

**UNIT 1      ROOM # 100      Biochemistry      Grade 7,8,9**

1. Joanie Cha, Grade 7      **Frozen Sugar: Is There More Sugar in Frozen Fruits?**  
Cedarbrook MS, Beth Kenna, Sponsor
2. Megan O'Halloran, Grade 7      **What Effect Does Acid Rain Have on Plants?**  
Sandy Run MS, Jeanie Kellock, Sponsor
3. Shreya Patil, Grade 7      **How Sweet is Your Drink?**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
4. Greta Schrag, Grade 7      **Mini Me**  
Penn View Christian School, Reichley, Sponsor
5. Davron Borhan, Grade 8      **How Does Cooking Food Destroy Vitamin C Levels?**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
6. Corinne Hansel, Grade 8      **What Household Product Best Kills Common Algae**  
Murray Avenue Sch, Denise Meyers, Sponsor
7. Benjamin Antill, Grade 9      **Cross Contact: What Lies on Your Plate?**  
Souderton Area SHS, Karen Frazier, Sponsor
8. Hannah Fairweather, Grade 9      **Fermentation Exploration**  
Souderton Area SHS, Karen Frazier, Sponsor
9. Nathan Wong, Grade 9      **Creating a Biofuel Cell Battery Using a Succulent**  
Germantown Academy, Sarah Kesten, Sponsor

**UNIT 2      ROOM # 101      Biochemistry      Grade 9,10**

1. Mallika Dinakar, Grade 9      **Did Someone Say Glucose?**  
Methacton HS, Robert Helm, Sponsor
2. Jacqueline Gallen, Grade 9      **Variability of Sugar Content in Fruit**  
Upper Dublin HS, Brian Palme, Sponsor
3. Abhi Shah, Grade 9      **Energetic Edibles**  
Methacton HS, Robert Helm, Sponsor
4. Sejal Suri, Grade 9      **Bio-Plactics from Banana Peels and Other Starch Sources**  
Methacton HS, Robert Helm, Sponsor
5. Kassie Chen, Grade 10      **What is the Effect of Fruit on Protein Degradation?**  
Methacton HS, Robert Helm, Sponsor
6. Emily Cheng, Grade 10      **Development of a NGS Assay for Early Detection of HCC/CRC**  
Methacton HS, Robert Helm, Sponsor
7. Vaibhav Gupta, Grade 10      **Managing Diabetes with Essential Oils**  
Methacton HS, Robert Helm, Sponsor
8. Alexis Schneider, Grade 10      **Examining Effects of Progesterone on Traumatic Brain Injury**  
Upper Dublin HS, Joanne Lilliendahl, Sponsor
9. Harleen Suri, Grade 10      **Differentiation of Ligaments and Tendons by Infrared Spectro**  
Methacton HS, Robert Helm, Sponsor
10. Carina Tse, Grade 10      **Nano-Engineering Chloroplasts with Carbon Nanotubes for Ex-V**  
Methacton HS, Robert Helm, Sponsor

**UNIT 3      ROOM # 102      Biochemistry      Grade 11,12**

1. Swetha Chengalvala, Grade 11      **Mechanism of Diet Induced Inhibition of Platelet Aggregation**  
Methacton HS, Robert Helm, Sponsor
2. Vikrant Gokhale, Grade 11      **The Effect of Plant Extracts to Control Hyperglycemia**  
Methacton HS, Robert Helm, Sponsor
3. Jeffrey Li, Grade 11      **Effect of Soft Drinks on the Erosion of Teeth Enamel**  
Methacton HS, Robert Helm, Sponsor

**UNIT 3            ROOM # 102            Biochemistry            Grade 11,12**

4. Shloke Nair, Grade 11            **Expression of Pepper Vein Banding Virus Coat Protein with Z-**  
Upper Merion, Dr Pete Vreeland, Sponsor
5. David Ta, Grade 11            **Effect of Soft Drink on the Erosion of Teeth Enamel**  
Methacton HS, Robert Helm, Sponsor
6. WeiWei Wang, Grade 11            **Effect of Antioxidants on 3-Nitrobenzanthrone**  
The Baldwin School, N Vechik, Sponsor
7. Kevin Biju, Grade 12            **Hippo-YAP: Chemotherapeutic Inhibition of Sarcoma Growth**  
Methacton HS, Robert Helm, Sponsor
8. David Grabovsky, Grade 12            **Optimizing Small Molecule Drug Design**  
Lower Moreland HS, Denise Meyers, Sponsor
9. Theodore Hansel, Grade 12            **Developing ALK-Targeted Therapeutic Combinations to Overcome**  
Lower Moreland HS, Denise Meyers, Sponsor
10. Doug Leonard, Grade 12            **Detection of Foodborne Pathogens**  
Upper Dublin HS, Joanne Lilliendahl, Sponsor
11. Xu Peter, Grade 12            **Corin Deficiency and Mutations Caused Cardiac Defects**  
Upper Dublin HS, Joanne Lilliendahl, Sponsor
12. Evan Trauger, Grade 12            **Development of a Urine DNA Test for Liver Cancer Screening**  
Christopher Dock Mennonite HS, Kathleen Holden, Sponsor
13. Jennifer Xiao, Grade 12            **Zinc Finger Modeling**  
Upper Dublin HS, Joanne Lilliendahl, Sponsor

