

**2015 Blue Ridge Highlands Regional Science Fair  
March 6 - 7, 2015 – Radford University**

**CATEGORY AWARDS**

**Grand Award Winners**

502

Emily Llaneras

*Slaying the "Destructor": The Effectiveness of Alternative Varroa Mite Treatments*

Southwest Virginia Governors' School

Sponsor: Krista Stith

901

Ashley Jordan and Austin Owen

*The Correlation Between Surface Temperature and Arctic Sea Ice Thickness*

Southwest Virginia Governors' School

Sponsor: Daniel Blake

**Grand Award Alternate**

201

Griffin McAvoy

*Objective and Subjective Comparisons of the Frequency Analyses of MP3 and*

*Compact Disc Musical Recordings*

Tazewell High School

Sponsor: Greg Deskins

**Senior Division**

**Animal Sciences**

*First Place*

103

Blake Hall

*Calf Starter Preference and Comparison*

Home School

Sponsor: Mark McCann

*Second Place*

102

Sarah Hope Cartee

*Equine Prosthetic Model*  
Southwest Virginia Governor's School  
Sponsor: Rebecca Phillips

*Third Place*

101

Justin Archer

*An Analysis of the Potential Ethanol Toxicity Levels in Dog Food Using Gas Chromatography*

Southwest Virginia Governor's School

Sponsor: Jared Brown

### **Behavioral and Social Sciences**

*First Place*

201

Griffin McAvoy

*Objective and Subjective Comparisons of the Frequency Analyses of MP3 and Compact Disc Musical Recordings*

Tazewell High School

Sponsor: Greg Deskins

*Second Place*

202

Wesley Meredith

*Preschool's Effect on Students' Educational Superiority*

Southwest Virginia Governor's School

Sponsor: Greg Riffe

### **Biomedical and Health Sciences**

*First Place*

302

Justin Davis

*Effect of Soccer Headgear on Impact Forces*

Southwest Virginia Governors' School

Sponsor: Krista Stith

*Second Place*

305

Alaa Ragab

*Mechanism of Calcium Cardiac Transport Modulation by the Novel Drug Nitroxyl*

Southwest Virginia Governors' School

Sponsor: Krista Stith

*Third Place*

306

Emma Stowe and Emma Strickland

*Can We Build a Bone? Osteoblastic Differentiation of Stem Cells on Micro-fibers*

Blacksburg High School

Sponsor: Katharine Davis

## **Chemistry**

*First Place*

402

Samuel Christoffer Mogen

*The Use of Layer-by-layer Techniques to Aid in the Protection of Antimicrobial Films*

Southwest Virginia Governors' School

Sponsor: Jared Brown

*Second Place*

403

Mark Sahyouni and Kyle Stiltner

*A Comparison of Dissolution Rates in Varying Conditions of Oral Soluble Medications*

Richlands High School

Sponsor: Tiffany Stillwell

*Third Place*

401

Bridget Boenke

*Determining Salinity Concentration of Road Spray*

Southwest Virginia Governors' School

Sponsor: Jared Brown

## **Earth and Environmental Sciences**

*First Place*

502

Emily Llaneras

*Slaying the "Destructor": The Effectiveness of Alternative Varroa Mite Treatments*

Southwest Virginia Governors' School

Sponsor: Krista Stith

*Second Place*

501

Canaan Addison and Chace Collins

*Comparison of Water Purification Methods: Ions, Chlorine, or "Old Fashioned" Boiling?  
That is the Question!*

Richlands High School

Sponsor: Melissa Addison

### **Materials Science**

*First Place*

601

Whatley Ozer

*Measuring the Effects of Softening Techniques on Pointe Shoes*

Southwest Virginia Governors' School

Sponsor: Sherry Pugh

*Second Place*

602

Andrew Peyton Simmons, John-Luke Asbury, and Luke Phillips

*The Effect of Bow Poundage on an Arrow's Penetration*

Richlands High School

Sponsor: Melissa Addison

### **Microbiology and Plant Sciences**

*First Place*

802

Ella Reeves

*Comparing a Manure-Based Fertilizer to Synthetic Fertilizer*

Southwest Virginia Governors' School

Sponsor: Rebecca Phillips

*Second Place*

801

Elliott Delp

*Measuring the Effectiveness of an Immobilization Prototype to Decrease Cyanobacteria*

Southwest Virginia Governors' School

Sponsor: Krista Stith

### **Physics and Astronomy**

*First Place*

901

Ashley Jordan and Austin Owen

*The Correlation Between Surface Temperature and Arctic Sea Ice Thickness*

Southwest Virginia Governors' School

Sponsor: Daniel Blake

*Second Place*

902

Jade Murray

*How Leadoff Stances Affect Speeds in Softball*

Southwest Virginia Governors' School

Sponsor: Daniel Blake

## Junior Division

### Animal Sciences

*First Place*

1101

Meredith Dabney

*Horse Hoof Heath: Trick or Treatment?*

Classical Conversations

Sponsor: Carrie Kroehler

*Second Place*

1102

Anna Haas

*The Effect of Weather on Bird Activity at Feeders*

Auburn Middle School

Sponsor: Carola Haas

### Behavioral and Social Sciences and Biomedical and Health Sciences

*First Place*

1201

Emma Kennedy

*Take a Knee: Strength Imbalance and Knee Injuries in Female Athletes*

Classical Conversations

Sponsor: Sandy Kennedy

*Second Place*

1202

Madison Vanover

*Looks Can Be Deceiving*

Tazewell Middle School

Sponsor: Katherine Claytor

### Biochemistry and Chemistry

*First Place*

1301

Matthew Blankenship

*Hand Dyeing Wool with Koolaid Continued*

Tazewell Middle School

Sponsor: Katherine Claytor

### Earth and Environmental Sciences and Plant Sciences

*First Place*

1401

Joshua Altizer

*Leeching or Leaching- Who's the Real Parasite?*

Classical Conversations

Sponsor: Karen Altizer

*Honorable Mention*

1402

Nick Grande

*What to Recycle and Why*

Wallace Middle School

1403

Seth Thompson

*"How Alive is our Food?" A Sweet Potato Experiment*

Classical Conversations

Sponsor: Damon Thompson

### **Energy: Chemical and Engineering Mechanics**

*First Place*

1502

Anna Katherine Smith

*Sails, Scales, and Indoor Gales*

Classical Conversations

Sponsor: Kenneth Smith

### **Materials Science**

*First Place*

1601

Peter Quek

*When Paper Flies*

Classical Conversations

Sponsor: Leelian Quek

### **Microbiology**

*First Place*

1702

Daniel Folta

*Why Can't I Get Better?*

Classical Conversations

Sponsor: Meg Folta

*Second Place*

1704

Carson Noel

*Got Germs?*

Tazewell Middle School

Sponsor: Katherine Claytor

*Third Place*

1703

Brandon Marsh

*To Eat or Not to Eat, That is the Question*

Classical Conversations

Sponsor: Cynthia Stevens

### **Physics and Astronomy**

*First Place*

1801

Carter Brockman

*Frozen*

Classical Conversations

Sponsor: Sharon Brockman

*Second Place*

1802

Keagan Henegar

*Levitation*

Classical Conversations

Sponsor: Kerrie Henegar