

## UNIT 1

## Behavioral 7

**Stark 105**

Veronica Gorka, Grade 7, **Want it now or want it later?** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Ben Rothwell, Grade 7, **Sleep Deprivation** , Our Lady of Peace, Dan Banicky, Sponsor  
Cara McCall, Grade 7, **Does color affect your memory?** , Our Lady of Peace, Dan Banicky, Sponsor  
Chrisbel Sanchez-Suero, Grade 7, **Are Your Eyes playing Tricks on You?** , West Hazleton Elem MS, Becky Rutkowski, Sponsor  
Maya Knecht, Grade 7, **A Color is Appetizing** , Lakeland JSHS, Dawn DeQuevedo, Sponsor  
Kylie Hillebrand, Grade 7, **Does color have an affect on our ability to read?** , Our Lady of Peace, Dan Banicky, Sponsor  
Audrey Cobb, Grade 7, **The Truth Behind PTSD** , Carbondale AHS, Christy Hinton, Sponsor  
Alyssa Hendrick, Grade 7, **How does short term memory affect different ages** , Carbondale AHS, Christy Hinton, Sponsor  
Cj Savage, Grade 7, **Who has better short term memory males or females** , Pocono Mt East HS, Maureen Elswick, Sponsor  
Katelyn Bozinko, Grade 7, **Betta Brawl** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Emma Ratchford, Grade 7, **Food Brand Test** , Our Lady of Peace, Dan Banicky, Sponsor  
Nora Collins, Grade 7, **Are students more alert in the morning or in the afternoon** , Our Lady of Peace, Dan Banicky, Sponsor

## UNIT 2

## Behavioral 7

**Stark 166**

Alexa Petroff, Grade 7, **Are Left-brained people smarter than Right-brained people?** , Pocono Mt East HS, Maureen Elswick, Sponsor  
Grace Goetz, Grade 7, **Do People of Different Age Groups React Differently to Ads?** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Caroline Murray, Grade 7, **Time Effect Test** , Our Lady of Peace, Dan Banicky, Sponsor  
Casey Healey, Grade 7, **The Power of Positive Thinking** , Our Lady of Peace, Dan Banicky, Sponsor  
Emma Fastiggi, Grade 7, **Favorite subjects effect on test scores** , Pocono Mt East HS, Maureen Elswick, Sponsor  
Andrew Hannig, Grade 7, **Gender's Effect on Auditory Perception** , Pocono Mt East HS, Maureen Elswick, Sponsor  
Shauna Durst, Grade 7, **Do Video Games Improve Test Scores?** , Carbondale AHS, Christy Hinton, Sponsor  
Marisleydi Garcia, Grade 7, **Stereotypes** , West Hazleton Elem MS, Becky Rutkowski, Sponsor  
Amaya Jefferson, Grade 7, **Genders favorite color stereotype** , Carbondale AHS, Christy Hinton, Sponsor  
Julia Gorel, Grade 7, **I think more girls like vanilla cake compared to boys.** , Carbondale AHS, Christy Hinton, Sponsor  
Rachel Kelly, Grade 7, **Does your favorite color affect what food you eat.** , Lakeland JSHS, Dawn DeQuevedo, Sponsor

## UNIT 3

## Behavioral 8

**Stark 216**

Caroline Stampien, Grade 8, **The Yawn Spreads On** , Our Lady of Peace, Dan Banicky, Sponsor  
Adrianna ColÃ³n, Grade 8, **Change-able** , St Clare/St Paul, Lisa Owens, Sponsor  
Abigail Haggerty, Grade 8, **More or Less? Piaget's Theory of Conservation** , St Clare/St Paul, Lisa Owens, Sponsor  
Wyatt Stelmak, Grade 8, **The Security Optimization** , South Scranton IS, Crystal DeAntona, Sponsor  
Gia Lettieri, Grade 8, **The Accuracy Eyewitness Testimony** , St Clare/St Paul, Lisa Owens, Sponsor  
Nora Davis, Grade 8, **Is Technology Hurting Reading Comprehension** , St Clare/St Paul, Lisa Owens, Sponsor  
Mia Perri, Grade 8, **Thats a Real Smile?... or is it** , Carbondale AHS, Jessica Trichilo, Sponsor  
Dominica Delayo, Grade 8, **Reward or Punishment** , Our Lady of Peace, Dan Banicky, Sponsor  
Sophia Calzola, Grade 8, **The Stroop Effect: Females vs Males** , Carbondale AHS, Jessica Trichilo, Sponsor  
Julie Schriver, Grade 8, **Can You Achieve Higher Test Score?** , North Pocono MS, Larry Dombek, Sponsor  
Joe Kalinowski, Grade 8, **Computer or Book: Which is the Leader in Education?** , Mid Valley SC, Suzanne Piorkowski, Sponsor

## UNIT 4

## Behavioral 8

**Stark 222**

Michael Watkins, Grade 8, **Do the Eyes (or Ears) Have It?** , St Clare/St Paul, Lisa Owens, Sponsor  
Aj Ambroseccchia, Grade 8, **Fact or Theory: The Cross Race Effect** , North Pocono MS, Larry Dombek, Sponsor  
Emily Williams, Grade 8, **Ready, Set, Remember?** , Good Shepherd Acad, Janice Ambrulavage, Sponsor  
Anna Kosierowski, Grade 8, **Music for Miles** , Our Lady of Peace, Dan Banicky, Sponsor  
Gabriella Randazzo, Grade 8, **The Effects of Forest-Bathing** , St Nicholas St. Mary, Janice Szczechowicz, Sponsor  
Sadie Zehner, Grade 8, **A Study of Gender Frustration** , Berwick AMS, Todd Gunther, Sponsor  
Maya Hemak, Grade 8, **What's With That Face?** , St Clare/St Paul, Lisa Owens, Sponsor

Sarah Parry, Grade 8, **Creativty among ages** , Carbondale AHS, Christy Hinton, Sponsor  
Jacqueline Pinto, Grade 8, **"Your Phone Is Messing With You"** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Jacqueline Pinto, Grade 8, **"Remember To Chew: Chew To Remember"** , Mid Valley SC, Suzanne Piorkowski, Sponsor

## UNIT 5

## Behavioral 8

**Stark 223**

Julia Curran, Grade 8, **Standout Memory** , Our Lady of Peace, Dan Banicky, Sponsor  
Aubrey Jumper, Grade 8, **Can Children Crack the Code** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Bryce Florey, Grade 8, **Free Throw Distraction** , Our Lady of Peace, Dan Banicky, Sponsor  
Avery Rebar, Grade 8, **Tv Trailers** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Makenzi McDermott, Grade 8, **How Does Design Affect Color Preference?** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Jocelyn Horvath, Grade 8, **The Effect of Music on Memory** , McAdoo-Kelayres MS, Kaitlyn Keich, Sponsor  
Mya Joie Schimelfenig, Grade 8, **Holiday smiles** , Our Lady of Peace, Dan Banicky, Sponsor  
Adrianna Colon, Grade 8, **Does Music Affect Memory?** , St Clare/St Paul, Lisa Owens, Sponsor  
Nicolette Hine, Grade 8, **Paintings and Emotions** , North Pocono MS, Larry Dombek, Sponsor  
Caitlin Bestrycki, Grade 8, **The Stroop Effect and Warped Words** , St Clare/St Paul, Lisa Owens, Sponsor

## UNIT 6

## Behavioral 9

**Stark 259**

Jamie Bryan, Grade 9, **Taste Perception** , Western Wayne HS, Christine McClure, Sponsor  
Claire Kelly, Grade 9, **The "Classical" Way to Lower Heart Rate** , Scranton Prep, Bridget Kotchick, Sponsor  
Claudia Pritchuk, Grade 9, **Does Music Improve How Fast You Run?** , Scranton Prep, Bridget Kotchick, Sponsor  
Kaitlynn Drennan, Grade 9, **To Get the Grade** , Hazleton AHS, Lawrence Pryzblick, Sponsor  
Ashley Katchmar, Grade 9, **Competitive Memories!** , Old Forge, Nanette Rinaldi, Sponsor  
Deana Mancuso, Grade 9, **Effect of a classrooms temperature on a students performance** , Carbondale AHS, Christy Hinton, Sponsor  
Vincent Pan, Grade 9, **Improving Reaction Time** , Marian Catholic, Lorraine Piehota, Sponsor  
Taylor Mazza, Grade 9, **The Mandela Effect** , Carbondale AHS, Jessica Trichilo, Sponsor  
Amelia Muta, Grade 9, **Color vs. Preference** , Carbondale AHS, Christy Hinton, Sponsor  
Noah Long, Grade 9, **How Multitasking Affects the Accuracy of Problem Solving** , Mmi Preparatory Middle School, Michael Mele, Sponsor  
Emma Yusavage, Grade 9, **The Sound Experiment** , Mid Valley SC, Suzanne Piorkowski, Sponsor

## UNIT 7

## Behavioral 10

**Stark 260**

Shannon Lawlor, Grade 10, **Which gender has stronger peripheral vision?** , Pocono Mt East HS, Michael Blough, Sponsor  
Vanessa Sawyer, Grade 10, **What's Your Favorite Color?** , Carbondale AHS, Jessica Trichilo, Sponsor  
Catie Collins, Grade 10, **Time Perception** , Scranton Prep, Bridget Kotchick, Sponsor  
Jazlynn Wohlers, Grade 10, **Intimidation on Testing Ability** , Pocono Mt East HS, Michael Blough, Sponsor  
Lanie Gray, Grade 10, **Positive reinforcement: mind of a child** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Thomas Betterly, Grade 10, **Making the Correct Choice** , Marian Catholic, Lorraine Piehota, Sponsor  
Hannah Lisowski, Grade 10, **Do Boys and Girls Really See Things Differently?** , Old Forge, Nanette Rinaldi, Sponsor  
Abygale Bergamino, Grade 10, **Does chewing gum improve test results?** , Old Forge, Nanette Rinaldi, Sponsor  
Ezekiel Milot, Grade 10, **Can Watching a Video Affect Your Reaction Time?** , Hazleton AHS, Jeff Koch, Sponsor  
Paige Fuller, Grade 10, **Replenish, Right!** , Scranton Prep, Bridget Kotchick, Sponsor  
Noelle Orehek, Grade 10, **The Effects of Oil Diffusion on Concentration** , Western Wayne HS, Christine McClure, Sponsor  
Madison Cost, Grade 10, **The Power of Suggestion** , Carbondale AHS, Christy Hinton, Sponsor

## UNIT 8

## Behavioral 10

**Stark 262**

Nathan Roppelt, Grade 10, **Does the Olfactory System Affect Our Memory?** , Holy Redeemer HS, Aaron Bilby, Sponsor  
Noah Newcomb, Grade 10, **Does Music Affect Concentration?** , Carbondale AHS, Jessica Trichilo, Sponsor  
Danielle Eifert, Grade 10, **Reinforcement during testing** , Honesdale HS, Rebecca Kretschmer, Sponsor  
Connor Richards, Grade 10, **The Effects of Autism on Recognition Memory** , North Pocono HS, Kara Stanton, Sponsor

Dean Nyberg, Grade 10, **Gender's Effect on Anticipatory Anxiety** , Pocono Mt East HS, Michael Blough, Sponsor  
Dushaun Thompson, Grade 10, **The Effect of Empathy on a Person's Ability to Judge** , Pocono Mt East HS, Michael Blough, Sponsor  
Alison Anilosky, Grade 10, **Learning Styles** , Marian Catholic, Lorraine Piehota, Sponsor  
Brooke Weiss, Grade 10, **Hear No Evil, See No Evil, Speak No Evil** , Crestwood SD, Mickey Harper, Sponsor  
Jarred Rosar, Grade 10, **Gender of Politics** , Carbondale AHS, Jessica Trichilo, Sponsor  
Cora Heenan, Grade 10, **Another C?** , Carbondale AHS, Jessica Trichilo, Sponsor  
Cassandra Nocera, Grade 10, **Although it seems simple, can you name these colors?** , Old Forge, Nanette Rinaldi, Sponsor

## **UNIT 9**

### **Behavioral 11**

### **Stark 263**

Amanda Moody, Grade 11, **How does playing different instruments affect the heart rate** , Pocono Mt West HS, Tiffany Becker, Sponsor  
Jessica Borders, Grade 11, **Gender Responses to Frustration** , Carbondale AHS, Christy Hinton, Sponsor  
Kristina Gorel, Grade 11, **Birth Order and Athleticism** , Carbondale AHS, Christy Hinton, Sponsor  
Jessica McClellan, Grade 11, **When is your Teacher at an A+?** , Mmi Preparatory High School, Michael Mele, Sponsor  
Robert Earley, Grade 11, **Does Facial Symmetry Determine Physical Attraction?** , Hazleton AHS, Jeff Koch, Sponsor  
Richard Fried, Grade 11, **Do Incentives Affect Problem Solving Skills in Students?** , Abington Heights HS, Rosa Sabie, Sponsor  
Meghan Darrough, Grade 11, **Driving Danger 2.3 Seconds** , Marian Catholic, Lorraine Piehota, Sponsor  
Robert Clemens, Grade 11, **Operation: "I Want to Hold Your Hand"** , Western Wayne HS, Christine McClure, Sponsor  
Danielle Snyder, Grade 11, **How Judgemental Are You?** , Lakeland JSHS, Nellie Shiver, Sponsor  
Gianna DeBastiani, Grade 11, **The Effects of Color on Student Learning** , Western Wayne HS, Christine McClure, Sponsor  
Grace Mussoline, Grade 11, **Individual vs. Team Sports** , Marian Catholic, Lorraine Piehota, Sponsor

