different fertilizers on plant height
Environmental & Earth Science (ENV)	Washington-Liberty High School	Harriet	Shapiro	9th	The Effect of Plant Type of a Green Roof on Internal Building Temperature
Environmental & Earth Science (ENV)	Washington-Liberty High School	Adam	Stievater	11th	The Effect of Distance from I-95 on Prevalence of Epiphytic Lichen
Environmental & Earth Science (ENV)	Washington-Liberty High School	Benjamin	Tsai	10th	The Effect of Time on Surgical Mask Degradation
Environmental & Earth Science (ENV)	Washington-Liberty High School	Ivy	Watson	10th	The Effect of Firework Display Length and Frequency on Amount of Particulate Matter 2.5 in the Air
Environmental & Earth Science (ENV)	Yorktown High School	Lanyi	Stroud	9th	The Effect of Ventilation Method on Level of Indoor Carbon Dioxide

Category	School Name	First Name	Last Name	Grade	Research Paper Title
Mathematics: Theoretical & Modeling (MTM)	Blacksburg High School	Jacqueline	Wang	12th	Investigating Trends in the Multiple Ligand Activation of PPAR Gamma
Mathematics: Theoretical & Modeling (MTM)	Charles J. Colgan High School	Tony	Bright	10th	SeizureSeeker: A Novel Approach to Epileptic Seizure Detection Using Machine Learning
		Hamza	Lateef	10th	
		Gabriel	Ralston	10th	
Mathematics: Theoretical & Modeling (MTM)	Chesapeake Bay Governor's School	Christopher	Behre	12th	Using Energy Conservation to Estimate Bullet Penetration into Differing Materials
Mathematics: Theoretical & Modeling (MTM)	Mills E. Godwin High School	Mahin	Atturu	11th	Using Transit Light Curves for Ground-Truthing the Orbital Radius and Planet Radius of Exoplanets Examined by the K2 Campaign 10 Mission
Mathematics: Theoretical & Modeling (MTM)	Mills E. Godwin High School	Pranav	Bandla	11th	The Effect of Model Type on the Accuracy of Predicted Values
Mathematics: Theoretical & Modeling (MTM)	Mills E. Godwin High School	Abhinav	Mara	11th	The Effect of Various Software on Protein Structure Prediction
Mathematics: Theoretical & Modeling (MTM)	Mills E. Godwin High School	Philip	Naveen	10th	Algorithmic Simulations of Hydrocortisone-Induced Degeneration
Mathematics: Theoretical & Modeling (MTM)	Ocean Lakes High School Mathematics and Science Academy	Nina	Dao	12th	Investigation in Microbiota Dysbiosis of E-cigarette Users and Smokers
Mathematics: Theoretical & Modeling (MTM)	Thomas Jefferson High School for Science and Technology	Junho	Lee	11th	Momentum-Based Interaction Networks for Modeling Rigid Body Dynamics
Mathematics: Theoretical & Modeling (MTM)	Thomas Jefferson High School for Science and Technology	Lillian	Sun	11th	De Novo Prediction of RNA-Protein Interactions for Discovery of Tissue-Specific Binding Sites
Mathematics: Theoretical & Modeling (MTM)	Thomas Jefferson High School for Science and Technology	Samhita	Vinay	11th	Assessing the Efficacy of Various NOX Enzyme Inhibitors as Potential Treatments for Ischemic Stroke in Silico
		Keertana	Yalamanchili	11th	
Mathematics: Theoretical & Modeling (MTM)	Washington-Liberty High School	Rose	Haron	10th	Predicting Ideal Group Sizes for COVID-19 Pooled Testing Using Mathematics
Medicine & Health (MDH)	Albemarle High School	Meenakshi	Ambati	11th	Identification of Fluoxetine as a direct NLRP3 inhibitor to treat atrophic macular degeneration: Molecular modeling, mechanism, morphometry, and meta-analysis (Year 2)
Medicine & Health (MDH)	Blacksburg High School	Katerina	Leedy	11th	Differential expression of genes associated with innate immune cell function in individuals with and without alpha-gal syndrome
Medicine & Health (MDH)	Central Virginia Governor's School.	Skylar	Farrar	11th	The effect of antipsychotic drugs on patients diagnosed with schizophrenia
Medicine & Health (MDH)	Central Virginia Governor's School.	Pranav	Jothi	11th	The Correlation Between a Country's Development, Unclean Fuel Use, and Prevalence of Respiratory Disease