**UNIT 4            ROOM # 103            Behavioral Science            Grade 7,8**

1. Ila Charendoff, Grade 7            **Watching Time Fly: Does Genre Affect Time Perception?**  
Cedarbrook MS, Beth Kenna, Sponsor
2. Grace Darling, Grade 7            **Speed Shot- Does Color Affect Human Perception?**  
Cedarbrook MS, Beth Kenna, Sponsor
3. Julia Fassler, Grade 7            **Does Font Size Affect Memory of People in Varying Ages?**  
Murray Avenue Sch, Denise Meyers, Sponsor
4. Charity Foster, Grade 7            **How Do Personality Traits Affect How Students Use Social Med**  
Sandy Run MS, Jeanie Kellock, Sponsor
5. Allison Fu, Grade 7            **What Genre Music is Most Beneficial While Studying?**  
Sandy Run MS, Jeanie Kellock, Sponsor
6. Grace Herchenroder, Grade 7            **The Stroop Effect**  
Sandy Run MS, Jeanie Kellock, Sponsor
7. Ross Camille, Grade 8            **Personality Type and How It Affects Creativity**  
Cedarbrook MS, Beth Kenna, Sponsor
8. Eve Glazier, Grade 8            **Click! The Effect of Digital Testing on Performance**  
Cedarbrook MS, Beth Kenna, Sponsor
9. Annabelle Laughlin, Grade 8            **Factors Affecting Reactions to Frustration**  
Sandy Run MS, Jeanie Kellock, Sponsor
10. Alana Margerum, Grade 8            **The Power of the Mind: How do Placebos Affect Test Scores?**  
Cedarbrook MS, Beth Kenna, Sponsor
11. Rajay Murray, Grade 8            **Does Cell Phone Usage Affect Reaction Time?**  
Cedarbrook MS, Beth Kenna, Sponsor
12. Skyler Shaw, Grade 8            **How Does Music Affect Memory**  
Sandy Run MS, Gary Hite, Sponsor

**UNIT 5****ROOM # 104****Behavioral Science****Grade 8**

1. Marlee Berger, Grade 8 **How Music Affects Memory and Concentration**  
Murray Avenue Sch, Denise Meyers, Sponsor
2. Clara Burrell, Grade 8 **Warped Words and the Stroop Effect**  
Indian Valley MS, Causland, Sponsor
3. Allison Chang, Grade 8 **Prize or Punishment**  
Sandy Run MS, Jeanie Kellock, Sponsor
4. Madison Fortier, Grade 8 **Persuaded By Peer Pressure**  
Indian Valley MS, Causland, Sponsor
5. Jacob Golden, Grade 8 **he Hand From the Dark**  
Indian Valley MS, Causland, Sponsor
6. Belinda Jin, Grade 8 **Conformity Rates Between Those of the Same and Different Gen**  
Sandy Run MS, Jeanie Kellock, Sponsor
7. Connie Liu, Grade 8 **Does Highlighting Improve Comprehension?**  
Sandy Run MS, Jeanie Kellock, Sponsor
8. Amy Ouyang, Grade 8 **Who Could be More Creative?**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
9. Isabella Palde, Grade 8 **Can Color Influence a Childs Choice**  
Indian Valley MS, Causland, Sponsor
10. Sonia Patel, Grade 8 **Effect of Age on Grades (Kids vs. Adults)**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
11. Amelia Shaddinger, Grade 8 **Positive or Negative Reinforcement?**  
Sandy Run MS, Jeanie Kellock, Sponsor
12. Ben Solomon, Grade 8 **The Effect of Color on Short-Term Memory**  
Indian Valley MS, Causland, Sponsor