## **UNIT 10**

### **Behavioral 11 & 12**

### **Stark 270**

Sara Wanat, Grade 11, **How will a Cell Phone Conversation Effect Reaction Time?** , Lakeland JSHS, Nellie Shiver, Sponsor  
Madison Weiss, Grade 11, **The Language of Manners** , Crestwood SD, Mickey Harper, Sponsor  
Jacob Adams, Grade 11, **Do Cute Images Increase Respondents' Product Preferences ?** , Honesdale HS, Rebecca Kretschmer, Sponsor  
Amber Goffredo, Grade 11, **Which Color Improves Memory the best?** , North Pocono HS, Kara Stanton, Sponsor  
Amanda Houser, Grade 11, **The Mere- Exposure Effect** , Hazleton AHS, Jeff Koch, Sponsor  
Vaeda Pontosky, Grade 11, **Handheld Device Versus Written** , Western Wayne HS, Christine McClure, Sponsor  
Gabrielle Miranda, Grade 12, **Where's Waldo?** , Pocono Mt East HS, Michael Blough, Sponsor  
Olivia Regal, Grade 12, **To Cheat or Not to Cheat** , Carbondale AHS, Jessica Trichilo, Sponsor  
Paige Gould, Grade 12, **The Endowment Effect** , Crestwood SD, Mickey Harper, Sponsor  
Ashley Bound, Grade 12, **The Effects of Music on Athletic Performance** , Old Forge, Nanette Rinaldi, Sponsor  
Gabriel Ramos, Grade 12, **Mind Over Matter: Meditation, Wellbeing, and Performance.** , North Pocono HS, Kara Stanton, Sponsor

## **UNIT 11**

### **Behavioral 12**

### **Stark 275**

Adrianna Bohman, Grade 12, **Could You Repeat That?** , Hazleton AHS, Jeff Koch, Sponsor  
Michael Goerlitz, Grade 12, **Effects on Memorization by Change in Tempo of Music** , Lakeland JSHS, Nellie Shiver, Sponsor  
Laura Miller, Grade 12, **Does Social Class Affect Self Esteem?** , Crestwood SD, Mickey Harper, Sponsor  
Mallory Jablon, Grade 12, **The Accuracy of Eye Witness Testimony** , Western Wayne HS, Christine McClure, Sponsor  
Kirstin Metschulat, Grade 12, **How time of day effects testing results** , Western Wayne HS, Christine McClure, Sponsor  
Sofia Losen, Grade 12, **Relationship vs. Academics** , Hazleton AHS, Jeff Koch, Sponsor  
Amanda Katchmar, Grade 12, **Does Priming Affect Test Performance?** , Old Forge, Nanette Rinaldi, Sponsor  
Amelia Zazzera, Grade 12, **Is Google Ruining Your Memory?** , Carbondale AHS, Jessica Trichilo, Sponsor  
Gabriel Ramos, Grade 12, **To Be or Not to Be, What is the Consensus?** , North Pocono HS, Kara Stanton, Sponsor  
Katelyn Dovin, Grade 12, **Written in the Stars** , Carbondale AHS, Jessica Trichilo, Sponsor

## **UNIT 12**

### **Biochemistry 7 & 8**

### **Stark 311**

Sarah Lyons, Grade 7, **Stop the Burn: The Effects of Antacids on Orange Juice** , Holy Rosary Sch, James Rose, Sponsor

Madeline Bormes, Grade 7, **Disguised Sugars** , Our Lady of Peace, Dan Banicky, Sponsor  
Nadia Saeed, Grade 7, **Does Fruit Juice have More Vitamin C than Artificial Juice?** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Victoria Simpson, Grade 8, **Preserving Fruits and Vegetables** , North Pocono MS, Larry Dombek, Sponsor  
Christina Monroe, Grade 8, **How Sugar Effects Tooth Decay** , Our Lady of Peace, Dan Banicky, Sponsor  
Collin Birtel, Grade 8, **Lead in Our Water** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Amelia Minzola, Grade 8, **Glucose in Your Smoothie** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Quinn Carden, Grade 8, **Denaturing Proteins** , Holy Rosary Sch, James Rose, Sponsor  
Daniel Bohenek, Grade 8, **Extraction Transaction** , St Clare/St Paul, Lisa Owens, Sponsor  
Connor Spencer, Grade 8, **Whitening your Wisdoms** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor

## UNIT 13

### Biochemistry 9

## Stark 305

Rebecca Ottensman, Grade 9, **The Molecules Of Food Coloring** , Greater Nanticoke AHS, Amanda Schraeder, Sponsor  
Jenna Beach, Grade 9, **Does Fruit Flavoring Effect the Amount of Electrolytes ?** , North Pocono HS, Kara Stanton, Sponsor  
Sarah Siddiqui, Grade 9, **To Compare Digestive Efficiency of Proteins in the Stomach** , Abington Heights HS, Rosa Sabie, Sponsor  
Peyton Phillips, Grade 9, **Semi-Quantitative Food Tests (For Reducing Sugars)** , Holy Cross HS, Jillian Rojek, Sponsor  
Thomas Hannon, Grade 9, **Can Christmas Trees Be Hazardous?** , North Pocono HS, Kara Stanton, Sponsor  
Louis DeAngelo, Grade 9, **Examining Cellulose as a Food Source for Humans** , Mmi Preparatory Middle School, Michael Mele, Sponsor  
Alexandra Young, Grade 9, **The effects of enzymes on the efficiency of detergent** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Lexi Zola, Grade 9, **A Novel Solution: Solubility Based on Internal Environment** , Mmi Preparatory Middle School, Michael Mele, Sponsor  
Ethan Esquilin, Grade 9, **Testing pH Levels of Different Brands of Water** , North Pocono HS, Kara Stanton, Sponsor

## UNIT 14

### Biochemistry 10 & 11

## Stark 359

Sabrina Dombek, Grade 10, **Chlorine Levels in Differnt Types of Water** , North Pocono HS, Kara Stanton, Sponsor  
Megan Winslow, Grade 10, **Skin Sooo Soft?** , North Pocono HS, Kara Stanton, Sponsor  
Katie Costa, Grade 10, **Testing the Solubility of Drugs** , Scranton Prep, Bridget Kotchick, Sponsor  
Rianna Ambosie, Grade 10, **Electrolytes in Beverages** , Crestwood SD, Mickey Harper, Sponsor  
Austin Bentler, Grade 10, **Electrolytes** , Scranton Prep, Bridget Kotchick, Sponsor  
Alexander Kline, Grade 11, **Finding DNA Yield - Spectroscopy vs. Fluorescence Tagging** , Mmi Preparatory High School, Michael Mele, Sponsor  
Dominique Preate, Grade 11, **Carbonic Stomach Acids: What Do They Really Do?** , Scranton Prep, Bridget Kotchick, Sponsor  
Grace Okrepkie, Grade 11, **Bioassay of Lactuca sativa L. var. Buttercrunch** , Holy Cross HS, Jennifer Leone, Sponsor  
Julia Iskra, Grade 11, **The Affect of pH on Enzyme Reactions** , Wyoming Seminary US, Andrea Nerozzi, Sponsor

## UNIT 15

### Biochemistry 11 & 12

## Stark 365

Kaylee Magda, Grade 11, **Ocean Acidification** , Holy Cross HS, Jennifer Leone, Sponsor  
Lauren Fletcher, Grade 11, **Do protein banding patterns correlate with salmon type?** , Wyoming Seminary US, Andrea Nerozzi, Sponsor  
Olivia Zehel, Grade 11, **Effect of Alcohol on the Behavior of Caenorhabditis elegans** , Holy Cross HS, Jennifer Leone, Sponsor  
Moyasar Osman, Grade 11, **Biofuels: Which Mushrooms Help the World?** , Wyoming Seminary US, Andrea Nerozzi, Sponsor  
Kaitlyn McGeehan, Grade 11, **Analysis of Cytotoxicity of Paclitaxel** , Mmi Preparatory High School, Michael Mele, Sponsor  
Caroline Kranick, Grade 11, **The Effect of Temperature on the Efficiency of Catalase** , Holy Cross HS, Jennifer Leone, Sponsor  
Julia Horchos, Grade 11, **The Effect of Ocean Acidification on Bioluminescent Dinoflag** , Scranton Prep, Bridget Kotchick, Sponsor  
Julia Snyder, Grade 12, **The Gluten Glitch** , Mmi Preparatory High School, Michael Mele, Sponsor  
Gabriella Kupsho, Grade 12, **It'll Take Your Breath Away** , Mmi Preparatory High School, Michael Mele, Sponsor

## UNIT 16

### Biology 7

## Stark 370

Nirjhala Kadariya, Grade 7, **Yeast Reproduction** , NativityMiguel School of Scranton, Neil Cronin, Sponsor  
Gabe Hook, Grade 7, **The Effects of Caffeine on Plant Growth** , Berwick AMS, Todd Gunther, Sponsor  
Abigail Saverslak, Grade 7, **Jumprope vs. jumping jacks** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Michael Allardyce, Grade 7, **Squeaky Clean** , Our Lady of Peace, Dan Banicky, Sponsor

Francesca Ramos, Grade 7, **Lines of Relation** , North Pocono MS, Larry Dombek, Sponsor  
Madison Metrick, Grade 7, **Characteristics Of Fingerprints** , McAdoo-Kelayres MS, Kaitlyn Keich, Sponsor  
Brenna Eckhart, Grade 7, **The Best Soil for Worms** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Delaney Curley, Grade 7, **Oil Vs. Wildlife** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Louis Scalise, Grade 7, **How much mold will four types of bread collect over a month?** , Hazleton AMS, Ryan Wilner, Sponsor  
Bianca Talarico, Grade 7, **Are Your Eyes Playing Tricks on You?** , St Clare/St Paul, Lisa Owens, Sponsor  
Noah Planey, Grade 7, **Taking a Second Look at the 5 Second Rule** , Howard Gardner School, Michael Rescigno, Sponsor  
Skye Williamson, Grade 7, **The Theory of the 5 Second Rule** , Our Lady of Peace, Dan Banicky, Sponsor

## UNIT 17

## Biology 8

**Stark 378**

Adam Mariotti, Grade 8, **Are Your Eyes Playing Tricks** , Our Lady of Peace, Dan Banicky, Sponsor  
Andrew Ferguson, Grade 8, **How color filters affect the growth of plants** , Our Lady of Peace, Dan Banicky, Sponsor  
Garrett Simpson, Grade 8, **Bioinformatics** , Berwick AMS, Todd Gunther, Sponsor  
Lucy Butkiewicz, Grade 8, **What cleaner works better?** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Anna Gowarty, Grade 8, **Temperature Effect on the Voice** , Wyoming Seminary LS, Lisa Iskra, Sponsor  
Jessie Miller, Grade 8, **Commercial Moisturizers vs. Homemade Alternatives** , Wyoming Seminary LS, Lisa Iskra, Sponsor  
Emily Aikens, Grade 8, **Vitamins on Planarian Regeneration** , Wyoming Seminary LS, Lisa Iskra, Sponsor  
Maria Spinelli, Grade 8, **Gluten Levels In Different Types Of Flour** , Forest City RHS, Audrey Nebzydoski, Sponsor  
Karen Daly, Grade 8, **Clean Your Teeth!** , Our Lady of Peace, Dan Banicky, Sponsor  
Mia Kotowski, Grade 8, **Fingerprint affect on surface temperature** , Wyoming Seminary LS, Lisa Iskra, Sponsor  
Grace Warner, Grade 8, **Are Fingerprint Patterns Genetic?** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Sarah Aubrey, Grade 8, **The 5 Second Rule : Is it Real?** , Our Lady of Peace, Dan Banicky, Sponsor