Medicine & Health (MDH)	Central Virginia Governor's School.	Lantz	Martin	11th	The Effect of Chemically Active Skincare Products on the Zones of Inhibition of Propionibacterium acnes
Medicine & Health (MDH)	Central Virginia Governor's School.	Leanne	Ranger	11th	Effects of Supplemental Oxygen on the Regeneration of Planaria
Medicine & Health (MDH)	Central Virginia Governor's School.	Avery	Roark	11th	Comparing the Antimicrobial Efficacy of Hand Sanitizers on Staphylococcus epidermidis and Escherichia coli
Medicine & Health (MDH)	Chesapeake Bay Governor's School	Emma	Almassy	12th	The Effect of Hand Sanitizer Composition and Brand on Antimicrobial Efficacy
Medicine & Health (MDH)	Chesapeake Bay Governor's School	Emily	Atkins	12th	The Effects of Tap Water CaCO3 on Kidney Health
Medicine & Health (MDH)	Chesapeake Bay Governor's School	Jessica	Medlin	12th	The Effect of Obesity on Drosophila Reproduction
Medicine & Health (MDH)	Clover Hill High School	Allison	Chen	10th	The Effect of Hairbrush Design on Amount of Hair Collected
Medicine & Health (MDH)	Clover Hill High School	Maggie	Matzen	10th	The Effect of Third-Hand Smoke (min) on the heart rate of Daphnia magna (bpm)
Medicine & Health (MDH)	Clover Hill High School	Charles	Redding	10th	The Effect of Children's Helmet Cost Variance (USD) on Mass Deviation (g) from Simulated Skull Impact
Medicine & Health (MDH)	Clover Hill High School	Ryann	Remias	10th	The Effect of Different Types/Brands of Water on Avocado Root Length
Medicine & Health (MDH)	Collegiate School	Ashwin	Johri	11th	The Effect of Increasing Indoor Ventilation on Artificially Generated Aerosol Particle Counts
Medicine & Health (MDH)	Collegiate School	Anju	Natarajan	11th	Comprehensive Computational Genomic Analysis of 1,134 Samples to Understand Genomic Alterations and Their Influence on Outcome in Colorectal Cancer: A Retrospective Study
Medicine & Health (MDH)	Governor's School@Innovation Park	Keren Czyra	Gonzaga	11th	Using a Computational Model to Determine the Binding Ability of Selected Estrogen Derivatives to $\text{ER}\alpha$ AND $\text{ER}\beta$ Type Estrogen Receptors to Prevent Amyloid- $\text{ER}\beta$ Aggregations
		Iqra	Ahmad	11th	
		Thu	Luong	11th	
Medicine & Health (MDH)	Governor's School@Innovation Park	Divya	Ramakrishnan	11th	The Effect of Plant-Based Metabolites on the Binding Affinity between the ACE2 Receptor and the Prefusion Spike Glycoprotein
		Soneha	Datta	11th	
		Hermela	Tadesse	11th	

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Category	School Name	First Name	Last Name	Grade	Research Paper Title
Medicine & Health (MDH)	Maggie L. Walker Governor's School	Yash	Saxena	9th	The Effect of Using Multiple Languages on Parkinson's Disease Detection with Machine Learning
Medicine & Health (MDH)	Maggie L. Walker Governor's School	Annabel	Tang	10th	Correlation of the National Institute of Health Stroke Scale (NIHSS) with Emergent Large Vessel Occlusion (ELVO) in Stroke Alert Patients: A Single-Center Experience
Medicine & Health (MDH)	Maggie L. Walker Governor's School for Government and International Studies	Perisa	Ashar	12th	Discovery of Novel Extracellular Vesicle Plasma and Tumor miRNAs As Biomarkers For Lung Cancer via Next Generation Sequencing, Bioinformatics, and In-Vitro Analyses
Medicine & Health (MDH)	Maggie L. Walker Governor's School	Aashka	Shah	9th	The Effect of Early Monocyte Reconstitution on CD4+ and CD8+ T Cell Populations after Allogeneic Stem Cell Transplantation
Medicine & Health (MDH)	Mills E. Godwin High School	Shreyas	Arcot	10th	The Effect of Different Suturing Techniques on Skin Closure
Medicine & Health (MDH)	Mills E. Godwin High School	Reagan	Goodwyn	10th	The Effect of Different Drinks on Electrolyte Content