**UNIT 6****ROOM # 105****Behavioral Science****Grade 9,10**

1. Sam Caplan, Grade 9 **The Colored Liquid Experiment**  
Upper Dublin HS, Dawn Pav, Sponsor
2. William Chen, Grade 9 **Reading Faces: Social Media and Social Intelligence**  
Methacton HS, Robert Helm, Sponsor
3. Sophie Kallenbach, Grade 9 **Auditory Illusion; the Tritone Paradox**  
Home School, Susanne Johnston, Sponsor
4. Zoe Kloufetos, Grade 9 **Battle of Revealing the True Taste: Sight vs Smell**  
Souderton Area SHS, Karen Frazier, Sponsor
5. Jessica Knapp, Grade 9 **Strategies in Tolerating Pain from Sport and Non-Sport Relat**  
Cheltenham HS, John Mohl, Sponsor
6. Marisa Lorenz, Grade 9 **The Effect of Personality Type on Answer to Subjective Tests**  
Souderton Area SHS, Karen Frazier, Sponsor
7. Lea Mangifesta, Grade 9 **Taste vs. Appearance**  
Upper Dublin HS, Dawn Pav, Sponsor
8. Reehan Siraj, Grade 9 **How Genre of Music Affects Quality of Work**  
Upper Dublin HS, Dawn Pav, Sponsor
9. Roman Smith, Grade 9 **Abstract Art: The Science and Art of Perception**  
Upper Dublin HS, Dawn Pav, Sponsor
10. Aaron Glatte, Grade 10 **Picking Sides**  
Upper Dublin HS, Dawn Pav, Sponsor
11. Brett Hu, Grade 10 **Effect of Music Tempo on Arithmetic Performance**  
Wissahickon SHS, Michael Shultz, Sponsor
12. Dustin Zhang, Grade 10 **Electronic Device Use and Physical Activity**  
Upper Dublin HS, Dawn Pav, Sponsor

**UNIT 7            ROOM # 106            Behavioral Science            Grade 10,11,12**

1. Sophia Beyda, Grade 10            **How Classical Music Affects Reaction Time**  
Upper Dublin HS, Dawn Pav, Sponsor
2. Michelle Borochaner, Grade 10            **Self-deception**  
Upper Dublin HS, Dawn Pav, Sponsor
3. Jessica Giampaolo, Grade 10            **Gender Biases in the Workplace**  
Lower Moreland HS, Denise Meyers, Sponsor
4. Faustina Nguyen, Grade 10            **Is seeing believing?**  
Lower Moreland HS, Denise Meyers, Sponsor
5. Molly Smith, Grade 10            **Can You Taste That?**  
Lower Moreland HS, Denise Meyers, Sponsor
6. Suhaas Adiraju, Grade 11            **Ants Overcoming Changed VisualMarkers in a Chemical Pathway**  
Wissahickon SHS, Michael Shultz, Sponsor
7. Emily Moyer, Grade 11            **The Effect of Age on Memory After Multitasking.**  
Wissahickon SHS, Michael Shultz, Sponsor
8. Kevin Ouyang, Grade 11            **The Effect of Negative News on Helping Behavior**  
Methacton HS, Robert Helm, Sponsor
9. Hanna Smyles, Grade 11            **The Effect of Equity on Work Attitude**  
Cheltenham HS, John Mohl, Sponsor
10. Kathryn Nunes, Grade 12            **Effect of Positive and Negative Disincentive on Learning**  
Germantown Academy, Sarah Kesten, Sponsor

**UNIT 8            ROOM # 107            Biology            Grade 7,8,9**

1. Madelyn Bergin, Grade 7            **Do Ear Lobe Creases Predict Coronary Artery Disease?**  
Penn View Christian School, Reichley, Sponsor
2. Hannah Landis, Grade 7            **Full Moon, Baby!**  
Penn View Christian School, Reichley, Sponsor
3. Ma'ayan Shahar, Grade 7            **The Result of Colored Light in Collaboration with Plants**  
Sandy Run MS, Jeanie Kellock, Sponsor
4. Mikayla Carty, Grade 8            **Smartboard Eye Syndrome?**  
Indian Valley MS, Causland, Sponsor
5. Casey Febus, Grade 8            **What is the effect of acid volume on volume of base needed t**  
Indian Crest MS, Hilary Cochran, Sponsor
6. Saket Gokhale, Grade 8            **Is Going Organic the Healthier Choice?**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
7. Tommy Scott, Grade 8            **Glowing Waves: Do Altered Light Cycles Affect Algae Glow?**  
Cedarbrook MS, Beth Kenna, Sponsor
8. Hannah Xiao, Grade 8            **How do nanoparticles interact with DNA and necleic acids**  
Sandy Run MS, Gary Hite, Sponsor
9. Samantha Krot, Grade 9            **Effect of Certain Drinks on a Singer's Voice**  
Souderton Area SHS, Karen Frazier, Sponsor
10. Sarah Matthews, Grade 9            **How Microwave Radiation Affects the Growth of Yeast**  
Souderton Area SHS, Karen Frazier, Sponsor
11. Julia Stauber, Grade 9            **The Effects of Sunscreen Application Intervals on UV Rays**  
Germantown Academy, Sarah Kesten, Sponsor