## UNIT 18

## Biology 9

**Stark 380**

Rose Hayward, Grade 9, **Effect of magnetism on bacteria growth** , Holy Redeemer HS, Kelsey Reyes, Sponsor  
McKenna Gallagher, Grade 9, **The Effect of Cholesterol on Cardiac Tissue** , Mmi Preparatory Middle School, Michael Mele, Sponsor  
Emily Payne, Grade 9, **How Does the pH of Water Affect Plant Growth?** , Hazleton AHS, Jeff Koch, Sponsor  
Gianna Donahue, Grade 9, **How Do Different Disinfectants Affect Bacterial Resistance?** , Greater Nanticoke AHS, Amanda Schraeder, Sponsor  
Darren Zheng, Grade 9, **The Effects of Temperature on Bacteria** , Mmi Preparatory Middle School, Michael Mele, Sponsor  
Amelia Grudkowski, Grade 9, **Is that clean?** , Holy Redeemer HS, Steven Wise, Sponsor  
Maxwell Schwabe, Grade 9, **Organic vs. Non-Organic Produce** , Marian Catholic, Lorraine Piehota, Sponsor  
Natalie Graham, Grade 9, **Efficacy of Colloidal Silver on E. Coli Growth** , Mmi Preparatory Middle School, Michael Mele, Sponsor  
Katherine Lewandowski, Grade 9, **Analyzing Bioluminescence through Photoperiod Variations** , Mmi Preparatory Middle School, Michael Mele, Sponsor  
Emily Ryan, Grade 9, **Fermentation Inhibition with Honey** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Sydney Kohl, Grade 9, **Protein Denaturation of Various Egg White Sources** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Sarah Stettler, Grade 9, **Concentration of Glucose in Fruit** , Holy Redeemer HS, Kelsey Reyes, Sponsor  
Jackie Snyder, Grade 9, **The Pathway to Good Health** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor

## UNIT 19

## Biology 10

**Stark 383**

Izabella Chmil, Grade 10, **Does Microwave Radiation Affect Life?** , Lakeland JSBS, Nellie Shiver, Sponsor  
John Ashton, Grade 10, **Effect of Salinity on the Hatching of Brine Shrimp** , Hazleton AHS, Jeff Koch, Sponsor  
Molly Dugan, Grade 10, **Bready, Set, Mold** , Holy Redeemer HS, Jean Grabowski, Sponsor  
Trina Barcarola, Grade 10, **The Effects of Athletic Fabrics on Heat Retention** , Western Wayne HS, Christine McClure, Sponsor  
Christopher Talluto, Grade 10, **Exhaled Effects of Exercise** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Jay Pande, Grade 10, **Affect of Sugar Concentration on Yeast Fermentation** , Wyoming Seminary US, Andrea Nerozzi, Sponsor  
Kimberly Aldrich, Grade 10, **What is all the buzz about?** , Holy Redeemer HS, Kelsey Reyes, Sponsor  
Anna Bajor, Grade 10, **Fruit Battery** , North Pocono HS, Kara Stanton, Sponsor

Calista Walk, Grade 10, **Studying Bioluminescence in Dinoflagellates** , Greater Nanticoke AHS, Amanda Schraeder, Sponsor  
Caitlyn Mc Ingvale, Grade 10, **Blue Cheese** , Holy Redeemer HS, Jean Grabowski, Sponsor

## UNIT 20

### Biology 11

## Stark 403

Matthew Schwarztrauber, Grade 11, **Effect of Varying pH on Lettuce Seed Germination** , Mountain View HS, Erin Rupp, Sponsor  
Paige McDonald, Grade 11, **Bacterial Transformation Efficiency as a Function of Plasmid** , Scranton Prep, Bridget Kotchick, Sponsor  
Zachary Young, Grade 11, **The Effect of NAD+ on rates of Alcoholic Fermentation** , Mmi Preparatory High School, Michael Mele, Sponsor  
Bailey Slusser, Grade 11, **Recycling Laundry Detergent** , Mmi Preparatory High School, Michael Mele, Sponsor  
Gianna Sacchetti, Grade 11, **The Effect of a Decongestant on the Heart-Rate of Daphnia** , Holy Cross HS, Jennifer Leone, Sponsor  
Rory Misko, Grade 11, **Peripheral vision** , Carbondale AHS, Jessica Trichilo, Sponsor  
Alexander Sessock, Grade 11, **Stain Removal** , Mmi Preparatory High School, Michael Mele, Sponsor  
Elizabeth Eckhart, Grade 11, **Denaturing Antibodies** , Mmi Preparatory High School, Michael Mele, Sponsor  
Alexander Sessock, Grade 11, **Respiration and Dehydration After Exercise** , Mmi Preparatory High School, Michael Mele, Sponsor  
Allison Zaremba, Grade 11, **Photosynthesis and Cellular Respiration by Pea Plants** , Hazleton AHS, Jeff Koch, Sponsor

## UNIT 21

### Biology 11 & 12

## Stark 405

Robert Gray, Grade 11, **Investigations of Catalase Activity in Broccoli Extracts** , Mountain View HS, Erin Rupp, Sponsor  
Andrew Decker, Grade 11, **The Chemical Differences In Differing Strains Of Tomatoes** , Mmi Preparatory High School, Michael Mele, Sponsor  
Kianna Savage, Grade 11, **The Skinny on Moisturizers** , Carbondale AHS, Jessica Trichilo, Sponsor  
Meghan Duda, Grade 11, **Neem Tree Extract as an Anti-Agent** , Greater Nanticoke AHS, Amanda Schraeder, Sponsor  
Ria James, Grade 12, **How does caffeine affect the rate of mitosis in onion roots?** , Pocono Mt West HS, Tiffany Becker, Sponsor  
Briana Frankovsky, Grade 12, **The Effect of Digestive Enzymes on Fast Food** , Mountain View HS, Erin Rupp, Sponsor  
Carlos Castillo, Grade 12, **Sugar Investigation with S. cerevisiae** , Greater Nanticoke AHS, Dawn Marshall, Sponsor  
Pari Pancholy, Grade 12, **Producing Genetic Mutations in Bacteria** , Abington Heights HS, Rosa Sabie, Sponsor  
Chava Kornblatt, Grade 12, **Good Vibrations: Permeability of the Blood Brain Barrier** , Mmi Preparatory High School, Michael Mele, Sponsor

## UNIT 22

### Botany 7

## Stark 411

Kaylee Butler, Grade 7, **Soil vs. Hydroponics** , South Scranton IS, Katona Miller, Sponsor  
Alex Iannone, Grade 7, **Cantaloupe Growth Experiment** , North Pocono MS, Larry Dombek, Sponsor  
Abby Redmond, Grade 7, **Glowing Roses** , North Pocono MS, Larry Dombek, Sponsor  
Ivan Knecht, Grade 7, **The Effect of Colored Light on Plant Germination** , Western Wayne MS, Christine McClure, Sponsor  
Owen Jumper, Grade 7, **The Effect of Caffeine on Plant Growth** , Our Lady of Peace, Dan Banicky, Sponsor  
Maris Sadowski, Grade 7, **Do Plants Grow better in Artificial Light or Natural Light?** , Valley MS, Jon Weaver, Sponsor  
Raymond Joseph, Grade 7, **Avocado Preservation?** , Crestwood SD, Mickey Harper, Sponsor  
Keith Pritchky, Grade 7, **Plant Talk** , Our Lady of Peace, Dan Banicky, Sponsor  
Adriana Sandy, Grade 7, **"Can They Hear Me?"** , North Pocono MS, Larry Dombek, Sponsor  
Madeline Nguyen, Grade 7, **How do Hydro-gel polymers affect the growth of a plant?** , St Nicholas St. Mary, Janice Szczechowicz, Sponsor  
Angelina Topa, Grade 7, **The Effect Different Soils Have On Plant Growth** , North Pocono MS, Larry Dombek, Sponsor  
Marcella Amendola, Grade 7, **The Growth of Plants: Organic vs Non-organic** , St Clare/St Paul, Lisa Owens, Sponsor

## UNIT 23

### Botany 7 & 8

## Stark 424

Jacob Hutchison, Grade 7, **Update** , Hazleton AMS, Ryan Wilner, Sponsor  
Tyler Schroeder, Grade 7, **Moisture and Fruit Rot, Do They Mix?** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Ava Groth, Grade 8, **The growth of plants with bonemeal** , Crestwood SD, Mickey Harper, Sponsor  
Nathaniel Bacon, Grade 8, **Do internet routers have an affect on plant growth?** , Valley MS, Jon Weaver, Sponsor  
Erin Barno, Grade 8, **Do Colored LED Lights Affect the Growth of Pea Plants?** , Crestwood SD, Mickey Harper, Sponsor  
Rosalyn Partington, Grade 8, **Repurposing Biodegradable Packing Peanuts** , St Nicholas St. Mary, Janice Szczechowicz, Sponsor  
Gianna Genco, Grade 8, **Nurture vs. Nature** , Our Lady of Peace, Dan Banicky, Sponsor

Mitchell Kirby, Grade 8, **Filtered Flowers** , Our Lady of Peace, Dan Banicky, Sponsor  
Kate Kolucki, Grade 8, **LED vs. Fluorescent** , Our Lady of Peace, Dan Banicky, Sponsor  
Kristyn Stanek, Grade 8, **The Effect of Caffeine on Plant Growth** , Freeland MS, Christopher Parise, Sponsor  
Ashley Loss, Grade 8, **How Natural Light vs. Grow Light Effects Plants** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor

## UNIT 24

### Botany 9 & 10

## Stark 434

Nicole Joseph, Grade 9, **Pea Plants with Hydrogen Peroxide?** , Crestwood SD, Mickey Harper, Sponsor  
Hailey Underwood, Grade 9, **Hours of Light vs. Growth Rate on Plants** , North Pocono HS, Kara Stanton, Sponsor  
Calvin Brzozowski, Grade 9, **Effect of Space Radiation on Beans** , Greater Nanticoke AHS, Anthony Fleury, Sponsor  
Jenna Topa, Grade 9, **The Effects Of Endomycorrhizal Fungi On Wheat Growth** , North Pocono HS, Kara Stanton, Sponsor  
Macy Zenier, Grade 10, **How Does Cloning Affect the Quality of a Plant?** , Mmi Preparatory High School, Michael Mele, Sponsor  
Catrina Havrilla, Grade 10, **The effects of food dye on photosynthesis of aquatic plants** , Mmi Preparatory High School, Michael Mele, Sponsor  
Miranda Fritz, Grade 10, **The Effects of Organic V. Conventional Produce on Plants** , Honesdale HS, Rebecca Kretschmer, Sponsor  
Kai Mele, Grade 10, **Green Ghosts: Methods for Decellularizing Vascular Plants** , Mmi Preparatory High School, Justin Vincent, Sponsor

## UNIT 25

### Botany 11 & 12

## Stark 435

Katerina Williams, Grade 11, **The Effect of UVB Radiation on Radish Seed Germination** , Abington Heights HS, Rosa Sabie, Sponsor  
Annie Stetz, Grade 11, **Tba** , Hazleton AHS, Lawrence Pryzblick, Sponsor  
Katie Nebzydoski, Grade 11, **Spectral Analysis of the Carbohydrates in PA Maple Syrup** , Forest City RHS, Audrey Nebzydoski, Sponsor  
Kelisa Hysenbegasi, Grade 11, **Jamination** , Mmi Preparatory High School, Michael Mele, Sponsor  
Wanshuang Zheng, Grade 11, **Light Intensities and Photosynthetic rates in Spinach** , Wyoming Seminary US, Andrea Nerozzi, Sponsor  
Maricruz Saucedo, Grade 12, **What Can I Grow in an Artificial Lung?** , Old Forge, Nanette Rinaldi, Sponsor  
Joshua Kalada-Kania, Grade 12, **Toxicity of Polystyrene Nanoparticles in Aquatic Plants** , Mmi Preparatory High School, Michael Mele, Sponsor  
Katrina Thomas, Grade 12, **Vibrations and Plant Growth** , Greater Nanticoke AHS, Anthony Fleury, Sponsor  
Lauren Freeman, Grade 12, **The Effects of Estrogen and Papaya on Fast Plants** , Mmi Preparatory High School, Michael Mele, Sponsor  
Clara Cicco, Grade 12, **The Effects of Aspirin on Plant Growth** , North Pocono HS, Kara Stanton, Sponsor  
Abigail Paul, Grade 12, **Effect of Rhodamine Dye on Plant Growth** , Mmi Preparatory High School, Michael Mele, Sponsor

## UNIT 26

### Chemistry 7

## Breiseth 013

Jeannie Rafferty, Grade 7, **How Much Protection Does Your Sunblock Really Give You?** , South Scranton IS, Katona Miller, Sponsor  
Madison Rios, Grade 7, **Temperature's Effect on Freezing Point** , Pocono Mt East HS, Maureen Elswick, Sponsor  
Carsyn Cole, Grade 7, **Would You Like a Lemon in Your Water** , Holy Rosary Sch, James Rose, Sponsor  
Glenda Vasquez, Grade 7, **Baking Soda & Vinegar Rocket!** , Berwick AMS, Todd Gunther, Sponsor  
Aidan DeLucy, Grade 7, **Dancing Raisins** , North Pocono MS, Larry Dombek, Sponsor  
Caitlin Dushanko, Grade 7, **Which Drink Affects Tooth Enamel the Most Using Eggshells?** , Crestwood SD, Mickey Harper, Sponsor  
Hannah Benko, Grade 7, **Which Solutions Work Best in Slime** , North Pocono MS, Larry Dombek, Sponsor  
Carson Battle, Grade 7, **Glow Sticks in various water temperatures** , North Pocono MS, Larry Dombek, Sponsor  
Michael Tomczyk, Grade 7, **Liquids vs. Penny** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Jillian DelBalso, Grade 7, **Pearly Whites** , Good Shepherd Acad, Janice Ambrulavage, Sponsor  
Ceanna Belisle, Grade 7, **How does soda effect the mass of deer bones?** , Crestwood SD, Mickey Harper, Sponsor  
Abigail Bertig, Grade 7, **Why Aren't All Medicines Pills?** , Mid Valley SC, Suzanne Piorkowski, Sponsor