Medicine & Health (MDH)	Mills E. Godwin High School	Yasmine	Groener	10th	The Effect of Suture Material on Dissolution Rate
Medicine & Health (MDH)	Mills E. Godwin High School	Harleen	Kaur	10th	The Effect of Acidic Substances on Dental Erosion
Medicine & Health (MDH)	Mills E. Godwin High School	John Mario	Kiely	10th	The Effect of Different Lenses on Blue-Light Filtration
Medicine & Health (MDH)	Mills E. Godwin High School	Sricharan	Lankalapalli	11th	The Effect of Soluble Factors on turning Stem Cells into Kidney Cells
Medicine & Health (MDH)	Mills E. Godwin High School	Vaibhavreddy	Maru	11th	Examining Potential for Prognostic Predictions by ALS Biomarkers using Neural Networks
Medicine & Health (MDH)	Mills E. Godwin High School	Manushi	Nepal	9th	The Effect of Different Liquids on Dissolving Time of Iron Supplements
Medicine & Health (MDH)	Mills E. Godwin High School	Ponnarasi	Rajakumaran	9th	The Effect of Virgin Coconut Oil on Regeneration Rate of Dugesia tigrina
Medicine & Health (MDH)	Mills E. Godwin High School	Elina	Rastegar	11th	The Effect of Breast Cancer Medications on Various Body Tissues of Patients
Medicine & Health (MDH)	Mills E. Godwin High School	Veronica	Samaan	10th	The Effect of the Storage Temperature on the Tomatoes' Nutritious Value
Medicine & Health (MDH)	Mills E. Godwin High School	Saniya	Sangle	9th	The Effect of vitamin supplements on the pH of stomach acid
Medicine & Health (MDH)	Mills E. Godwin High School	Yousif	Shakroo	9th	The Effect of the Type of Toothpaste on Enamel Damage
Medicine & Health (MDH)	Mills E. Godwin High School	Tanvee	Sunkari	11th	Testing Food Formulas for Glucose Concentrations Before and After Invertase
Medicine & Health (MDH)	Mills E. Godwin High School	Tuong	Vo	9th	The Effect of Fermentation Time on Sugar Content of Kombucha
Medicine & Health (MDH)	Ocean Lakes High School Mathematics and Science Academy	Alan	Mach	12th	NeuroSense: A Quantitative, Cost-Effective, and Portable Device for Early Detection and Nonpharmacologic Treatment of Diabetic Neuropathy
Medicine & Health (MDH)	Ocean Lakes High School Mathematics and Science Academy	Owen	Tucker	12th	The Effect of a Musical Composition on Stress Levels in the Listener
Medicine & Health (MDH)	Portsmouth STEM@I.C. Norcom High School	Kimayah	Nelson	9th	The Effects of Information Source on Acceptance of COVID-19 Vaccine
Medicine & Health (MDH)	Roanoke Valley Governor's School	Madison	Brown	11th	Analyzing Custom DNA Oligo Synthesis Using a Polymerase Chain Reaction to Target TGFR- α 1
Medicine & Health (MDH)	Roanoke Valley Governor's School	Dhruvi	Patel	11th	The Genetic Correlation Between Multiple Sclerosis and Various Autoimmune and Neurodegenerative Diseases
Medicine & Health (MDH)	Roanoke Valley Governor's School	Holly	Hinchy	11th	Using Raman Spectroscopy to Identify Bladder Cancer Biomarkers
Medicine & Health (MDH)	Roanoke Valley Governor's School	Ella	Bryant	11th	Investigating Alternatives to Conventional Chronic Kidney Disease Treatment Through Analysis of Differential Gene Expression
Medicine & Health (MDH)	Roanoke Valley Governor's School	Lacey	Ngo	11th	Left vs. Right Handedness: The Effect of Handedness on Aspect Chosen to Order Objects
Medicine & Health (MDH)	Southwest Virginia Governor's School	London	Paige	12th	RayGAN: Employing Generative Adversarial Networks for 3D Human Anatomy Reconstructions from Planar 2D X-Rays
Medicine & Health (MDH)	Thomas Jefferson High School for Science and Technology	Morgan	Dalton	11th	The Effect of Tissue Thickness on Temperature Change Induced by Cellular Radiation
Medicine & Health (MDH)	Washington-Liberty High School	Pranav	Ravella	11th	The effect of comorbidities on COVID - 19 mortality rate
Medicine & Health (MDH)	Washington-Liberty High School	Lina	Aniss	10th	The Relationship Between Exposure to Fine Particulate Matter During Pregnancy and Preterm Births.