**UNIT 9            ROOM # 109            Biology            Grade 9,10,11**

1. Yiheng Chen, Grade 9            **How Different Colored Dyes Affect the Coloration of Plants**  
Upper Dublin HS, Brian Palme, Sponsor

**UNIT 9**      **ROOM # 109**      **Biology**      **Grade 9,10,11**

- Eric Hu, Grade 9      **Comparison of DNA Density in Members of Vascular Plants**  
Upper Dublin HS, Brian Palme, Sponsor
- Amy Lu, Grade 9      **A Study of the Pan-allergen Profilin in Peanuts, Treenuts, a**  
Methacton HS, Robert Helm, Sponsor
- Peter Luba, Grade 9      **Caring for Your Largest Organ**  
Methacton HS, Robert Helm, Sponsor
- Nina Cheng, Grade 10      **Will Drugs Targeting Protein NPC1 be effective against Ebola**  
Upper Dublin HS, Leanne Jones, Sponsor
- Jessica Edelson, Grade 10      **Effect of Multiple Variables on Malignancy of Ovarian Growths**  
Wissahickon SHS, Michael Shultz, Sponsor
- Kaitlyn Pigeon, Grade 10      **Effect of Amylase on Glucose Produced**  
Wissahickon SHS, Michael Shultz, Sponsor
- Erika Rodenberger, Grade 10      **The Power of Music on the Human Electrical System**  
Perkiomen School, M Irven, Sponsor
- Maxwell Howald, Grade 11      **Treatment of Prostate Cancer Using Piperlongumine and its De**  
Christopher Dock Mennonite HS, Kathleen Holden, Sponsor
- Richard Zhang, Grade 11      **Hepatitis and HCC, a Computational Analysis**  
Upper Dublin HS, Dawn Pav, Sponsor

**UNIT 10**      **ROOM # 111**      **Biology**      **Grade 11,12**

- Jenna Feltes, Grade 11      **Potassium and Magnesium Levels on Daphnia Magna Heart Rate**  
Wissahickon SHS, Michael Shultz, Sponsor
- Arielle Goldberg, Grade 11      **The Effect of Hair Products on the Damage of Hair**  
Wissahickon SHS, Mary Burgoyne, Sponsor
- Niharika Gupta, Grade 11      **Winning the Battle Against Blood Transfusion Transmitted Inf**  
Methacton HS, Robert Helm, Sponsor
- Sun Min Kim, Grade 11      **The Effect of Fruit Type on Fruit Fly Selection**  
Wissahickon SHS, Michael Shultz, Sponsor
- Rohan Saganti, Grade 11      **The Effect of Caffeine on Lumbriculus variegatus**  
Cheltenham HS, Rebecca Sheridan, Sponsor
- Nicole Sigal, Grade 11      **Role of Viral Protein EVM36 in Cell Migration**  
Cheltenham HS, Rebecca Sheridan, Sponsor
- Nikita Tulin, Grade 11      **Epigenetic Control of Longevity**  
Cheltenham HS, Rebecca Sheridan, Sponsor
- Michael Duong, Grade 12      **Advances in Alzheimer's Disease: AB Reprograms Neuron Develo**  
Methacton HS, Robert Helm, Sponsor
- Joshua Li, Grade 12      **Comparing Drug Sensitivity Signatures in Cancer Cell Lines**  
Upper Dublin HS, Joanne Lilliendahl, Sponsor
- Madison Wilken, Grade 12      **What affects do artificial sweeteners have on mealworms size**  
Cheltenham HS, L Meldru, Sponsor

**UNIT 11**      **ROOM # 146**      **Botany**      **Grade 7,8**

- Logan Geffen, Grade 7      **What Types of Grass are Most Tolerate to Drought**  
Murray Avenue Sch, Denise Meyers, Sponsor
- Christina Greatti, Grade 7      **The Effect of Different Fertilizer on Tomato Plant Growth**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
- Joy Hutchison, Grade 7      **Plant Tropism: The Downside of Plant Life**  
Murray Avenue Sch, Denise Meyers, Sponsor

