

**28th Annual Blue Ridge Highlands Regional Science Fair
March 8 - 9, 2019 – Radford University**

**VIRGINIA STATE SCIENCE AND ENGINEERING FAIR
DELEGATES**

ANIMAL SCIENCES

- 103 Morgan Ralph
***The Effect of Humidity on the Madagascar Hissing Cockroach
Reproduction Cycle***
Southwest Virginia Governor's School
Sponsor: Rebecca Phillips

BEHAVIORAL AND SOCIAL SCIENCES

- 210 Asha Thomas
***The Association of Oxytocin Receptor Gene Variant rs53576 with Optimism
and Pessimism***
Southwest Virginia Governor's School
Sponsor: Rebecca Phillips
- 209 Savannah Spencer
***The Association of 5-HTTLPR Gene Variants with Humor Styles of
Teenagers***
Southwest Virginia Governor's School
Sponsor: Rebecca Phillips

**BIOMEDICAL & HEALTH SCIENCES
CELL AND MOLECULAR BIOLOGY**

- 301 Michael Chen
Role of EphA4 Gene in Vascular Gene Expression During Inflammation
Blacksburg High School
Sponsor: Katharine Davis

**BIOMEDICAL ENGINEERING
TRANSLATIONAL MEDICAL SCIENCES**

- 401 Alexandra Barrett
Velocity Limiting Exoskeleton for Children with Cerebral Palsy
Southwest Virginia Governor's School
Sponsor: Matthew Frazier

CHEMISTRY

- 501 Makayla Goines
Electrochemical Detection of Salicylates in Pepto-Bismol and Bug Guard SPF 30 Sunscreen
Southwest Virginia Governor's School
Sponsor: Jared Brown
- 509 Rose Tomiak
Analyzing the Difference in the Sorption Concentrations of Copper, Lead, Iron, and Zinc in Polylactic Acid and High Density Polyethylene Plastic Bags
Southwest Virginia Governor's School
Sponsor: Jared Brown

EARTH AND ENVIRONMENTAL SCIENCES

- 604 Ainsley LaPlante
Effects of Gasoline on RGB Values of Montipora capricornis and Pavona frondifera Corals
Southwest Virginia Governor's School
Sponsor: Jared Brown

ENGINEERING MECHANICS

- 702 Ross Brown
Different Projectile Materials Affecting Propulsion in a Prototype Electromagnetic Projectile Launcher
Southwest Virginia Governor's School
Sponsor: Matthew Frazier

ENVIRONMENTAL ENGINEERING MATERIALS SCIENCE

- 801 Isabella Burgoyne
Testing Oil Absorption of a Cellulose Barrier on Cardboard
Southwest Virginia Governor's School
Sponsor: Jared Brown

MATHEMATICS

- 902 Camden Mariotti
Comparing Powerlifting Competitors Across Different Divisions
Southwest Virginia Governor's School
Sponsor: Greg Riffe

MICROBIOLOGY

- 1002 Claire Morton
The Relationship Between Codon Usage Bias, mRNA Half-Life, and the Ste13 Protein
Blacksburg High School
Sponsor: Katharine Davis

PHYSICS & ASTRONOMY

- 1106 Noah Whitlow
Anti-Rollover Countermeasures for Dangerous Civilian Vehicles
Southwest Virginia Governor's School
Sponsor: Matthew Frazier

PLANT SCIENCES

- 1203 Sophia Link
The Role of the IPK1 and ITPK1 Genes in Plant Sucrose Sensing
Blacksburg High School
Sponsor: Katharine Davis

SYSTEMS SOFTWARE

- 1302 Brandon Fan
An AI-based System for Discovering Potential Adverse Drug Events Using Open Data
Blacksburg High School
Sponsor: Katharine Davis