Medicine & Health (MDH)	Washington-Liberty High School	Jacob	Bayer	9th	The Effect of Mask Type on Ability to Block Droplets from Passing Through
Medicine & Health (MDH)	Washington-Liberty High School	Malek	Ben Hammouda	9th	The Effect of Homeopathic Antifungals on Yeast CO2 Production
Medicine & Health (MDH)	Washington-Liberty High School	Jonah	Bierman	10th	The Effect of the Type of Cardiovascular Exercise on the Number of Calories Burned
Medicine & Health (MDH)	Washington-Liberty High School	Sarah	Bolles	10th	The Effect of Elapsed Time on the Thickness Level of Commercial Kefir as Measured by the IDDSI Flow Test and Framework
Medicine & Health (MDH)	Washington-Liberty High School	Lucy	Anderson	10th	The Effect of Public Health Policy on COVID-19 Mortality
Medicine & Health (MDH)	Washington-Liberty High School	Natalie	Cecil	10th	The Effect of the Occurrence of CD226 Gene Variants on the Death Rate of COVID-19
Medicine & Health (MDH)	Washington-Liberty High School	Charlotte	Cunningham	10th	The Effect of Cellular Device Type on the Amount of Electromagnetic Radiation
Medicine & Health (MDH)	Washington-Liberty High School	Maryam	Elgindy	9th	
Medicine & Health (MDH)	Washington-Liberty High School	Kara	Felker	10th	
Medicine & Health (MDH)	Washington-Liberty High School	Caroline	Fern	9th	
Medicine & Health (MDH)	Washington-Liberty High School	Caleigh	Sleeth	9th	

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Category	School Name	First Name	Last Name	Grade	Research Paper Title
Medicine & Health (MDH)	Washington-Liberty High School	Anne	Licato	10th	The Effect of Proximity and Particles Exhaled Based on Breath Rate on the Number of COVID-19 Virus Particles Accumulated
Medicine & Health (MDH)	Washington-Liberty High School	Sofia	Reyes	10th	The effect of different types of tinted sunscreens on how much light goes through a solar panel measured in kilowatts
Medicine & Health (MDH)	Washington-Liberty High School	Lauren	Rylander	10th	Knowledge of Tissue Donation Survey Project
Medicine & Health (MDH)	Washington-Liberty High School	Lewis	Wearmouth	10th	The Effect of Building Age on the Amount of Lead in Water
Medicine & Health (MDH)	Washington-Liberty High School	Brady	Krohl	10th	The Effect of Building Age on the Amount of Lead in Water
Medicine & Health (MDH)	Washington-Liberty High School	Abby	Welker	9th	Race vs. the amount of Confirmed Covid-19 Cases in the US
Medicine & Health (MDH)	York High School	Zahra	Rizvi	9th	The Right Mask for the Task: The effect of different face masks on the expelled droplets or particles
Medicine & Health (MDH)	Yorktown High School	Ameya	Sinha	12th	Analyzing Different Socio-economic Factors and its Effects on Pandemic Response
Microbiology & Cell Biology (MCB)	Central Virginia Governor's School.	Ryan	Beck	11th	Effects of 5G Compatible Broadband Waves on Average Change in Color of Saccharomyces cerevisiae
Microbiology & Cell Biology (MCB)	Central Virginia Governor's School.	Kallena	Branham	11th	Analyzing the PETase enzyme activity in Bacillus cereus and its effect on plastic degradation
Microbiology & Cell Biology (MCB)	Central Virginia Governor's School.	Brooke	Coleman	11th	The Comparison Between Different Straw Materials to Determine Which Material Grows the Most Bacterial Colonies
Microbiology & Cell Biology (MCB)	Central Virginia Governor's School.	Brady	Mandeville	11th	The Antimicrobial Efficacy of Ascorbic Acid on Escherichia coli
Microbiology & Cell Biology (MCB)	Central Virginia Governor's School.	Reagan	Morford	11th	The Effect of Transition Metals on Gram-negative and Gram-positive Bacterial Growth
Microbiology & Cell Biology (MCB)	Chesapeake Bay Governor's School	Lane	Anderson	12th	An Analysis of Cleaning Method Efficacy on Shared Surfaces in a Gym
Microbiology & Cell Biology (MCB)	Chesapeake Bay Governor's School	Katelynn	Headley	12th	Analysis of Bacteria Presence After High Pressure Hand Dryer Use
Microbiology & Cell Biology (MCB)	Chesapeake Bay Governor's School	Grace	Oren	12th	Your Shoes are More than Smelly
Microbiology & Cell Biology (MCB)	Clover Hill High School	Swetha	Poluri	10th	The Effect of Time Spent in Contact Lens Solution on Number of Bacterial Colonies Plated From the Lenses