**UNIT 11      ROOM # 146      Botany      Grade 7,8**

4. Rushmika Iyer, Grade 7      **Plants React To Music**  
Sandy Run MS, Jeanie Kellock, Sponsor
5. Nyah Jurado, Grade 7      **Upside-Down Plants**  
Murray Avenue Sch, Denise Meyers, Sponsor
6. Kate Landis, Grade 7      **To Pee or Not to Pee**  
Penn View Christian School, Reichley, Sponsor
7. Misha Mathai, Grade 7      **Hydroponics: Can you really garden without soil?**  
Murray Avenue Sch, Denise Meyers, Sponsor
8. Bethany Rutkowski, Grade 7      **How Does Microwave Radiation Affect Germination of Seeds?**  
Cedarbrook MS, Beth Kenna, Sponsor
9. Asia Lam, Grade 8      **Does plant type affect plant growth when grown hydroponically?**  
Indian Crest MS, Jennifer Odenwald, Sponsor
10. Angelina Pham, Grade 8      **What is the effect of plants on amount of aspirin?**  
Indian Crest MS, Hilary Cochran, Sponsor

**UNIT 12      ROOM # 150      Botany      Grade 8,9**

1. Brydon Bateman, Grade 8      **Cleaning Nutrient Laden Water with Aquatic Plants**  
Indian Valley MS, Causland, Sponsor
2. Spendser Haslam, Grade 8      **The Effect of Modern Junk Food on Plant Growth**  
Indian Valley MS, Causland, Sponsor
3. Sydney McQuiggan, Grade 8      **How Does Aspirin Effect Different Types of Bean Plants?**  
Murray Avenue Sch, Denise Meyers, Sponsor
4. Daryna Shnitser, Grade 8      **How Does Caffeine Affect the Growth of Plants?**  
Murray Avenue Sch, Denise Meyers, Sponsor
5. Wesley Ahart, Grade 9      **The Effect of Endophytic Bacteria During Grafting in Bell Pe**  
Souderton Area SHS, Karen Frazier, Sponsor
6. Miles Hanamirian, Grade 9      **The Effect of Plastic Mulch on the Growth of Vegetation**  
Germantown Academy, Sarah Kesten, Sponsor
7. Victoria Hoffner, Grade 9      **Effect of Microwaves on Plant Growth**  
Upper Dublin HS, Brian Palme, Sponsor
8. Satvik Kakkar, Grade 9      **The Affects of Water soluble Vitamins on Plant Growth**  
Methacton HS, Robert Helm, Sponsor
9. Jennifer Katsnelson, Grade 9      **Pavlov's Plants**  
Lower Moreland HS, Denise Meyers, Sponsor
10. Monique Slowly, Grade 9      **Managing Invasive Plants: Methods of Control**  
Cheltenham HS, Rebecca Sheridan, Sponsor

**UNIT 14      ROOM # 159      Botany      Grade 10,11,12**

1. Samantha Glass, Grade 10      **How well do pinto bean plants grow in a simple starch and wa**  
Lower Moreland HS, Denise Meyers, Sponsor
2. Jessica Chung, Grade 11      **Climbing Up the Tree With Chloroplast Sequencing**  
Christopher Dock Mennonite HS, Kathleen Holden, Sponsor
3. Jake Rosen, Grade 11      **Does the Presence of Vitamin D Affect How Much a Plant Grows**  
Upper Dublin HS, Dawn Pav, Sponsor
4. Justin Yi, Grade 11      **Genetically Modified Seeds**  
Lower Moreland HS, Denise Meyers, Sponsor
5. Michael Miller, Grade 12      **Back to the Roots**  
Methacton HS, Robert Helm, Sponsor

**UNIT 14      ROOM # 159      Botany      Grade 10,11,12**

6. Shira Wein, Grade 12      **The Effect of Nitrogen Levels of Soil on Decomposition Rate**  
Germantown Academy, Sarah Kesten, Sponsor
7. Carolyn Wulfsohn, Grade 12      **The Influence of Chemical vs. Solar Energy on the Growth of**  
The Shipley School, M Deja, Sponsor
8. Ilana Zeitzer, Grade 12      **Salt Tolerance in Grain Crops**  
Upper Dublin HS, Joanne Lilliendahl, Sponsor