## UNIT 27

### Chemistry 7

## Breiseth 014

Nathan Carr, Grade 7, **Cold Pack Chemistry: Where Does the Heat Go?** , Our Lady of Peace, Dan Banicky, Sponsor  
Evan Peirce, Grade 7, **How good is Sunscreen?** , Western Wayne MS, Christine McClure, Sponsor  
Hillary Hoda, Grade 7, **Rapid Reliever** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Brooke Lapinski, Grade 7, **Whiting Wars** , Crestwood SD, Mickey Harper, Sponsor  
Shreya Rupareliya, Grade 7, **The pH Truth of Water** , St Jude Mountain Top, Marilyn Baran, Sponsor

Julia Ogurkis, Grade 7, **How does the increasing of co2 levels affect plant growth?** , Valley MS, Jon Weaver, Sponsor  
James Young, Grade 7, **Got Fizz?** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Molly Jameson, Grade 7, **Trick or Treat?** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Aubrey Glucksnis, Grade 7, **How Acid Effects Your Teeth** , North Pocono MS, Larry Dombek, Sponsor  
Caden Sparich, Grade 7, **Temperature and Rebound** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Kate Malay, Grade 7, **Sugar Content in Soft Drinks** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Sydney Kozden, Grade 7, **Smart Cookie Chemistry** , St Jude Mountain Top, Marilyn Baran, Sponsor

## UNIT 28

## Chemistry 7

Breiseth 105

Logan Heffner, Grade 7, **The Organic Battery Charger** , Howard Gardner School, Michael Rescigno, Sponsor  
Ava Blumer, Grade 7, **Stain Removers** , North Pocono MS, Larry Dombek, Sponsor  
Clare Devine, Grade 7, **Solutions and Radiant Heat** , Our Lady of Peace, Dan Banicky, Sponsor  
Gemma Alberti, Grade 7, **Enticing Enzymes** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Mariah Hudock, Grade 7, **Does Color Matter?** , Freeland MS, Christopher Parise, Sponsor  
Justin Delgado, Grade 7, **Rust Inhibitors** , NativityMiguel School of Scranton, Neil Cronin, Sponsor  
Josh Van Pelt, Grade 7, **A Duct Dilemma** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Miranda Karoscik, Grade 7, **The Hairspray Challenge** , LaSalle Acad, Lisa Vladicka, Sponsor  
Taylor Bayley, Grade 7, **To Glow or Not to Glow** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Nahisha Pokhrel, Grade 7, **The Amount Of Sugar In Fruit Juice** , NativityMiguel School of Scranton, Neil Cronin, Sponsor  
Riley McNutt, Grade 7, **The Effects of Varying pH on Eggs** , North Pocono MS, Lawrence Dombek, Sponsor  
Lauren Urosevich, Grade 7, **Which Fruit Has the Most Vitamin C?** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor

## UNIT 29

## Chemistry 8

Breiseth 106

Chase Pugh, Grade 8, **Sugary Smile** , Crestwood SD, Mickey Harper, Sponsor  
Emily Dombek, Grade 8, **Hot Hair!** , North Pocono MS, Larry Dombek, Sponsor  
Jordyn Chepolis, Grade 8, **Beat the Burn** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Megan Nidoh, Grade 8, **The Electrolyte Challenge** , LaSalle Acad, Lisa Vladicka, Sponsor  
Dana Mackin, Grade 8, **Electrolytes in Drinks** , Holy Rosary Sch, James Rose, Sponsor  
Ryan Lewis, Grade 8, **Orange Juice - Nature's Powerade?** , West Scranton HS & MS, Frank Wahl, Sponsor  
Jake Mackey, Grade 8, **Power to the Players** , Our Lady of Peace, Dan Banicky, Sponsor  
Athena Chin, Grade 8, **Optimal Temperatures for Glow Sticks** , Crestwood SD, Mickey Harper, Sponsor  
Ashley Luciano, Grade 8, **pH Level of Common Beverages** , Hazleton AMS, Ryan Wilner, Sponsor  
Jacob Bianchi, Grade 8, **Do you know what you are really putting in your drinks?** , North Pocono MS, Larry Dombek, Sponsor  
William Wolfgang, Grade 8, **Fruity Fungi** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Molly Znachko, Grade 8, **Which antacid is the best neutralizer?** , Valley MS, Jon Weaver, Sponsor

## UNIT 30

## Chemistry 8

Breiseth 107

Kathryn Mc Ingvale, Grade 8, **Lotion Commotion** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Alexandria Bien-Aime, Grade 8, **The effects of pH change on Copper** , Western Wayne MS, Christine McClure, Sponsor  
Sophia Magistro, Grade 8, **Does the amount of sugar in cookies affect its freshness?** , St Nicholas St. Mary, Janice Szczechowicz, Sponsor  
Logan Rose, Grade 8, **Feel the Burn** , North Pocono MS, Larry Dombek, Sponsor  
Anna Cabell, Grade 8, **The Flammability of Laundry Detergent** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Christopher Papciak, Grade 8, **Super Sunscreens** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Madelyn Franceski, Grade 8, **The Chemistry of Hair Highlights** , LaSalle Acad, Lisa Vladicka, Sponsor  
Lucy Olander, Grade 8, **Which type of nail resists rust the most effectively?** , Valley MS, Jon Weaver, Sponsor  
Molly Devine, Grade 8, **Does Nail Polish Affect the Results of a Pulse Oximeter?** , Our Lady of Peace, Dan Banicky, Sponsor  
Emma Budnovitch, Grade 8, **Snap, Crackle, Pop** , North Pocono MS, Larry Dombek, Sponsor  
Kiera Skuntz, Grade 8, **How Oily is Foundation** , Valley MS, Jon Weaver, Sponsor

Edward Patrick, Grade 8, **The Burning Truth of Nuts** , St Jude Mountain Top, Marilyn Baran, Sponsor

### UNIT 31

### Chemistry 8

**Breiseth 108**

Lilly Reilly, Grade 8, **Is your water pure? Let us test to make sure!** , St Clare/St Paul, Lisa Owens, Sponsor  
Isabelle Seratch, Grade 8, **What whitening agent removes coffee stains most efficiently?** , Valley MS, Jon Weaver, Sponsor  
Avery McNulty, Grade 8, **Homemade pH Paper... If I buy it, is it better?** , Our Lady of Peace, Dan Banicky, Sponsor  
Grace Nealon, Grade 8, **Does Suntan Lotion expire?** , St Nicholas St. Mary, Janice Szczechowicz, Sponsor  
Sara Balay, Grade 8, **Do different types of fluids affect the rate at which ibuprofen** , Valley MS, Jon Weaver, Sponsor  
Logan Slusser, Grade 8, **Calorimetry of Fast Food** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Grace Borie, Grade 8, **What Will Give You the Most Explosive Tub-Time?** , West Scranton HS & MS, Frank Wahl, Sponsor  
Makenzi McDermott, Grade 8, **Which Slime Activator is The Best?** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Daryl Boich, Grade 8, **Cookie Catastrophe?** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Laney Schulz, Grade 8, **Heating Fruits for Gelatin** , St Nicholas St. Mary, Janice Szczechowicz, Sponsor  
Ethan Stoltz, Grade 8, **Soapy Sensation** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Madison Megivern, Grade 8, **Is soda bad for your teeth?** , West Scranton HS & MS, Frank Wahl, Sponsor

### UNIT 32

### Chemistry 8

**Breiseth 205**

Natalie Yeager, Grade 8, **The Sports Drink Challenge** , Maple Manor MS, Janet Shebelock, Sponsor  
Viva Barrett, Grade 8, **Ice Melt Comparison** , Freeland MS, Christopher Parise, Sponsor  
Olivia Coar, Grade 8, **Dirt You Basic?** , North Pocono MS, Larry Dombek, Sponsor  
Abby Merrifield, Grade 8, **Cold Pack Chemistry** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Kyra Hayden, Grade 8, **Sugary Situation** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Isaac Rodriguez, Grade 8, **The Breaking Point** , Maple Manor MS, Janet Shebelock, Sponsor  
Jenna Kubitz, Grade 8, **Do natural antacids work better than commercial antacids?** , Valley MS, Jon Weaver, Sponsor  
Giovanna Cerminaro, Grade 8, **No more Burnt Cookies** , LaSalle Acad, Lisa Vladicka, Sponsor  
Madison Schriver, Grade 8, **Which Liquid Evaporates The Fastest?** , North Pocono MS, Larry Dombek, Sponsor  
Sophia Bere, Grade 8, **Sweet Solution** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Grace Hauenstein, Grade 8, **Turning Up the Heat on Salt Water** , North Pocono MS, Larry Dombek, Sponsor  
Kayla Martisofski, Grade 8, **The Vitamin C in Organic and Inorganic Orange Juice.** , Valley MS, Jon Weaver, Sponsor

### UNIT 33

### Chemistry 8

**Breiseth 207**

Dustin Paul, Grade 8, **Salt in Fast Food Hamburgers** , Mmi Preparatory Middle School, Michael Mele, Sponsor  
Elizabeth Knight, Grade 8, **Insulation Comparison** , Freeland MS, Christopher Parise, Sponsor  
Ashton Sciuilara, Grade 8, **Measuring the Amount of Acid in Vinegar** , North Pocono MS, Larry Dombek, Sponsor  
Rachael Betz, Grade 8, **The Difference of Calories in Frozen and Canned Vegetables** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Ava Zions-Smith, Grade 8, **Antacid Potency** , Drums Elem MS, Thomas Kevin Yurkanin, Sponsor  
Kyle McCullough, Grade 8, **Flaming Shirt** , North Pocono MS, Larry Dombek, Sponsor  
Gianna Labert, Grade 8, **Do sweeteners affect the pH of coffee?** , Valley MS, Jon Weaver, Sponsor  
Danielle Reese, Grade 8, **Calories and Nutrition Label Accuracy** , West Scranton HS & MS, Frank Wahl, Sponsor  
Benjamin Zhao, Grade 8, **Solubility in Carbon Dioxide Solutions at Certain Temperatures** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Alaina Minor, Grade 8, **What is the Best Source of Carbohydrates?** , Maple Manor MS, Janet Shebelock, Sponsor  
Matthew Motichka, Grade 8, **How Blue is Your Beverage?** , North Pocono MS, Larry Dombek, Sponsor  
Stephanie Yatko, Grade 8, **Can Electromagnetism effect the content of sugar in liquids?** , Our Lady of Peace, Dan Banicky, Sponsor

### UNIT 34

### Chemistry 9

**Breiseth 208**

Cheyenne Husted, Grade 9, **How do the chemicals of Sodas react the chemicals of Milk?** , North Pocono HS, Kara Stanton, Sponsor  
Travis Lane, Grade 9, **Thirst for Electricity** , North Pocono HS, Kara Stanton, Sponsor

Caroline Shaffern, Grade 9, **Titration of Aspirin** , Holy Cross HS, Jillian Rojek, Sponsor  
Jacob Metzger, Grade 9, **Electrified Waters: How Does Electricity change pH?** , West Scranton HS & MS, Frank Wahl, Sponsor  
Kevin Jumper, Grade 9, **Sugar in Ripening Fruit** , Holy Cross HS, Jillian Rojek, Sponsor  
Alexandria Graham, Grade 9, **Electrolyte Test** , Greater Nanticoke AHS, Anthony Fleury, Sponsor  
Emily Ferguson, Grade 9, **Let's Concentrate on Vitamin C** , Holy Cross HS, Jillian Rojek, Sponsor  
Abigail Marusak, Grade 9, **Feel Better Faster** , Greater Nanticoke AHS, Anthony Fleury, Sponsor  
Patricia Olsen, Grade 9, **Acids Effect on Tooth Enamel** , Pocono Mt East HS, Michael Blough, Sponsor  
Gavin Kensinger, Grade 9, **What hydrophobic compound would work best as a water-proofer** , Pocono Mt East HS, Michael Blough, Sponsor  
Caitlin McBride, Grade 9, **Electrons in Different Drinks** , Hazleton AHS, Jeff Koch, Sponsor

## UNIT 35

## Chemistry 9

## Breiseth 209

Erin Pearsall, Grade 9, **Titration of Bleach** , Holy Cross HS, Jillian Rojek, Sponsor  
Giana Arnese, Grade 9, **Is Your Water Choice Safe to Drink?** , Carbondale AHS, Jessica Trichilo, Sponsor  
Danielle McNutt, Grade 9, **Which Fabric Provides the Best Insulation?** , North Pocono HS, Kara Stanton, Sponsor  
Alana Scanlon, Grade 9, **Which type of orange juice has the most vitamin C?** , West Scranton HS & MS, Frank Wahl, Sponsor  
Tori Fox, Grade 9, **Better the protein, better the recovery** , Hazleton AHS, Lawrence Pryzblick, Sponsor  
Katie Ritsick, Grade 9, **Does pH affect corrosion in steel wool?** , Crestwood SD, Mickey Harper, Sponsor  
Ashleigh Button, Grade 9, **Vitamin C content of orange juice** , Crestwood SD, Mickey Harper, Sponsor  
Erin McGee, Grade 9, **Title** , Holy Cross HS, Jillian Rojek, Sponsor  
McKenna Gallagher, Grade 9, **Speed of Fire** , Mmi Preparatory Middle School, Michael Mele, Sponsor  
Mallory Moratori, Grade 9, **Comparing the Effectiveness of Melting Salts** , Crestwood SD, Mickey Harper, Sponsor  
Aaliyeh Sayed, Grade 9, **Abrasive Toothpaste** , Wyoming Seminary US, Andrea Nerozzi, Sponsor