Microbiology & Cell Biology (MCB)	Douglas S. Freeman High School	Nitya	Kumar	9th	The Effect of Hand-washing vs Hand Sanitizer on Hand Bacteria
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Anika	Agarwal	11th	The Effect of Antiseptics on Bacterial Growth
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Sumiyya	Butt	10th	The Effect of Different Hand Drying Techniques on Quantity of Microbes
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Matthew	Gavin	9th	The Effect of Supplements on the Regeneration of Planaria
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Diya	Johar	9th	The Effects of Natural Antifungal Remedies on Baker's Yeast
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Anika	Kashyap	9th	The Effect of Container Material on Lactobacillus Count in Yogurt
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Diana	Kirilov	12th	Testing the Effectiveness of Different Supplements on the Breaking Down of Lactose in Whole Milk
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Hannah	Loos	9th	The Effect of Medicinal Plant Concentrates on Saccharomyces cerevisiae
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Akul	Miriyala	9th	The Effect of Water pH On Bioluminescence of Dinoflagellates
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Mihir	Pokhriyal	9th	The Effect of Lyophilization on Rates of Saccharomyces cerevisiae Proliferation
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Avirat	Raj	11th	The Effect of Water-Soluble Vitamins on Saccharomyces Cerevisiae Survival Rate
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Shreya	Rajkumar	12th	The Effect of Children's Toothpastes on S. cerevisiae Growth
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Netra	Shah	10th	The dependence of milk type on the shelf life beyond the "best by date"
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Sudarshan	Srinaiyer	10th	The Effect of Different Materials on Purity of Water
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Leem	Taha	11th	The Effect of Turbidity on the Reproduction of Culex pipien Mosquitos
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Raymond	Wen	10th	The Effect of Streptococcus Thermophilus on Average Bread Crumb Grain
Microbiology & Cell Biology (MCB)	Mills E. Godwin High School	Monona	Zhou	9th	The Effect of Coronavirus Species on the Binding Strength to a Neutralizing Antibody
Microbiology & Cell Biology (MCB)	Roanoke Valley Governor's School	Caroline	Grant	11th	Analyzing the Cell Viability and Cell Signaling Activity of an Alginate-based Synthetic Extracellular Matrix Scaffold
Microbiology & Cell Biology (MCB)	Roanoke Valley Governor's School	Vineel	Kavuru	11th	Analyzing the Cell Viability and Cell Signaling Activity of an Alginate-based Synthetic Extracellular Matrix Scaffold
Microbiology & Cell Biology (MCB)	Roanoke Valley Governor's School	Catherine	Chen	11th	Analyzing the Cell Viability and Cell Signaling Activity of an Alginate-based Synthetic Extracellular Matrix Scaffold
Microbiology & Cell Biology (MCB)	Roanoke Valley Governor's School	Jennie	Pham	12th	The Effect of Trametes versicolor Infused Bandages on Staphylococcus epidermidis
Microbiology & Cell Biology (MCB)	Roanoke Valley Governor's School	Cynthia	Lin	11th	The Effect of Trametes versicolor Infused Bandages on Staphylococcus epidermidis
Microbiology & Cell Biology (MCB)	Roanoke Valley Governor's School	Emma	Greer	12th	The Effect of Trametes versicolor Infused Bandages on Staphylococcus epidermidis
Microbiology & Cell Biology (MCB)	Southwest Virginia Governor's School	Katelyn	Collett	12th	Diversity of Arctic Ice Bacteria in Relation to Position and Distance From the Shore
Microbiology & Cell Biology (MCB)	Southwest Virginia Governor's School	Noor	Zakriya	11th	Finding the Least Harmful Aircraft Runway De-Icing Chemicals On Nitrifying Bacteria in Water Masses
Microbiology & Cell Biology (MCB)	Thomas Jefferson School for Science and Technology	Harrish	Ganesh	11th	The Analysis of the Viral Transmission between the HIV-1 Envelope Glycoprotein and the Lymphocyte Receptor Integrin $\alpha 4 \beta 7$
Microbiology & Cell Biology (MCB)	Washington-Liberty High School	Ella	Cohen	9th	The Effect of Temperature on Concentration of Sugar After 10 Days in the Musa acuminata

Category	School Name	First Name	Last Name	Grade	Research Paper Title