**UNIT 15      ROOM # 161      Chemistry      Grade 7,8**

1. Andrew Chen, Grade 7      **Conductance of Solutions**  
Sandy Run MS, Jeanie Kellock, Sponsor
2. Annie Cheng, Grade 7      **How Does Temperature Affect How Fast a Solution Dissolves**  
Sandy Run MS, Jeanie Kellock, Sponsor
3. William Clapham, Grade 7      **Warmest Cup of Joe**  
Sandy Run MS, Jeanie Kellock, Sponsor
4. Mia Costonis, Grade 7      **Tough Stains**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
5. Kamaria Green, Grade 7      **Big Bucks: Comparing Electrolytes in OJ and Sports Drinks**  
Cedarbrook MS, Beth Kenna, Sponsor
6. Hannah Lemanowicz, Grade 7      **The Effect of Different Solutions on Nail Oxidation**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
7. Lucas Lin, Grade 7      **Gaseous Fire, Solid Paper and Liquid Substances**  
Sandy Run MS, Jeanie Kellock, Sponsor
8. Sophi Schneider, Grade 7      **Does the Surface Area and Make Up of an Ice Cube Affect Its**  
Sandy Run MS, Jeanie Kellock, Sponsor
9. Manav Singh, Grade 7      **The Ice-Cold Liquid**  
Murray Avenue Sch, Denise Meyers, Sponsor
10. Erica Stover, Grade 7      **Chew on This**  
Indian Valley MS, Nancy Cianchetta, Sponsor
11. Olivia Wirsching, Grade 7      **The Affect of Objects on the Growth of Salt Crystals**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
12. Joseph (JP) Losco, Grade 8      **Pop: How does the flavor of mentos affect the geyser height?**  
Indian Crest MS, Jennifer Odenwald, Sponsor
13. Abena Otu-Adum, Grade 8      **Lotion Commotion: How does lotion keep skin moist?**  
Indian Crest MS, Jennifer Odenwald, Sponsor

**UNIT 16      ROOM # 200      Chemistry      Grade 8**

1. Isabella Alessi, Grade 8      **Purifying Water**  
Indian Valley MS, Causland, Sponsor
2. Kira Ariyamitr, Grade 8      **Additional Fluorescent Compounds in Substances**  
Sandy Run MS, Jeanie Kellock, Sponsor
3. Alexander Clapham, Grade 8      **What Makes Water Boil Fastest**  
Sandy Run MS, Jeanie Kellock, Sponsor
4. Priya Devanarayan, Grade 8      **Do you "C" what I see? : How does the type of orange flavore**  
Indian Crest MS, Jennifer Odenwald, Sponsor
5. Liz Duffy, Grade 8      **Does the Beverage You Drink Affect Enamel Erosion?**  
Indian Crest MS, Jennifer Odenwald, Sponsor
6. Madison Haase, Grade 8      **Cleaning Power of Green vs. Store Bought Laundry Detergent**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor

**UNIT 16      ROOM # 200      Chemistry      Grade 8**

- Erin Hardenburg, Grade 8      **Which Brand of Sunscreen Will Minimize the Most UV Exposure**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
- Karina Martin, Grade 8      **Rethinking Your Carpet Cleaner**  
Indian Valley MS, Causland, Sponsor
- Sophia Ung, Grade 8      **Corrosion of Metals**  
Murray Avenue Sch, Denise Meyers, Sponsor
- Declan Winters, Grade 8      **Pill's Coating Effect on its Dissolution**  
Murray Avenue Sch, Denise Meyers, Sponsor
- Adam Zhang, Grade 8      **The Mystifying Mpemba Effect**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
- Judy Zhong, Grade 8      **Permanent Markers: Are They Actually Permanent?**  
Sandy Run MS, Jeanie Kellock, Sponsor
- Jenna Zook, Grade 8      **How does the price of nail polish affect the durability?**  
Indian Crest MS, Jennifer Odenwald, Sponsor

**UNIT 17      ROOM # 201      Chemistry      Grade 8,9**

- Lindsay Ford, Grade 8      **How does soaking popcorn kernels in different flavored extra**  
Indian Crest MS, Jennifer Odenwald, Sponsor
- Abigail Hwan, Grade 8      **Best Methods to Whiten Teeth**  
Murray Avenue Sch, Denise Meyers, Sponsor
- Sasha Khripkova, Grade 8      **What Type of Allergy Drug Will Dissolve the Fastest**  
Murray Avenue Sch, Denise Meyers, Sponsor
- Felicia Pinto, Grade 8      **How Much Energy is Stored in Different Types of Foods?**  
Murray Avenue Sch, Denise Meyers, Sponsor
- Abigail Thompson, Grade 8      **What is the effect of baking soda on rise of cupcakes?**  
Indian Crest MS, Hilary Cochran, Sponsor
- Willy Tran, Grade 8      **Electro Liquids**  
Indian Crest MS, Jennifer Odenwald, Sponsor
- Rebekah Varghese, Grade 8      **How Does the Acidity of Liquids Affect Gastric Acid**  
Murray Avenue Sch, Denise Meyers, Sponsor
- Elektra Benkrid, Grade 9      **Investigation of the Mpemba Effect**  
Perkiomen School, M Irven, Sponsor
- Timothy Feng, Grade 9      **Eliminating Pesticide Residue by Analyzing pH**  
Upper Dublin HS, Joanne Lilliendahl, Sponsor
- Julia Kurylec, Grade 9      **Digestive Enzymatic Activity in the Breakdown of Lipids**  
Lower Moreland HS, Denise Meyers, Sponsor
- Andrei Robu, Grade 9      **Pykrete**  
Upper Dublin HS, Brian Palme, Sponsor
- Anastasia Shchurin, Grade 9      **Effects of Exposure to High Temperatures on Various Types of**  
Lower Moreland HS, Denise Meyers, Sponsor
- Eliana Yi, Grade 9      **Briggs-Rauscher Oscillating Reaction**  
Lower Moreland HS, Denise Meyers, Sponsor

