

**2014 Blue Ridge Highlands Regional Science Fair  
March 7 - 8, 2014 – Radford University**

***VIRGINIA STATE SCIENCE AND ENGINEERING FAIR  
DELEGATES***

**ANIMAL SCIENCES**

**Nick Walsh**

*Human Interaction and Its Effect on Laying Quail*

Blacksburg High School

Adult Sponsor: Michael Collver

**Leah Hall**

*Bone Growth in Goat Kids*

Homeschool

Adult Sponsor: Scott Greiner

**BEHAVIORAL & SOCIAL SCIENCES**

**Jonathan Deters**

*Time Management Skills of Student Athletes Versus Non-Athlete Students*

Southwest Virginia Governor's School

Adult Sponsor: Sherry Pugh

**Anna Makarova**

*Factors that Affect Singing*

Southwest Virginia Governor's School

Adult Sponsor: Sherry Pugh

**CELLULAR & MOLECULAR BIOLOGY**

**Ibrahim Zegue Konate**

*Improving Reprogramming of Specialized Cells to Pluripotency*

Blacksburg High School

Adult Sponsor: Michael Collver

**CHEMISTRY**

**Meredith Dove and Keena Shang**

*Crystal Formation on Collagenous Gelatins: Effect of Carboxylation and pH on Rates and Polymorph of Calcium Carbonates*

Blacksburg High School

Adult Sponsor: Nizhou Han

**Brittney Worrell**

*Effects of Petroleum Diesel and Biodiesel on Polymer Engine Parts*

Southwest Virginia Governor's School

Adult Sponsor: Krista Stith

**COMPUTER SCIENCE**

**Joseph Widrig**

*Development of Directory-Specific Software for the Extraction of CxxTest Modules*

Southwest Virginia Governor's School

Adult Sponsor: Dan Blake

**ENERGY AND TRANSPORTATION**

**Collin Smith**

*Reducing Wind Resistance and Drag to Boost*

*Electric Car Efficiency*

Southwest Virginia Governor's School

Adult Sponsor: Daniel Blake

**Tanner Hay**

*Improving UPS Delivery Truck Drag Using Pre-existing Devices Pt. 2*

Southwest Virginia Governors School

Adult Sponsor: Kenneth Abel

**ENGINEERING: ELECTRICAL AND MECHANICAL**

**Jordan Kuhn and Eric Chang**

*Designing, Prototyping, and Testing Agricultural Drones*

Southwest Virginia Governor's School

Adult Sponsor: Kenneth Abel

**ENVIRONMENTAL SCIENCES**

**Julia Hager**

*The Removal of Copper Sulfate from Water Using *Saccaromyces cerevisiae**

Southwest Virginia Governor's School

Adult Sponsor: Krista Stith

**Brandon Spangler**

*The Effects of Agriculture on Nitrate Levels in Water*

Southwest Virginia Governor's School

Adult Sponsor: Jared Brown

## MATHEMATICAL SCIENCES

### **Rebecah Storms**

*Sonification of Mathematics Using a String Ensemble*

Southwest Virginia Governor's School  
Adult Sponsor: Jerri England

## MEDICINE AND HEALTH SCIENCES

### **Sydney Fain**

*Interaction of Ferrous Sulfate and Alternative Sweetening Agents in the Perception of Sweetness, Flavor Intensity, and Presence of Dysgeusia*

Southwest Virginia Governor's School  
Adult Sponsor: Rebecca Phillips

### **Catherine Grant**

*The Effects of Mirror Therapy on Performance of Physical Therapy*

Blacksburg High School  
Adult Sponsor: Michael Collver

## PLANT SCIENCES

### **Y. Terence Lo**

*Green Tea Extract as an Environmentally-Friendly Bactericide Against Pseudomonas Syringae on Plants*

Classical Conversations of Christiansburg  
Adult Sponsor: Bingyu Zhao

### **Alex Bandy**

*Effect of Chlorine Concentration on the Germination Rate and Stem Growth of Glycine max*

Richlands High School  
Adult Sponsor: Tiffany Stillwell