Physics & Astronomy (PHY)	Arlington Tech	Sam	Watchman	9th	The Effect of Constellation on Radio Signal Received at 21cm
Physics & Astronomy (PHY)	Battlefield High School	Anika	Mukul	11th	Quantum Dot Supercapacitors - The Impact of Variation of Supercapacitor Electrolyte Base Material on Capacitance and Supercapacitor Discharge Time
Physics & Astronomy (PHY)	Central Virginia Governor's School.	Aditi	Mukul	11th	
Physics & Astronomy (PHY)	Central Virginia Governor's School.	Brian	Cate	11th	Spectral Signatures of Simulated Black Hole Accretion
Physics & Astronomy (PHY)	Central Virginia Governor's School.	Landon	Epperson	11th	Analyzing Dust Grain Sizes in the Protoplanetary Disk HD 163296 Through Different Electromagnetic Wavelengths
Physics & Astronomy (PHY)	Central Virginia Governor's School.	Jillian	Nylund	11th	The Effect of Grain Size on Temperature in the Protoplanetary Disk IM Lup
Physics & Astronomy (PHY)	Chesapeake Bay Governor's School	Kelly	Taylor	12th	Let's Play Ball: A Study on How the Material of A Softball Bat Affects the Distance of a Ball Hit
Physics & Astronomy (PHY)	Clover Hill High School	Madeline	Cheatham	10th	The Effect of Different Parts of the Foot On Distance a Soccer Ball Travels
Physics & Astronomy (PHY)	Clover Hill High School	Ian	Hooks	10th	The Effect of Location on the Amount of Skyglow Detected By a Digital Camera
Physics & Astronomy (PHY)	Governor's School@Innovation Park	Simran	Patibanda	11th	
Physics & Astronomy (PHY)	Mills E. Godwin High School	Kaylyn	Nguyen	11th	The Connection Between Spiral Galaxies and Asymmetry: Analyzing Quadrupole Multipole Asymmetry in Spiral Galaxies and its Relation to other Galactic Characteristics
Physics & Astronomy (PHY)	Mills E. Godwin High School	Trent	Schuyler	11th	
Physics & Astronomy (PHY)	Mills E. Godwin High School	Brandon	Chung	11th	Kinematic Analysis: Transition Skateboarding on Force Components
Physics & Astronomy (PHY)	Mills E. Godwin High School	Mohnish	Gopalan	9th	The effect of different shin guards on force reflected
Physics & Astronomy (PHY)	Mills E. Godwin High School	Anvita	Korrapati	11th	The Effect of Coronal Mass Ejection Acceleration (km/s^2) In Relevance of Earth's Orbital Position on Gamma Ray Dose Equivalent Rate (nSv/H) in Virginia
Physics & Astronomy (PHY)	Mills E. Godwin High School	Ryan	Poquis	11th	The Effect of Type of Carbohydrate on a Solution's Refractive Index
Physics & Astronomy (PHY)	Mills E. Godwin High School	Erum	Vohra	11th	The Effect of Various Wavelengths on the Detection of Point Sources in the Galactic Center
Physics & Astronomy (PHY)	Thomas Jefferson High School for Science and Technology	William	Graf	11th	Is the Solar System an Outlier? Exoplanetary Orbital Eccentricity and Its Relation to Mass and the Count of Planets
Physics & Astronomy (PHY)	Washington-Liberty High School	Angelica	Bain	10th	The Effect of Different Blue Light Mitigation Techniques on LED Blue Light Irradiance
Physics & Astronomy (PHY)	Washington-Liberty High School	Maya	Kaminski	9th	The Effect of Artificial Lighting on the Ability to View the Night Sky
Psychology (PSY)	Blacksburg High School	Cameron	Gilmore	12th	Cameron Gilmore
Psychology (PSY)	Blacksburg High School	Dasol	Lee	12th	Evaluating Loneliness Scales to Assess Loneliness During the COVID-19 Pandemic
Psychology (PSY)	Central Virginia Governor's School.	Sarah	Blair	11th	The Effects of Classroom Environment on Average Student Participation in a Group Discussion
Psychology (PSY)	Central Virginia Governor's School.	Peter	Garrison	11th	Active Versus Passive Virtual Education
Psychology (PSY)	Central Virginia Governor's School.	Nathan	Kames	11th	The Effect of Socioeconomic Status on an Individual's Ability to Swim
Psychology (PSY)	Central Virginia Governor's School.	Eric	Kauppi	11th	Effect of Social Isolation During the COVID-19 Quarantine on General Mental Health
Psychology (PSY)	Central Virginia Governor's School.	Kylie	Maupin	11th	The Effect of Academic Reconditioning on Perception of Connotation
Psychology (PSY)	Central Virginia Governor's School.	Benjamin	McGuire	11th	How Lifestyle Affects Fast Food Consumption
Psychology (PSY)	Central Virginia Governor's School.	Eleanor	McPhatter	11th	Is There a Correlation between Anxiety and Trypophobia?