## UNIT 36

## Chemistry 10 & 11

## Breiseth 211

Sammea Ricciardi, Grade 10, **Does Whitening Toothpaste Really Work?** , Scranton Prep, Bridget Kotchick, Sponsor  
Charles Helmbold, Grade 10, **Electrolytic Separation** , Crestwood SD, Mickey Harper, Sponsor  
Payton Glynn, Grade 10, **Boiling Point Elevation** , Crestwood SD, Mickey Harper, Sponsor  
Khaya Fuller, Grade 10, **Deteriorating bones** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Katelyn Stanek, Grade 10, **Best Source of Electrolytes. Orange juice vs. Sports drinks** , Hazleton AHS, Jeff Koch, Sponsor  
Katharine Pinto, Grade 10, **Caffeine Extraction Efficiency** , Mmi Preparatory High School, Michael Mele, Sponsor  
Cortney Dushanko, Grade 10, **Ideal Gas Constant** , Crestwood SD, Mickey Harper, Sponsor  
Maren Mcgrath, Grade 10, **Which Blue is Brighter?** , Scranton Prep, Bridget Kotchick, Sponsor  
Rounak Lele, Grade 10, **Making Plastic from Starch** , Wyoming Seminary US, Andrea Nerozzi, Sponsor  
Isabella Brown, Grade 10, **Drug Solubility** , Lakeland JSHS, Nellie Shiver, Sponsor  
Julia LaClair, Grade 10, **The Observation of Gas Expansion** , Scranton Prep, Bridget Kotchick, Sponsor  
James Bianchi, Grade 10, **What Types of Pain Medication Prove Most Effective?** , North Pocono HS, Kara Stanton, Sponsor  
Chloe Pearce, Grade 11, **Caffeine Content in Tea** , Holy Cross HS, Jennifer Leone, Sponsor

## UNIT 37

## Chemistry 11

## Breiseth 212

Brendan Braatz, Grade 11, **Colligative Properties of Water** , Scranton Prep, Bridget Kotchick, Sponsor  
Ariyanna Hrivnak, Grade 11, **Lactose Determination** , Greater Nanticoke AHS, Brandon Collins, Sponsor  
Mia Gianello, Grade 11, **Amazing Antacids** , Scranton Prep, Bridget Kotchick, Sponsor  
Annabelle Callis, Grade 11, **Determining the Concentration of Red Dye in Drinks** , Holy Cross HS, Jennifer Leone, Sponsor  
William Craig, Grade 11, **The Titration of Vinegar** , Holy Cross HS, Jennifer Leone, Sponsor  
Anthony Poyer, Grade 11, **Finding Acetylsalicylic Acid in Aspirin Tablets** , Crestwood SD, Mickey Harper, Sponsor  
Ericka Pica, Grade 11, **Determining Calcium Carbonate Content in Chicken Eggshells** , Holy Cross HS, Jennifer Leone, Sponsor  
Christine Hine, Grade 11, **Testing Vitamin C in Oranges, Juice, and Supplements** , North Pocono HS, Kara Stanton, Sponsor  
Rachel McFarland, Grade 11, **Which Vitamins Have the Most Antioxidants?** , Crestwood SD, Mickey Harper, Sponsor

Michael Olsen, Grade 11, **Acid Concentration of Unfiltered vs. Filtered Vinegar** , Pocono Mt East HS, Michael Blough, Sponsor  
Michael Mucciolo, Grade 11, **Kool-Aid Adsorption: A Particularly Perplexing Process** , Old Forge, Nanette Rinaldi, Sponsor  
Meghan Keenan, Grade 11, **Degradation of Vitamin C From Light Exposure** , Holy Cross HS, Jennifer Leone, Sponsor  
Matthew Herne, Grade 11, **Bleach Titration** , Holy Cross HS, Jennifer Leone, Sponsor

### **UNIT 38**

### **Chemistry 11 & 12**

### **Breiseth 213**

Lauren Palmiter, Grade 11, **Titration of Aspirin Tablets** , Holy Cross HS, Jennifer Leone, Sponsor  
Lizzy Borchick, Grade 11, **Dare to Drink** , Mmi Preparatory High School, Michael Mele, Sponsor  
Patrick Luptak, Grade 11, **Which Candies Have a Higher Concentration of Dextrose?** , North Pocono HS, Kara Stanton, Sponsor  
Emily Scott, Grade 12, **Isolation of Caffeine** , Greater Nanticoke AHS, Brandon Collins, Sponsor  
Mark Abdelmalek, Grade 12, **Ice With Spice** , Hazleton AHS, Lawrence Pryzblick, Sponsor  
Ellie Rosentel, Grade 12, **Synthesizing Aspirin** , Wyoming Seminary US, Andrea Nerozzi, Sponsor  
Arjun Iyengar, Grade 12, **Fueling Up** , Abington Heights HS, Rosa Sabie, Sponsor  
Joshua Danna, Grade 12, **Homemade Supercapacitors** , North Pocono HS, Kara Stanton, Sponsor  
Gabby Hanstein, Grade 12, **Lights! Camera! Crime Scene! Action!** , Scranton Prep, Bridget Kotchick, Sponsor  
William Thomas, Grade 12, **Storm Glasses** , North Pocono HS, Kara Stanton, Sponsor  
Tommy Niemiec, Grade 12, **Which Sunscreen Brand is the Most Effective?** , Holy Cross HS, Jennifer Leone, Sponsor  
Yandra Del Rosario, Grade 12, **Bitter to Sweet** , Hazleton AHS, Lawrence Pryzblick, Sponsor

### **UNIT 39**

### **Computer Science 7, 8, 10, 11 & 12**

### **Martz 214**

Madison Van Gorden, Grade 7, **Turning a Raspberry Pi Into a Radio** , Crestwood SD, Mickey Harper, Sponsor  
Emily Kelly, Grade 8, **Identifying Targets For The NASA Asteroid Rendezvous Mission** , Carbondale AHS, Jessica Trichilo, Sponsor  
Sandra Abdulrahman, Grade 8, **Tba** , Heights Terrace Elem MS, Michael Gavlick, Sponsor  
Tianwei Li, Grade 10, **Connect Four Game Algorithm - Game Tree** , Wyoming Seminary US, Andrea Nerozzi, Sponsor  
Logan Chabal, Grade 10, **Password Security** , North Pocono HS, Kara Stanton, Sponsor  
Daniel DeMelfi, Grade 11, **Sorting Algorithms in Python** , Mmi Preparatory High School, Justin Vincent, Sponsor  
Alexander Lindenbaum, Grade 11, **Computer Password Security with Java** , Pocono Mt East HS, Michael Blough, Sponsor  
Rocco Polimeni, Grade 11, **Brute Force vs. Frequency Analysis Decryption** , Pocono Mt East HS, Michael Blough, Sponsor  
Marco Polimeni, Grade 11, **Arduino** , Pocono Mt East HS, Michael Blough, Sponsor  
Mallory DeQuevedo, Grade 11, **11th Grade** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Colin Greybosh, Grade 12, **Pi Calculation Time Variance in Algorithms** , Hazleton AHS, Jeff Koch, Sponsor  
Benjamin Placek, Grade 12, **Encryption Algorithms** , Greater Nanticoke AHS, Michele Wisniewski, Sponsor  
David Mash, Grade 12, **Neural Network Activation Functions** , Greater Nanticoke AHS, Michele Wisniewski, Sponsor

### **UNIT 40**

### **Earth and Space 7, 8, 9, 10 & 11**

### **Kirby 107**

Susana Limbar, Grade 7, **How does Soil Affect the PH of Water?** , West Hazleton Elem MS, Becky Rutkowski, Sponsor  
Melody Velez, Grade 7, **Can Plants Stop Soil Erosion?** , West Hazleton Elem MS, Becky Rutkowski, Sponsor  
Christopher Maciejczyk, Grade 7, **How does a comets size affect how fast it melts?** , St Nicholas St. Mary, Janice Szczechowicz, Sponsor  
Neha Rai, Grade 7, **Acid Rain** , South Scranton IS, Katona Miller, Sponsor  
Cameron Chalmers, Grade 7, **Pollution Produced By Cars** , South Scranton IS, Katona Miller, Sponsor  
Kelsey Green, Grade 8, **MythBuster: Old Sailor's Tale** , Berwick AMS, Todd Gunther, Sponsor  
Maryanna Betterly, Grade 9, **Earth's Tilt and the Seasons** , Berwick AHS, Todd Gunther, Sponsor  
Ivy Norton, Grade 10, **How do plants effect global warming?** , Holy Redeemer HS, Aaron Bilby, Sponsor  
Nick Ostrowski, Grade 11, **Affects of Acid Rain on Metals** , North Pocono HS, Kara Stanton, Sponsor

### **UNIT 41**

### **Ecology 7, 8 & 9**

### **Breiseth 206**

Henerys Polanco, Grade 7, **Now You See It, Now You Don't** , West Hazleton Elem MS, Becky Rutkowski, Sponsor  
Janae Scott, Grade 8, **Does Cold Water Help Make Crispy Potatoes** , Maple Manor MS, Janet Shebelock, Sponsor

Seth Rockovich, Grade 8, **Recycled Water** , West Hazleton Elem MS, Becky Rutkowski, Sponsor  
Bridgette Flannery, Grade 8, **Effects of OTC Drugs on Daphnia Heart Rate** , Western Wayne MS, Christine McClure, Sponsor  
Julia Webb, Grade 8, **The Microwave Effect** , Fell CS, Jamie Seymour, Sponsor  
Isabella Deflice, Grade 8, **Will Your Tombstone Last Your Eternal Life?** , West Scranton HS & MS, Frank Wahl, Sponsor  
Kelly Kennedy, Grade 9, **Protecting soil: testing methods to prevent erosion.** , West Scranton HS & MS, Frank Wahl, Sponsor  
Maya Yagan, Grade 9, **The Scientific Effect of Acid Rain on Building Materials** , Pocono Mt East HS, Michael Blough, Sponsor

## UNIT 42

### Ecology 10, 11 & 12

## Kirby 305

Darlene Black, Grade 10, **Effects of Silver on Daphnia Heart rate** , Western Wayne HS, Christine McClure, Sponsor  
McKinley Borders, Grade 10, **Do Gas Stations Affect the pH Levels in Surrounding Soil?** , Carbondale AHS, Jessica Trichilo, Sponsor  
Paige Barillo, Grade 11, **The Effects of Land Location on Perc Test** , Western Wayne HS, Christine McClure, Sponsor  
Katie Nguyen, Grade 11, **Biodegradable vs. Compostable Substances** , Forest City RHS, Audrey Nebzydoski, Sponsor  
Aidan Hinchey, Grade 12, **Levels of Phosphorus** , Marian Catholic, Robert Valente, Sponsor  
Caitlin Falloon, Grade 12, **Cough Meds with Sleep Aids on Daphnia Heart Rate** , Western Wayne HS, Christine McClure, Sponsor  
Scarlett Spager, Grade 12, **It's That Easy** , Old Forge, Nanette Rinaldi, Sponsor

## UNIT 43

### Engineering 7, 8 & 9

## Martz 203

Sasha Roumyantseva, Grade 7, **"The Power Claw"** , LaSalle Acad, Lisa Vladicka, Sponsor  
George Pegula, Grade 7, **Home Security** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Michael Novak, Grade 8, **3d Printed Pot Plant vs Normal Pot Plant** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Meghan McDonnell, Grade 8, **Rain Gutter Foundations** , Holy Rosary Sch, James Rose, Sponsor  
Gavin Durkin, Grade 8, **Got Snow?** , North Pocono MS, Larry Dombek, Sponsor  
Shaunjae Suarez, Grade 8, **The Most Efficient Way to Clean a Window** , Heights Terrace Elem MS, Michael Gavlick, Sponsor  
Adam Garraoui, Grade 9, **Electric Motor** , Crestwood SD, Mickey Harper, Sponsor  
Emma Thompson, Grade 9, **Which Car Body Type Is Most Aerodynamic** , Pocono Mt East HS, Michael Blough, Sponsor  
Cole Rinehimer, Grade 9, **The Coil Gun** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
Aaron Haber, Grade 9, **Fish Feeder** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor  
David Alunni, Grade 9, **Brand name batteries price relative to capacity** , North Pocono HS, Kara Stanton, Sponsor