**UNIT 18      ROOM # 202      Chemistry      Grade 9**

- Preeti Bobba, Grade 9      **Do Different Vinegars Have Different Amounts of Acetic Acid?**  
Methacton HS, Robert Helm, Sponsor
- Stephanie Bush, Grade 9      **Number Times a Fire-Retardant Material Washed on Time Burned**  
Wissahickon SHS, Michael Ford, Sponsor



**UNIT 18****ROOM # 202****Chemistry****Grade 9**

3. Caleb Goldberg, Grade 9 **The effect of the amount of flour on how much a cookie rises**  
Wissahickon SHS, Melissa Ryan, Sponsor
4. Mikayla Joffe, Grade 9 **Effect of Liquids Ph on Rate Medicine Dissolves**  
Wissahickon SHS, Michael Ford, Sponsor
5. Sam Klugherz, Grade 9 **Effect of Household Cleaners on Fabric Puncture Resistance**  
Wissahickon SHS, Mary Burgoyne, Sponsor
6. Eric Lang, Grade 9 **Effect of Stress Conditions on BPA Leeching from Plastic**  
Wissahickon SHS, Michael Ford, Sponsor
7. Nevin Mendis, Grade 9 **Effectiveness of Water vs a Sports Drink for Exercise**  
Methacton HS, Robert Helm, Sponsor
8. Luna Morales, Grade 9 **effect of fluids pH level on calcium carbonate in egg shell**  
Wissahickon SHS, Melissa Ryan, Sponsor
9. Sayuri Padmanabhan, Grade 9 **Effects of pH on Corrosion of Copper**  
Methacton HS, Robert Helm, Sponsor
10. Mohammed Rashid, Grade 9 **Effect of Amount of Citric Acid on Amount Current Produced**  
Wissahickon SHS, Mary Burgoyne, Sponsor
11. Fred Shub, Grade 9 **The Effect of Medication on P. Acnes**  
Lower Moreland HS, Denise Meyers, Sponsor
12. Josh Teperov, Grade 9 **Is it the Calorie or Calorie**  
Lower Moreland HS, Denise Meyers, Sponsor
13. Mary Zhuang, Grade 9 **The Race to Beat Heartburn**  
Methacton HS, Robert Helm, Sponsor

**UNIT 19****ROOM # 203****Chemistry****Grade 10,11**

1. Braden Cody, Grade 10 **Optimizing Performance of Solar Cell Photoanodes**  
Germantown Academy, Sarah Kesten, Sponsor
2. Tyler Hook, Grade 10 **Use of Salt Water as an Alternative Fuel to Produce Energy**  
Germantown Academy, Sarah Kesten, Sponsor
3. Clayton Howard, Grade 10 **An Investigation of the Relationship Between Acetic Acid Con**  
Lower Moreland HS, Denise Meyers, Sponsor
4. Kian Jamasbi, Grade 10 **Water as Solvent for High Molecular Weight Acrylic Polymer**  
Germantown Academy, Sarah Kesten, Sponsor
5. Schuyler La Barge, Grade 10 **The Dark Side of Light**  
Upper Dublin HS, Leanne Jones, Sponsor
6. Neda Mahjour, Grade 10 **Effect of Temperature on Vitamin C in Foods**  
Souderton Area SHS, Karen Frazier, Sponsor
7. Ruchi Mulajker, Grade 10 **What is the Vitamin C content in different juices?**  
Methacton HS, Robert Helm, Sponsor
8. Jennifer Zhang, Grade 10 **Arrowroot Powder vs Cassava and White Corn**  
Methacton HS, Robert Helm, Sponsor
9. Elaine Ma, Grade 11 **Saturated Fat Levels in Cooking Oil**  
Methacton HS, Robert Helm, Sponsor
10. Jessica Novey, Grade 11 **Effect of Acid on Durability of Building Materials**  
Wissahickon SHS, Michael Shultz, Sponsor
11. Jimmy Olsen, Grade 11 **Novel Chemistries in the Synthesis of Next Gen Antimalarials**  
La Salle College HS, Charles Cirelli, Sponsor
12. Haley Wilken, Grade 11 **Electrolytes in Drinks**  
Cheltenham HS, Russell Wolff, Sponsor