Psychology (PSY)	Central Virginia Governor's School.	Alaysia	Oakes	11th	Studying Demographic Trends in Life Quality Based on Maslow's Hierarchy
Psychology (PSY)	Central Virginia Governor's School.	Amanda	Powell	11th	The Effect of Hours of Sleep on Creativity Test Scores
Psychology (PSY)	Central Virginia Governor's School.	Elliott	Putnam	11th	The effect of weekly practice time on a violinist's ability to sight read
Psychology (PSY)	Central Virginia Governor's School.	Leilani	Rucker	11th	The Effect of Meal Planning and Grocery Lists on the Amount of Food Waste in Households
Psychology (PSY)	Central Virginia Governor's School.	Anna	Sloan	11th	The Effect of Knowing Yourself Better Through the Enneagram on Mental Health
Psychology (PSY)	Central Virginia Governor's School.	Alex	Taylor	11th	The Effects of Reading, Listening, and Dual-Modalities on the Comprehension of Different Passages Among High School Students
Psychology (PSY)	Central Virginia Governor's School.	Hannah	Taylor	11th	The Effect of Relaxation Techniques on Chronic Pain
Psychology (PSY)	Central Virginia Governor's School.	Lauren	Vossen	11th	The Effect of Increased Blue Light Exposure on Sleep Quality
Psychology (PSY)	Central Virginia Governor's School.	Ella	Wesolowski	11th	Relationships Between Screen Time and Anxiety and Depression in High School Students
Psychology (PSY)	Central Virginia Governor's School.	Jacob	Williams	11th	Gender Morality Differences
Psychology (PSY)	Chesapeake Bay Governor's School	Isabel	Baggette	12th	The Effect of Visual Messaging on Hand Sanitizer Use
Psychology (PSY)	Chesapeake Bay Governor's School	Wyatt	Brown	12th	Emotional Trauma Caused By The Lack Of Sports Due To The Covid-19 Pandemic
Psychology (PSY)	Chesapeake Bay Governor's School	Caitlin	Grant	12th	The Correlation Between Dominant/Submissive Personality Traits and the Tendency to Socially Conform
Psychology (PSY)	Chesapeake Bay Governor's School	Sofia	Harrison	12th	The Relationship Between ABO Blood Groups and Certain Personality Types
Psychology (PSY)	Chesapeake Bay Governor's School	Kelsey	Henry	12th	Ethnicity and Education: Do Gifted Programs Get a Passing Grade?
Psychology (PSY)	Chesapeake Bay Governor's School	Sara	Murray	12th	The Effects of Political Advertisements on Voter Response
Psychology (PSY)	Chesapeake Bay Governor's School	Lindsey	Shortt	12th	The Correlation between Perceiving Faces in Optical Illusions and the Ability to Read Emotional Expressions in Faces
Psychology (PSY)	Chesapeake Bay Governor's School	Jonah	Snyder	12th	How Background Music Affects Concentration and Cognitive Processing

(More PSY next page)

Category	School Name	First Name	Last Name	Grade	Research Paper Title
Psychology (PSY)	Mills E. Godwin High School	Kate	Devitt	11th	The Comparison of Online Learning Strategies on Information Retention
Psychology (PSY)	Ocean Lakes High School Mathematics and Science Academy	Lauren	Wilson	12th	COVID-19 and Mental Health
Psychology (PSY)	Southwest Virginia Governor's School	Johannah	Caudill	12th	How does the media influence perception of law enforcement?
Psychology (PSY)	Southwest Virginia Governor's School	Madison	Lilly	12th	Influence of Virginia State Sentencing Guidelines on Jury Recommended Maximum Sentences
Psychology (PSY)	Southwest Virginia Governor's School	Jade	Riddle	11th	Generational Differences in the Perception of Diabetes Mellitus
Statistical Analysis & Inferences (SAI)	Blacksburg High School	Diego	Elias	12th	Use It or Lose It: An Analysis of Unnecessary Spending in Flexible Spending Accounts
Statistical Analysis & Inferences (SAI)	Blacksburg High School	Ellen	Habteyonas	12th	Access to High Quality Child Care Centers in Rural Counties in Different Virginian Regions
Statistical Analysis & Inferences (SAI)	Blacksburg High School	Eric	Xie	12th	Classification of Neurons by Activation Stages using an Artificial Neural Network
Statistical Analysis & Inferences (SAI)	Central Virginia Governor's School.	Isaiah	Bradner	11th	The Effect of the Type of Instruction Received on High School Math Test Scores
Statistical Analysis & Inferences (SAI)	Central Virginia Governor's School.	Bethany	Duncan	11th	The Effect of Virginia State Budget Allocation on Rates of Incarceration and Recidivism
Statistical Analysis & Inferences (SAI)	Central Virginia Governor's School.	Camden	Good	11th	The Effect of a student attending Governor's School on College Acceptance
Statistical Analysis & Inferences (SAI)	Central Virginia Governor's School.	Chandler	O'Rourke	11th	The relationship between gun law strength and homicide rates
Statistical Analysis & Inferences (SAI)	Chesapeake Bay Governor's School	Jordyn	Rollins-Williams	12th	The Effect of Sex, Age, and Geographic Location on Allergy and Asthma Frequency
Statistical Analysis & Inferences (SAI)	Chesapeake Bay Governor's School	Kayli	Smith	12th	Correlations Between the Traditional Diets of Different Cultures and the Human Genome's Disease Allele Frequency
Statistical Analysis & Inferences (SAI)	Maggie L. Walker Governors School	Sania	Jain	9th	Multiple Regression Modeling to Predict Changes in US GDP Using Stock Market Volatility and Unemployment Rates.