## UNIT 44

### Engineering 10, 11 & 12

## Martz 213

Michael Smith, Grade 10, **The Power in your House** , North Pocono HS, Kara Stanton, Sponsor  
Garrett Dzugan, Grade 11, **Potato Powered Computing** , Greater Nanticoke AHS, Anthony Fleury, Sponsor  
Aidan Bilski, Grade 11, **Pendulum Style Tuned Mass Damper** , Holy Redeemer HS, Aaron Bilby, Sponsor  
Wesley Guarneri, Grade 11, **Smart Mirror** , Mmi Preparatory High School, Justin Vincent, Sponsor  
Cameron Shedlock, Grade 11, **Effective Erosion On Various Concrete Types** , Wyoming Seminary US, Andrea Nerozzi, Sponsor  
Wesley Guarneri, Grade 11, **Automatic Plant Watering System** , Mmi Preparatory High School, Justin Vincent, Sponsor  
Angelica Alday, Grade 12, **Motorized Hand Model** , Mmi Preparatory High School, Justin Vincent, Sponsor  
Chris English, Grade 12, **Solar Powered Car** , Hazleton AHS, Jeff Koch, Sponsor  
Lauren Babinetz, Grade 12, **Creating an Artificial Heartbeat** , Mmi Preparatory High School, Michael Mele, Sponsor

## UNIT 45

### Mathematics 7

## Breiset 320

Murphy Pick, Grade 7, **Pick's Theorem** , Wyoming Valley West, Maria Konopke, Sponsor  
Sierra Neely, Grade 7, **The Golden Ratio** , South Scranton IS, Crystal DeAntona, Sponsor  
Scott Lenio, Grade 7, **Binary Numbers** , Crestwood SD, Mickey Harper, Sponsor  
Isaac Bolan, Grade 7, **Group Theory** , Wyoming Valley West, Maria Konopke, Sponsor  
Evan Zemalkowski, Grade 7, **Pi** , South Scranton IS, Crystal DeAntona, Sponsor  
Zain Ansari, Grade 7, **Algorithms: The Rubik's Cube** , Crestwood SD, Mickey Harper, Sponsor  
Manan Pancholy, Grade 7, **Pascal's Triangle** , Abington Heights MS, David Perrotti, Sponsor

Ivan Prodanets, Grade 7, **The Quadratic Equation** , Wyoming Valley West, Maria Konopke, Sponsor  
Jaden Evanoski, Grade 7, **The Pythagorean Theorem** , Good Shepherd Acad, Joyce Elston, Sponsor  
Maxwell Saporito, Grade 7, **Matrices** , Wyoming Valley West, Maria Konopke, Sponsor  
Michael Fino, Grade 7, **Adding and Subtracting Polynomials** , Good Shepherd Acad, Joyce Elston, Sponsor  
Anthony Wan, Grade 7, **What is the area of a circle?** , Crestwood SD, Mickey Harper, Sponsor

## UNIT 46

## Mathematics 7 & 8

Cohen 102

Chloe Tucker, Grade 7, **Pythagorean Theorem** , South Scranton IS, Crystal DeAntona, Sponsor  
Jandri Dimon-Dominguez, Grade 7, **Know Your Units!** , West Hazleton Elem MS, Becky Rutkowski, Sponsor  
Aida Tenezaca, Grade 7, **Systems of Linear Equations** , South Scranton IS, Crystal DeAntona, Sponsor  
Tanisi Patel, Grade 8, **Quadratic Equation** , Crestwood SD, Mickey Harper, Sponsor  
Anna Scholl, Grade 8, **Trigonometry Components in Physics** , Wyoming Valley West, Maria Konopke, Sponsor  
Aurora Lefever, Grade 8, **Black Hole Decay by Hawking Radiation** , North Pocono MS, Larry Dombek, Sponsor  
Matthew White, Grade 8, **Sierpinski's Triangle** , Good Shepherd Acad, Joyce Elston, Sponsor  
Adam Cavalari, Grade 8, **The Area of a Triangle** , Wyoming Valley West, Maria Konopke, Sponsor  
Elizabeth ODonnell, Grade 8, **The Math Behind Hitting a Softball** , Mmi Preparatory Middle School, Susan Moyer, Sponsor  
Andrew Shaw, Grade 8, **How to Win with Gianella's Theorem** , Wyoming Valley West, Maria Konopke, Sponsor  
Quinn Zabiegalski, Grade 8, **Magic Squares** , Crestwood SD, Mickey Harper, Sponsor  
Jonanthony Sencion, Grade 8, **Popcorn** , Hazleton AMS, Ryan Wilner, Sponsor

## UNIT 47

## Mathematics 8

Cohen 103

Jenna Skibitsky, Grade 8, **Adding and subtracting polynomials** , Good Shepherd Acad, Joyce Elston, Sponsor  
Savanna Willauer, Grade 8, **The Magic of Squares** , South Scranton IS, Crystal DeAntona, Sponsor  
Isabelle Romano, Grade 8, **Adding and Subtracting Algebraic Fractions** , Good Shepherd Acad, Joyce Elston, Sponsor  
Wyatt Stelmak, Grade 8, **Integrals** , South Scranton IS, Crystal DeAntona, Sponsor  
Stepan Prodanets, Grade 8, **Graphing Polynomial Functions** , Wyoming Valley West, Maria Konopke, Sponsor  
Parth Patel, Grade 8, **Pascal's Triangle** , Crestwood SD, Mickey Harper, Sponsor  
Apil Sanyashi, Grade 8, **Polar Coordinates** , South Scranton IS, Crystal DeAntona, Sponsor  
Charles Floryan, Grade 8, **Circles** , Good Shepherd Acad, Joyce Elston, Sponsor  
Kevin Cheng, Grade 8, **Bayes' Theorem** , Crestwood SD, Mickey Harper, Sponsor  
Phillip Evan, Grade 8, **Mathematics in Baseball** , Wyoming Valley West, Maria Konopke, Sponsor  
Jessica Zimmermann, Grade 8, **Fibonacci Sequence** , Crestwood SD, Mickey Harper, Sponsor

## UNIT 48

## Mathematics 8 & 9

Cohen 119

Lucas Dwyer, Grade 8, **Quadratic Equations with Perfect Squares** , Good Shepherd Acad, Joyce Elston, Sponsor  
Antonio Daiute, Grade 8, **Trigonometric Functions** , Drums Elem MS, Thomas Kevin Yurkanin, Sponsor  
Eva Szura, Grade 8, **The Tangent Ratio** , Good Shepherd Acad, Joyce Elston, Sponsor  
Maryanna Betterly, Grade 9, **Riemann Sums** , Berwick AHS, Todd Gunther, Sponsor  
Alexandra Lipinski, Grade 9, **The Unit Circle** , Crestwood SD, Mickey Harper, Sponsor  
Emily Getty, Grade 9, **The Unit Circle** , Berwick AHS, Todd Gunther, Sponsor  
Justin Williams, Grade 9, **Proving the Sum of the Angles in a Triangle Equal 180** , Abington Heights HS, Rosa Sabie, Sponsor  
Victoria Harper, Grade 9, **Sine, Cosine, and Tangent** , Crestwood SD, Mickey Harper, Sponsor  
Samantha Sparich, Grade 9, **Logic** , Mmi Preparatory Middle School, Susan Moyer, Sponsor  
Aiden Shymanski, Grade 9, **Logic** , Wyoming Valley West, Maria Konopke, Sponsor  
Amelia Anderson, Grade 9, **Pascal's Triangle and Binomial Expansion** , Holy Redeemer HS, Robert Rowinski, Sponsor

## UNIT 49

## Mathematics 9

Cohen 202

Nicholas Matthews, Grade 9, **Binomial Probability Distribution** , Crestwood SD, Mickey Harper, Sponsor

Jordan Kopac, Grade 9, **Defining the Derivative**, Berwick AHS, Todd Gunther, Sponsor  
Sahil Dalsania, Grade 9, **Trigonometry Fundamentals and History**, Abington Heights HS, Rosa Sabie, Sponsor  
Logan Cary, Grade 9, **Solving the Sphere**, Wyoming Valley West, Maria Konopke, Sponsor  
Hanna White, Grade 9, **An Investigation of Integration and Differentiation**, Abington Heights HS, Rosa Sabie, Sponsor  
James Kelly, Grade 9, **Using Matrices to Code or De-Code secret Messages**, Mmi Preparatory Middle School, Susan Moyer, Sponsor  
Dev Patel, Grade 9, **Fibonacci Sequence**, Crestwood SD, Mickey Harper, Sponsor  
Hiba Muhammad, Grade 9, **Logarithms and their Real Life Application**, Mmi Preparatory Middle School, Susan Moyer, Sponsor  
Nicholas Curry, Grade 9, **Pascal's Triangle**, Crestwood SD, Mickey Harper, Sponsor  
Priyal Patel, Grade 9, **Vectors**, Crestwood SD, Mickey Harper, Sponsor  
Jules Colombo, Grade 9, **The Science of Spotting**, Abington Heights HS, Rosa Sabie, Sponsor

## UNIT 50

## Mathematics 10

Cohen 204

Benjamin Putnam, Grade 10, **Real Life Applications for Non-Linear Systems**, Mmi Preparatory High School, Susan Moyer, Sponsor  
Gabe Jenceleski, Grade 10, **The Uncertainty Principle**, Greater Nanticoke AHS, Barb Warman, Sponsor  
Nihar Patel, Grade 10, **Complex and Imaginary Numbers**, Crestwood SD, Mickey Harper, Sponsor  
Kevin Regep, Grade 10, **Linear Regression**, Crestwood SD, Mickey Harper, Sponsor  
Brandon Lantz, Grade 10, **The Laws of Sines and Cosines**, Wyoming Valley West, Maria Konopke, Sponsor  
Angelina Chin, Grade 10, **The Golden Ratio**, Crestwood SD, Mickey Harper, Sponsor  
Sebastian Allen, Grade 10, **Linear Regression**, Wyoming Valley West, Maria Konopke, Sponsor  
Jay Bhavsar, Grade 10, **Euler's Number**, Crestwood SD, Mickey Harper, Sponsor  
Madysen Sobolewski, Grade 10, **The Power Rule of Derivatives**, Crestwood SD, Mickey Harper, Sponsor  
Michala Dennis, Grade 10, **The Ellipse**, Wyoming Valley West, Maria Konopke, Sponsor  
Kayla Supkowski, Grade 10, **Integration**, Crestwood SD, Mickey Harper, Sponsor

## UNIT 51

## Mathematics 10 & 11

Cohen 219

Faatihah Nayeem, Grade 10, **Unit Circle**, Abington Heights HS, Rosa Sabie, Sponsor  
Emily Ankiewicz, Grade 10, **Bayes' Theorem**, Mmi Preparatory High School, Susan Moyer, Sponsor  
Meredythe Baird, Grade 10, **Exploring Pascals Triangle**, Holy Redeemer HS, Kelly Pacelli, Sponsor  
Karlea Allen, Grade 11, **The limit definition of a derivative**, Berwick AHS, Todd Gunther, Sponsor  
Zachary Blau, Grade 11, **Predicting Carrying Capacity**, Mid Valley SC, Suzanne Piorkowski, Sponsor  
Coleman Smith, Grade 11, **Riemann Zeta Hypothesis**, Mmi Preparatory High School, Susan Moyer, Sponsor  
Mahum Ahmed, Grade 11, **Matrices**, Mmi Preparatory High School, Susan Moyer, Sponsor  
Hannah Gizenski, Grade 11, **Taylor's Theorem**, Berwick AHS, Todd Gunther, Sponsor  
Emily Nguyen, Grade 11, **Polar Coordinates**, Holy Redeemer HS, Kelly Pacelli, Sponsor  
Matthew Hayden, Grade 11, **The Napkin Ring Problem**, Holy Redeemer HS, Kelly Pacelli, Sponsor  
Grace Dacey, Grade 11, **Explaining the Playfair Cipher**, Holy Redeemer HS, Kelly Pacelli, Sponsor

## UNIT 52

## Mathematics 11

Cohen 325

Dhruv Patel, Grade 11, **Derivatives**, Crestwood SD, Mickey Harper, Sponsor  
Andrew Decker, Grade 11, **Markov Processes**, Mmi Preparatory High School, Michael Mele, Sponsor  
Korina Cheng, Grade 11, **Logistic Functions**, Crestwood SD, Mickey Harper, Sponsor  
Christine Park, Grade 11, **Heron's Formula**, Mmi Preparatory High School, Susan Moyer, Sponsor  
Nick Carrato, Grade 11, **Topology**, Mmi Preparatory High School, Susan Moyer, Sponsor  
Coleman Smith, Grade 11, **The Collatz Conjecture**, Mmi Preparatory High School, Susan Moyer, Sponsor  
Madison Hoover, Grade 11, **Polar Coordinates**, Greater Nanticoke AHS, Barb Warman, Sponsor  
Brian Payne, Grade 11, **Cardinal Numbers and Infinities**, Mmi Preparatory High School, Susan Moyer, Sponsor  
Samantha Shelesky, Grade 11, **Linear Programming**, Mid Valley SC, Suzanne Piorkowski, Sponsor  
Sarah Azaizeh, Grade 11, **The Math Behind a Rollar Coaster**, Holy Redeemer HS, Kelly Pacelli, Sponsor

