

**26<sup>th</sup> Annual Blue Ridge Highlands Regional Science Fair  
March 3 - 4, 2017 – Radford University  
VIRGINIA STATE SCIENCE AND ENGINEERING FAIR  
DELEGATES**

**ANIMAL SCIENCES**

- 104 Senah Stephens  
*The Effect of Clipping Udder Hair on Somatic Cell Counts in Dairy Cattle*  
Southwest Virginia Governor's School  
Sponsor: Krista Stith

**BEHAVIORAL AND SOCIAL SCIENCES**

- 203 Mary Brown  
*The Prototypes of Good and Bad in Children*  
Southwest Virginia Governor's School  
Sponsor: Greg Riffe

**BIOCHEMISTRY  
COMPUTATIONAL BIOLOGY AND BIOINFORMATICS  
PLANT SCIENCES**

- 302 Andrew Caudill  
*Constructing a Connectivity Map: Linking Genes Associated with Type 2  
Diabetes Using Genome Databases*  
Southwest Virginia Governor's School  
Sponsor: Rebecca Phillips

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

- 404 Audra White  
*Variation in Lung Volumes of Non-Smokers, Smokers of Conventional  
Cigarettes, and Smokers of Electronic Cigarettes*  
Southwest Virginia Governor's School  
Sponsor: Rebecca Phillips

- 402 Morgan Fisher and Carly Porter  
***ACTN3, ACE, PPARD, and Outside Factors Influencing High School Male Athletes' Choice to Pursue a Sport***  
Southwest Virginia Governor's School  
Sponsor: Rebecca Phillips

## CHEMISTRY

- 503 Dawson Michel Little  
***The Effect of Pure Vegetable Oils on the Quality of Biodiesel Fuel***  
Southwest Virginia Governor's School  
Sponsor: Jared Brown

## EARTH & ENVIRONMENTAL SCIENCE

- 603 Olivia Smoot  
***Phytoremediation of Zinc Sulfate Using Hyperaccumulating Sunflowers in a Hydroponic System***  
Southwest Virginia Governor's School  
Sponsor: Krista Stith

## EMBEDDED SYSTEMS ROBOTICS AND INTELLIGENT MACHINES SYSTEMS SOFTWARE

- 702 Joseph Nielson  
***Integration of data science and Google Sheets in Lemonade Stand Point-of-Sale web app***  
Southwest Virginia Governor's School  
Sponsor: Richard Fisher

## ENGINEERING MECHANICS ENVIRONMENTAL ENGINEERING

- 803 Kaelum Hasler  
***Post Consumer PET as Stock for Additive Manufacturing***  
Blacksburg High School  
Sponsor: Katharine Davis

## MATHEMATICS

- 904 Alexander Tomiak  
***Determining the Accuracy of SIR Modeling to Predict Movie Popularity***  
Southwest Virginia Governor's School  
Sponsor: Sherry Pugh

## MICROBIOLOGY

- 1005 Simonne Guenette  
***The Role of Trehalose in Heat Resistant Mycobacterium avium***  
Blacksburg High School  
Sponsor: Katharine Davis
- 1002 Joseph Carman  
***Pigs, potential transmitters? Clostridium difficile and pigs in southwest Virginia***  
Southwest Virginia Governor's School  
Sponsor: Krista Stith