Statistical Analysis & Inferences (SAI)	Mills E. Godwin High School	Alex	Coffman	11th	The Effect of Aircraft Type on Irregular Operation Rate
Statistical Analysis & Inferences (SAI)	Mills E. Godwin High School	Nate	Stevenson	11th	Data Analysis and Evaluation of an Area's Median Household Income on Varying Success in Hospice
Statistical Analysis & Inferences (SAI)	Thomas Jefferson High School for Science and Technology	Ashwitha	Surabhi	11th	Development of a Machine Learning Algorithm to Detect Amyotrophic Lateral Sclerosis(ALS) in Patients
Statistical Analysis & Inferences (SAI)	Washington-Liberty High School	Natalia	Chahil	10th	The Effect of Natural Disasters on the Severity of Cholera in Africa
Statistical Analysis & Inferences (SAI)	Washington-Liberty High School	Rory	McAndrew	10th	The Effect of the Occupation on the Difference in Pay Between Males and Females
Statistical Analysis & Inferences (SAI)	Washington-Liberty High School	Ambica	Shama	10th	The Effect of Algorithm Based Neural Network Machine Learning on the Projection of the Basis and Progression of Alzheimer's Disease
Statistical Analysis & Inferences (SAI)	Yorktown High School	Colin	Bery	11th	The Impact of Penalties, Population Density, and Partisanship on Compliance with Stay-at-Home Orders During COVID-19
Zoology (ZOO)	Central Virginia Governor's School.	Elora	Burchette	11th	The Effect of the Type of Recyclable Waste on Vermicompost pH Levels
Zoology (ZOO)	Central Virginia Governor's School.	Julie	Fitzgerald	11th	The Effect of Ultraviolet Radiation on the Survival and Hatch Rates of Artemia salina
Zoology (ZOO)	Central Virginia Governor's School.	Virginia	Trost	11th	The Effect of Monosodium Glutamate on the Reproduction Rates of Daphnia magna
Zoology (ZOO)	Chesapeake Bay Governor's School	Paula	Perez	12th	Nectar Feeding Preferences of Ruby-Throated Hummingbirds in the Middle Peninsula
Zoology (ZOO)	Clover Hill High School	Jackson	Drewry	10th	The Effect of Colored Feeding Stations on Honeybee Attraction
Zoology (ZOO)	Deep Run High School	Anooshka	Pendyal	9th	Determining Relatedness of L. Kempii Nesting Sites Using Bioinformatics
Zoology (ZOO)	Mills E. Godwin High School	Shreel	Golwala	9th	The Effect of Agricultural Pesticides on Daphnia magna.
Zoology (ZOO)	Mills E. Godwin High School	Mrunal	Kute	11th	Analyzing Blue Light on Dugesia tigrina Regeneration to Model Human Epidermal Growth Processes
Zoology (ZOO)	Mills E. Godwin High School	Emily	Lionberger	11th	The Effect of Oxygenator Design on the Survival Rate of Culex tarsalis Larvae
Zoology (ZOO)	Mills E. Godwin High School	Olivia	Nguyen	9th	The Effect of Nitrate Levels on Daphnia Magna's Heart rate
Zoology (ZOO)	Mills E. Godwin High School	Paul	Yang	12th	The Effect of Silver Nanoparticles on the Heart Rate of Daphnia magna
Zoology (ZOO)	Mills E. Godwin High School	Varun	Yeri	9th	The Effect of Different Foods on Fruit Fly Preference
Zoology (ZOO)	Roanoke Valley Governor's School	Liala	Sofi	12th	Investigation of Bio-printed Hydrogels for Purification of Danio rerio Habitats During Embryonic Development
Zoology (ZOO)	Roanoke Valley Governor's School	Alicia	Carvalho	11th	Using the Embryonic- \uparrow Danio rerio- \uparrow Stress Response System to Investigate the Toxicity of Metal Oxide Nanoparticles
Zoology (ZOO)	Roanoke Valley Governor's School	Uyen Nhi	Tran	12th	Using the Embryonic- \uparrow Danio rerio- \uparrow Stress Response System to Investigate the Toxicity of Metal Oxide Nanoparticles
Zoology (ZOO)	Thomas Jefferson High School for Science and Technology	Shan	Lateef	12th	What's All the Buzz? Drosophila melanogaster as a Unique Model for Addiction Disorders and Physiology after Traumatic Brain Injury (TBI)
Zoology (ZOO)	Washington-Liberty High School	Rachel	Dickerson	9th	Prevalence of Mixed Species Herding with Giraffe Calves
Zoology (ZOO)	Washington-Liberty High School	Anujin	Enkhee	9th	The Effect of Water pH on the Heart Rate of Daphnia magna