David Wan, Grade 11, **Limits** , Crestwood SD, Mickey Harper, Sponsor

## UNIT 53

## Mathematics 12

## Cohen 429

Cydnie Toth, Grade 12, **Partial Fraction Decomposition and Logistic Growth** , Berwick AHS, Todd Gunther, Sponsor

Jakob Schwabe, Grade 12, **Anyone Can Count!** , Mmi Preparatory High School, Justin Vincent, Sponsor

Zarquá Ansari, Grade 12, **Integral Calculus** , Crestwood SD, Mickey Harper, Sponsor

Iain Kerrigan, Grade 12, **Push It to the Limit** , Old Forge, Nanette Rinaldi, Sponsor

Aaron Kleger, Grade 12, **Partial Differentiation** , Crestwood SD, Mickey Harper, Sponsor

Kaitlyn Bigos, Grade 12, **Epidemics** , Greater Nanticoke AHS, Barb Warman, Sponsor

Thomas Perillo, Grade 12, **Blockchain Mathematics and Cryptography** , Crestwood SD, Mickey Harper, Sponsor

Shiv Patel, Grade 12, **Monty Hall** , Crestwood SD, Mickey Harper, Sponsor

Evan Stecco, Grade 12, **Where's My Electron?** , Greater Nanticoke AHS, Barb Warman, Sponsor

Lauren Babinetz, Grade 12, **Analyzing PJAS Award Distribution** , Mmi Preparatory High School, Michael Mele, Sponsor

Faith Templeton, Grade 12, **Is it Cool Yet?** , Berwick AHS, Todd Gunther, Sponsor

## UNIT 54

## Microbiology 7, 8 & 9

## UCOM 201

Alexandra Pinto, Grade 7, **Bacterial Growth on Fruit** , Honesdale HS, Rebecca Kretschmer, Sponsor

Riley Bossick, Grade 7, **The Antimicrobial Effects of Hand Sanitizer** , Forest City RHS, Audrey Nebzydowski, Sponsor

Khristian Banks, Grade 7, **Spontaneous Generation** , Crestwood SD, Mickey Harper, Sponsor

Ariel McNear, Grade 7, **Bacteria Growth** , South Scranton IS, Katona Miller, Sponsor

Macey Pennay, Grade 8, **Great Green Fluorescence** , Our Lady of Peace, Dan Banicky, Sponsor

Ava Aulisio, Grade 8, **Can a U/V Light Clean Water?** , Old Forge, Nanette Rinaldi, Sponsor

Erin Lona, Grade 8, **Is it better to drink from a water fountain or water cooler?** , West Scranton HS & MS, Frank Wahl, Sponsor

Rachel Tuman, Grade 8, **The Five Second Rule** , Western Wayne MS, Christine McClure, Sponsor

Luke Spece, Grade 8, **Bacteria on purses, wallets, and backpacks** , Pocono Mt East HS, Maureen Elswick, Sponsor

Thomas Mayernik, Grade 8, **Seasonal Bacteria** , St Jude Mountain Top, Marilyn Baran, Sponsor

Alyssa Coskilo, Grade 8, **Natural vs. Synthetic Antibiotics** , Carbondale AHS, Jessica Trichilo, Sponsor

Morgan Allen, Grade 9, **Analyzing Bacterial Transformation Efficiency in E. coli** , Mmi Preparatory Middle School, Michael Mele, Sponsor

## UNIT 55

## Microbiology 9

## UCOM 207

Julia Kocher, Grade 9, **Color Reactant Bacteria** , Greater Nanticoke AHS, Anthony Fleury, Sponsor

Morgan Hosier, Grade 9, **Spreading Myths** , Mmi Preparatory Middle School, Amanda Shonk, Sponsor

Caroline Fitt, Grade 9, **Bacterial Proliferation vs Cost Analysis** , Hazleton AHS, Jeff Koch, Sponsor

Calvin Hubbard, Grade 9, **Gum's effect on bacteria in the mouth** , Pocono Mt East HS, Michael Blough, Sponsor

Venrese Stennett, Grade 9, **End of Evil Growth** , Hazleton AHS, Jeff Koch, Sponsor

Ella Urosevich, Grade 9, **Antibiotic Immunity** , Mmi Preparatory Middle School, Michael Mele, Sponsor

Marcus Danchision, Grade 9, **The effects of Lactic Acid on Muscle Contractions** , Mmi Preparatory Middle School, Michael Mele, Sponsor

Kyra Zabretsky, Grade 9, **What Duration of Ultra-Violet Rays Kill Bacteria?** , Hazleton AHS, Jeff Koch, Sponsor

Samantha Howey, Grade 9, **Cleaning Products Work on Human Contact Surfaces** , Honesdale HS, Rebecca Kretschmer, Sponsor

Robert Kretschmer, Grade 9, **Sticky Situation** , Honesdale HS, Rebecca Kretschmer, Sponsor

Steven Austin, Grade 9, **How Exposure to Radiation Affects Bacteria Growth** , Greater Nanticoke AHS, Anthony Fleury, Sponsor

## UNIT 56

## Microbiology 10

## UCOM 210

Hannah Price, Grade 10, **How to Most Effectively Prevent Mold Growth on Bread** , Pocono Mt East HS, Michael Blough, Sponsor

Dana Pratt, Grade 10, **Spongy Situation** , Honesdale HS, Rebecca Kretschmer, Sponsor

Kacey Durkin, Grade 10, **Dilutions of Disinfectants and Bacterial Resistance** , Mid Valley SC, Suzanne Piorkowski, Sponsor

Olivia Manarchuck, Grade 10, **Disguised Attackers** , Carbondale AHS, Jessica Trichilo, Sponsor

Dominic Maglione, Grade 10, **The Effect of Gum Flavor on Bacteria Growth** , Honesdale HS, Rebecca Kretschmer, Sponsor

Kathryn Mattern, Grade 10, **The Effects of Antibiotics on Bacteria** , Western Wayne HS, Christine McClure, Sponsor  
Kacey Durkin, Grade 10, **Dilutions of Disinfectants and Bacterial Resistance!** , Mid Valley SC, Sue Piorkowski, Sponsor  
Ellie Scovish, Grade 10, **What is the most effective way to kill E. Coli?** , Holy Redeemer HS, Jean Grabowski, Sponsor  
Emma Jones, Grade 10, **Zapping that Zit** , Carbondale AHS, Jessica Trichilo, Sponsor

## UNIT 57

### Microbiology 10 & 11

## Cohen 101

Hannah Holbert, Grade 10, **Nuclear Radiation Effects on Bacterial Growth** , Honesdale HS, Rebecca Kretschmer, Sponsor  
Lanie Gray, Grade 10, **Stopping the spread of the stomach virus** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Jackie Dudley, Grade 10, **Efficiency of Mouthpiece Cleaners** , Pocono Mt East HS, Michael Blough, Sponsor  
Abigail Lapinski, Grade 10, **The Zone of Inhibition** , Holy Redeemer HS, Kelsey Reyes, Sponsor  
Abigail Lapinski, Grade 10, **The Zone of Inhibition** , Holy Redeemer HS, Kelsey Reyes, Sponsor  
Katelyn Thomas, Grade 11, **All Kinds of Molds** , Lakeland JSHS, Nellie Shiver, Sponsor  
Nicole Capparell, Grade 11, **Hand Hygiene** , Marian Catholic, Lorraine Piehota, Sponsor  
Emily Wall, Grade 11, **What Duration of Ultraviolet Exposure Kills Bacteria?** , Carbondale AHS, Jessica Trichilo, Sponsor  
Melissa Petrilak, Grade 11, **The Antibacterial Effects of Lotions** , Western Wayne HS, Christine McClure, Sponsor

## UNIT 58

### Microbiology 11 & 12

## Cohen 123

Mahum Ahmed, Grade 11, **Frequencies Effect on Bacteria Growth** , Mmi Preparatory High School, Susan Moyer, Sponsor  
Keiana Faltz, Grade 11, **Will e.Coli Grow Resistant to Natural Antibiotics Over Time?** , Holy Redeemer HS, Steven Wise, Sponsor  
Kristina Rinaldi, Grade 11, **Immunological Reaction Between Tick Proteins and Red Meat** , Pocono Mt East HS, Michael Blough, Sponsor  
Megan Wallis, Grade 11, **Bacterial Sensitivity to Silver Nanoparticles** , Carbondale AHS, Jessica Trichilo, Sponsor  
Christina Carachilo, Grade 12, **Do Different Dilutions of Disinfectants Affect the Developme** , Carbondale AHS, Jessica Trichilo, Sponsor  
Megen Banas, Grade 12, **Can Ascorbic or Citric Acid Help to Mitigate e-coli Damage?** , Greater Nanticoke AHS, Amanda Schraeder, Sponsor  
Aaron Srinivasan, Grade 12, **Inhibiting Streptococcus mutans by Using Green Tea Mouthwash** , Marian Catholic, Lorraine Piehota, Sponsor  
Lauren McHenry, Grade 12, **Bacteriophage T4r vs. E.coli B** , Greater Nanticoke AHS, Amanda Schraeder, Sponsor  
David Shea, Grade 12, **The Effect of Antiseptic Concentration on E. Coli Population** , Mountain View HS, Erin Rupp, Sponsor

## UNIT 59

### Physics 7

## UCOM 212

Isabel Eckenrode, Grade 7, **The Effects of Acidic Drinks on Teeth** , South Scranton IS, Katona Miller, Sponsor  
Joshua Berg, Grade 7, **Loop the loop** , Carbondale AHS, Jessica Trichilo, Sponsor  
Sarika Mongar, Grade 7, **Friction of Moving Objects** , NativityMiguel School of Scranton, Neil Cronin, Sponsor  
Jaikob Brooks, Grade 7, **Density Tower** , North Pocono MS, Larry Dombek, Sponsor  
Grace Pachick, Grade 7, **What batteries last longer** , Crestwood SD, Mickey Harper, Sponsor  
Alyssa King, Grade 7, **Does the temperature influence the distance of a baseball?** , Pocono Mt East HS, Maureen Elswick, Sponsor  
Alina Gucksnis, Grade 7, **The Strength of Eggshells** , North Pocono MS, Larry Dombek, Sponsor  
Dhiraj Baniya, Grade 7, **Diamagnetism** , NativityMiguel School of Scranton, Neil Cronin, Sponsor  
Jacob Kozlek, Grade 7, **What effects Wifi Signal?** , Valley MS, Jon Weaver, Sponsor  
Amir Akach, Grade 7, **Sound Waves** , Our Lady of Peace, Dan Banicky, Sponsor  
Rita Collins, Grade 7, **A Battery's Life** , St Clare/St Paul, Lisa Owens, Sponsor  
Micayla Arzie, Grade 7, **Bridge Design and Weight** , Lakeland JSHS, Dawn DeQuevedo, Sponsor

## UNIT 60

### Physics 7

## UCOM 134

Finnbarr Whittaker, Grade 7, **Electrical Loss of Insulated Copper Wire** , Howard Gardner School, Michael Rescigno, Sponsor  
Katherine Gude, Grade 7, **Color's Effect on Radiation** , Pocono Mt East HS, Maureen Elswick, Sponsor  
Grace Gudich, Grade 7, **At What Temperature Do Glowsticks Last the Longest?** , Valley MS, Jon Weaver, Sponsor  
Jaden Cook, Grade 7, **Pressure's effect on soccer ball distance** , Pocono Mt East HS, Maureen Elswick, Sponsor  
Paige Fallbright, Grade 7, **Lightbulb Efficiency** , Crestwood SD, Mickey Harper, Sponsor  
Jessica Rinaldi, Grade 7, **How Salt Concentrations Affect Boiling Temperature** , Pocono Mt East HS, Maureen Elswick, Sponsor

Jillian McGeehin, Grade 7, **What type of Insulated Thermos Keeps Water the Coldest?** , Valley MS, Jon Weaver, Sponsor  
Matthew Maciejczyk, Grade 7, **How does temperature affect Polymers?** , St Nicholas St. Mary, Janice Szczechowicz, Sponsor  
David Rudat, Grade 7, **Duct Tape strength test** , North Pocono MS, Larry Dombek, Sponsor  
Ella Oswald, Grade 7, **Which Brand if Ice Melt is the most Effective?** , Valley MS, Jon Weaver, Sponsor  
Edward Lockie, Grade 7, **Fins on a Rocket** , Pocono Mt East HS, Maureen Elswick, Sponsor

## UNIT 61

## Physics 7

## UCOM 231

Adam Yagan, Grade 7, **Does the size of a magnet affect the magnetic field** , Pocono Mt East HS, Maureen Elswick, Sponsor  
Madeline Ashton, Grade 7, **What Paper Towel Brand is the Strongest?** , Valley MS, Jon Weaver, Sponsor  
Lauren Wakefield, Grade 7, **How Much Popcorn Could a Microwave Pop** , Hazleton AMS, Ryan Wilner, Sponsor  
Regan Welch, Grade 7, **Can Water Float on Water?** , Berwick AMS, Todd Gunther, Sponsor  
Jayce Sanchez, Grade 7, **How the Temperature of a Magnet Alters in Other Temperatures** , Hazleton AMS, Ryan Wilner, Sponsor  
Alice Davis, Grade 7, **Glow in the Dark Magnetic Slime** , Fell CS, Ross Donato, Sponsor  
Lucia Carvalho, Grade 7, **Viscosity of Ketchup** , NativityMiguel School of Scranton, Neil Cronin, Sponsor  
Tyler Williams, Grade 7, **Testing Gravity** , Fell CS, Jamie Seymour, Sponsor  
Paige Kowalski, Grade 7, **Does Salt effect the boiling point of water?** , Valley MS, Jon Weaver, Sponsor  
Xzierean Tassej, Grade 7, **The Effect of Temperature on The Elasticity of Rubber Bands** , NativityMiguel School of Scranton, Neil Cronin, Sponsor  
Anthony Nicotera, Grade 7, **Inflate Gate** , St Jude Mountain Top, Marilyn Baran, Sponsor

## UNIT 62

## Physics 8

## UCOM 126

Austin Kish, Grade 8, **Which helmet is superior?** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Erik Burdyn, Grade 8, **Soda POP!** , Our Lady of Peace, Dan Banicky, Sponsor  
Giovanni Ramos, Grade 8, **Pitch Perfect : The Use of Sound to Extinguish Fire** , St Clare/St Paul, Lisa Owens, Sponsor  
Natalie Schroeder, Grade 8, **How the Strength of a Magnet Varies with Temperature** , Pocono Mt East HS, Maureen Elswick, Sponsor  
Aiden Mackrell, Grade 8, **Capricious Cans** , Our Lady of Peace, Dan Banicky, Sponsor  
Jason Yanul, Grade 8, **Fast Flying Footballs** , Our Lady of Peace, Dan Banicky, Sponsor  
Katharine Fitzgerald, Grade 8, **Which toe pads take the most pressure off dancers' toes?** , St Nicholas St. Mary, Janice Szczechowicz, Sponsor  
Ethan Gumula, Grade 8, **Keeping It Chill** , Our Lady of Peace, Dan Banicky, Sponsor  
Ryan Vinton, Grade 8, **The Effects of Shape on Flight** , Western Wayne MS, Christine McClure, Sponsor  
Chisom Eneh, Grade 8, **How does color affect heating by absorption of light?** , St Nicholas St. Mary, Janice Szczechowicz, Sponsor  
Patrick Robinson, Grade 8, **Track to the Future** , Our Lady of Peace, Dan Banicky, Sponsor  
Connor Brown, Grade 8, **Generating Electricity Through Magnets and Gravity** , Riverside Junior/Senior HS, Nadine Solomon, Sponsor  
Michael Marion, Grade 8, **Grippy grappling of the gloves** , Our Lady of Peace, Dan Banicky, Sponsor

## UNIT 63

## Physics 8

## UCOM 127

Quinn O'Connor, Grade 8, **The Absorption of Radiant Energy by Different Colors** , Howard Gardner School, Michael Rescigno, Sponsor  
David McIntyre, Grade 8, **Ban the Tan** , St Clare/St Paul, Lisa Owens, Sponsor  
Angie Escobar, Grade 8, **An Investigation into the Mpemba Effect** , Maple Manor MS, Janet Shebelock, Sponsor  
Olivia Matyjevich, Grade 8, **Keep It Comfy** , North Pocono MS, Larry Dombek, Sponsor  
James Roberson, Grade 8, **Rampy Ramps** , North Pocono MS, Larry Dombek, Sponsor  
Jacob Sukel, Grade 8, **Coming Out of Nowhere** , Our Lady of Peace, Dan Banicky, Sponsor  
Zoe Stewart, Grade 8, **The Influence of Mass on a Figure Skating Spin** , Crestwood SD, Mickey Harper, Sponsor  
Matthew Cobb, Grade 8, **Mini vs Massive** , Our Lady of Peace, Dan Banicky, Sponsor  
Grace Murtagh, Grade 8, **Absorbency of Paper Towels** , Our Lady of Peace, Dan Banicky, Sponsor  
Benjamin Cikota, Grade 8, **How does Outside Temperature Affect a Magnet's Force?** , North Pocono MS, Larry Dombek, Sponsor  
Logan Rabięga, Grade 8, **Let it Blow** , North Pocono MS, Larry Dombek, Sponsor  
Kaitlyn Idhaw, Grade 8, **As Fast As Light** , LaSalle Acad, Lisa Vladicka, Sponsor

## UNIT 64

## Physics 8 & 9

**Breiseth 311**

Maria Belardi, Grade 8, **Saucy Science- A Sticky Situation** , All Saints Acad, Sarah Hallock, Sponsor  
Lauren O'Brien, Grade 8, **Does the Strength of a Magnet Vary With Water Temperature?** , Holy Rosary Sch, James Rose, Sponsor  
Sandra Abdulrahman, Grade 8, **Will It ...** , Heights Terrace Elem MS, Michael Gavlick, Sponsor  
Teresa Martin, Grade 8, **Urban Heat Island Effect** , St Nicholas St. Mary, Janice Szczechowicz, Sponsor  
Mia Leombruni, Grade 8, **How good is your nail polish?** , North Pocono MS, Larry Dombek, Sponsor  
Michael Datto, Grade 8, **Archimedes Principle of Buoyancy** , Our Lady of Peace, Dan Banicky, Sponsor  
Gordon Kopa, Grade 8, **The Radiation Conundrum** , South Scranton IS, Katona Miller, Sponsor  
Matthew Banford, Grade 8, **Keep Calm and Helmet On** , St Jude Mountain Top, Marilyn Baran, Sponsor  
Olivia Garibaldi, Grade 9, **At What Temperature Does Water Freeze the Fastest?** , North Pocono HS, Kara Stanton, Sponsor  
Michelle Henderson, Grade 9, **The Factors That Affect How A Pendulum Swings** , Greater Nanticoke AHS, Anthony Fleury, Sponsor  
Isabelle Ritz, Grade 9, **Rip it and grip it** , Hazleton AHS, Lawrence Pryzblick, Sponsor  
Benjamin Thompson, Grade 9, **How Physics Affects Roller Coasters** , North Pocono HS, Kara Stanton, Sponsor

## UNIT 65

## Physics 9

**Breiseth 316**

Ian Dougherty, Grade 9, **The Density of Bullets and How It Effects Accuracy** , North Pocono HS, Kara Stanton, Sponsor  
James Fay, Grade 9, **Do Thermal Lunchboxes Actually Work?** , Holy Cross HS, Jillian Rojek, Sponsor  
Keefer Wu, Grade 9, **The Quantum Wave Property of Light** , Wyoming Seminary US, Andrea Nerozzi, Sponsor  
Madeline Leggiero, Grade 9, **What Material Insulates the Best?** , North Pocono HS, Kara Stanton, Sponsor  
William Walsh, Grade 9, **Refraction in Action** , Scranton HS, Katona L Miller, Sponsor  
Ashley Sabia, Grade 9, **Bernoulli's Principle** , Hazleton AHS, Jeff Koch, Sponsor  
Marina Miesko, Grade 9, **The Effects of Viscosity on Splatter Patterns** , North Pocono HS, Kara Stanton, Sponsor  
Kayla Eckrote, Grade 9, **Electric Field Detector** , Greater Nanticoke AHS, Anthony Fleury, Sponsor  
Elizabeth Nemitz, Grade 9, **Making and Testing Electromagnets** , North Pocono HS, Kara Stanton, Sponsor  
Megan McDonald, Grade 9, **Efficiency of Wind Turbine Shape** , Scranton Prep, Bridget Kotchick, Sponsor  
Charlie Talapa, Grade 9, **The Power of Magnets** , Scranton HS, Katona L Miller, Sponsor  
Jared Mastillo, Grade 9, **Using a laser to measure speed of light in gelatin** , North Pocono HS, Kara Stanton, Sponsor

## UNIT 66

## Physics 10 & 11

**Cohen 227**

William Cholish, Grade 10, **How Does Viscosity of a Medium Affect Properties?** , Scranton Prep, Bridget Kotchick, Sponsor  
Ricky Blase, Grade 10, **Determining the Speed of Light** , Hazleton AHS, Jeff Koch, Sponsor  
Nicholas Guerra, Grade 10, **Using a Microwave Oven to Measure The Speed of Light** , West Scranton HS & MS, Frank Wahl, Sponsor  
Lance Jenson, Grade 10, **Volumetric Expansion** , Greater Nanticoke AHS, Anthony Fleury, Sponsor  
James Marsh, Grade 10, **No Filters** , Holy Cross HS, Jennifer Leone, Sponsor  
Tobias Chalk, Grade 10, **The Effects of Different Air Pressures in Footballs** , North Pocono HS, Kara Stanton, Sponsor  
Madison Hoover, Grade 11, **Stuck on Temperature Change** , Greater Nanticoke AHS, Barb Warman, Sponsor  
Dylan Rowland, Grade 11, **Firearm Sound Levels** , Carbondale AHS, Christy Hinton, Sponsor  
Emily Rouse, Grade 11, **Which Container Makes the Best Insulator?** , North Pocono HS, Kara Stanton, Sponsor  
Morgan Long, Grade 11, **Skyscraper Optimality** , Mmi Preparatory High School, Michael Mele, Sponsor  
Matthew Schwarztrauber, Grade 11, **The Effect of Base Area / Height Ratio on Bottle Flipping** , Mountain View HS, Erin Rupp, Sponsor  
Samantha Shelesky, Grade 11, **Perpetual Motion** , Mid Valley SC, Suzanne Piorkowski, Sponsor

## UNIT 67

## Physics 11 & 12

**Karambelas 137**

Sophia Serafini, Grade 11, **Absorption of Radiant Energy by Different Colors** , Scranton Prep, Bridget Kotchick, Sponsor  
Jessica McClellan, Grade 11, **When is it the Best Time to Golf?** , Mmi Preparatory High School, Michael Mele, Sponsor  
Carissa Giordano, Grade 11, **Lifting could be hurting you instead of helping** , North Pocono HS, Kara Stanton, Sponsor  
Emily Leggiero, Grade 11, **Hooke's Law** , North Pocono HS, Kara Stanton, Sponsor

Lucas O'Neill, Grade 11, **The Bigger They are, the Lighter They Fall** , Forest City RHS, Audrey Nebzydoski, Sponsor  
Luis Santos, Grade 12, **Angle's Effect on Solar Panel Efficiency** , Pocono Mt East HS, Michael Blough, Sponsor  
Lisa McDonough, Grade 12, **Charging up Single Cell Batteries** , Hazleton AHS, Jeff Koch, Sponsor  
Andrew Tieszen, Grade 12, **Are canards more efficient than traditional stabilizers?** , Pocono Mt West HS, Tiffany Becker, Sponsor  
Sophia Ficarro, Grade 12, **The Effect of an Arrow's Mass on Sound Production** , Mountain View HS, Erin Rupp, Sponsor  
Danielle Shermock, Grade 12, **The Effect of Mass on Angular Momentum** , Pocono Mt East HS, Michael Blough, Sponsor  
Emily Brzozowski, Grade 12, **What Materials Block Alpha, Beta and Gamma Radiation** , Greater Nanticoke AHS, Anthony Fleury, Sponsor  
Carina D'Souza, Grade 12, **Physics** , Crestwood SD, Mickey Harper, Sponsor

## **UNIT 68**

## **Zoology 7, 8, 9, 10, 11 & 12**

## **Stark 101**

Ariana Lane, Grade 7, **Do Dogs Have Paw Preferences?** , Mid Valley SC, Suzanne Piorkowski, Sponsor  
Ava Touch, Grade 7, **Righties or Lefties** , Our Lady of Peace, Dan Banicky, Sponsor  
Angelesa DeNaples, Grade 8, **Craving Crickets** , Our Lady of Peace, Dan Banicky, Sponsor  
Jordan Kulsa, Grade 9, **The effects of Atropine on Cardiac Function** , Mmi Preparatory Middle School, Michael Mele, Sponsor  
Caydence Faatz, Grade 9, **How The Salt Levels In Water Affect Water Daphnia** , Western Wayne HS, Christine McClure, Sponsor  
Cindy Perricone, Grade 10, **Golden ratio of shells** , Honesdale HS, Rebecca Kretschmer, Sponsor  
Taylor Bertram, Grade 11, **How Organic Food Affects Cricket Reproduction?** , Pocono Mt West HS, Tiffany Becker, Sponsor  
Maggie Kowalewski, Grade 11, **Planaria Regeneration** , Forest City RHS, Audrey Nebzydoski, Sponsor  
Brianna Metschulat, Grade 11, **Wormed Out** , Western Wayne HS, Christine McClure, Sponsor  
Joshua Kalada-Kania, Grade 12, **Effects of Plastic Nanoparticles on Brine Shrimp** , Mmi Preparatory High School, Michael Mele, Sponsor  
Nicholas Govus, Grade 12, **Fertilizer's Effect on the Heart Rate of Daphnia Magna** , Pocono Mt East HS, Michael Blough, Sponsor