**UNIT 20      ROOM # 204      Chemistry      Grade 11,12**

1. Chloe Becker, Grade 11      **The Effect of Freezing on Oils**  
Wissahickon SHS, Christine Brandt, Sponsor
2. Ryan Henderson, Grade 11      **Determining the Endpoint of Titration**  
Upper Dublin HS, Dawn Pav, Sponsor
3. Elyse Kauffman, Grade 11      **The Effect of Filtration on Iron Content in Well Water**  
Wissahickon SHS, Christine Brandt, Sponsor
4. Pooja Anantha, Grade 12      **Chemical vs. Natural Antacids**  
Methacton HS, Robert Helm, Sponsor
5. Pooja Bobba, Grade 12      **Temperature's Effect on Crystallizing Supercooled Solutions**  
Methacton HS, Robert Helm, Sponsor
6. Gavin Chen, Grade 12      **Graphene Oxide Supercapacitors**  
Germantown Academy, Sarah Kesten, Sponsor
7. Arun Pidugu, Grade 12      **A Study of Dye-Sensitized Solar Cells (Cont.)**  
Methacton HS, Robert Helm, Sponsor
8. Neha Shah, Grade 12      **Purity and pH Balance**  
Methacton HS, Robert Helm, Sponsor
9. Abay Tadesse, Grade 12      **Controlling Graphene Electrical Properties Using Silicon Dop**  
Germantown Academy, Sarah Kesten, Sponsor

**UNIT 21      ROOM # 205      Computer Science      Grade 7,8,9**

1. Olivia Messina, Grade 7      **Interference!**  
Penn View Christian School, Reichley, Sponsor
2. Aviel Resnick, Grade 7      **How to make a secure Wi-Fi terminal**  
Murray Avenue Sch, Denise Meyers, Sponsor
3. Seth Cardy, Grade 8      **Scientific Strategies for Winning at Monopoly**  
Penn View Christian School, Reichley, Sponsor
4. Jonah Carver, Grade 8      **The Effect of Pitch on Voice Recognition Accuracy**  
Sandy Run MS, Gary Hite, Sponsor
5. Ryan McShane, Grade 8      **Uncovering Olagiarism with Text Mining**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
6. Ethan Moyer, Grade 8      **Simple Tick Passwords: Protection using keystrokes inputted**  
Indian Crest MS, Jennifer Odenwald, Sponsor
7. Harrison Beerley, Grade 9      **Overclocking: Gaming Performance Unleashed?**  
Souderton Area SHS, Karen Frazier, Sponsor
8. Ananth Dandibhotla, Grade 9      **Analysis to Determine the Fastest Search Algorithm**  
Methacton HS, Robert Helm, Sponsor
9. Andrew Luo, Grade 9      **Spatial and Temporal Patterns of Bridge Conditions in PA**  
Germantown Academy, Sarah Kesten, Sponsor
10. Achyut Reddy, Grade 9      **Visualizing Homology With Computers**  
Methacton HS, Robert Helm, Sponsor

**UNIT 22      ROOM # 206      Computer Science      Grade 10,11,12**

1. Vivek Gopalan, Grade 10      **Simulating Response Times for Fire Engines to Optimize Engin**  
Methacton HS, Robert Helm, Sponsor
2. Gerald Liu, Grade 10      **Improving Efficiency of Targeted Amplicon Sequencing**  
Methacton HS, Robert Helm, Sponsor
3. Chirag Ram, Grade 10      **Where Am I?**  
Lower Moreland HS, Denise Meyers, Sponsor

**UNIT 22      ROOM # 206      Computer Science      Grade 10,11,12**

4. Owen Ritz, Grade 10      **Identifying Breast Cancer Mutations using Machine Learning**  
Germantown Academy, Sarah Kesten, Sponsor
5. Kerri Diamond, Grade 11      **The Hive Comparison: The possible benefit of diversified pol**  
Souderton Area SHS, Karen Frazier, Sponsor
6. Justin Feng, Grade 11      **Biomarkers: The Future of Medicine**  
Lower Moreland HS, Denise Meyers, Sponsor
7. Emily Won, Grade 11      **Color Conversion Software for Smartphone Cameras**  
Upper Dublin HS, Christopher Hayden, Sponsor
8. Alex Zavitsanos, Grade 11      **The Effect of Temperature and Ratio on Light Produced**  
Wissahickon SHS, Michael Shultz, Sponsor
9. Nichelle Hall, Grade 12      **Defensive Network Security Engineering**  
Germantown Academy, Sarah Kesten, Sponsor
10. Justin Wong, Grade 12      **Diffusion Mapping for Clustering Protein Structural Ensemble**  
Germantown Academy, Susanne Johnston, Sponsor

**UNIT 23      ROOM # 207      Ecology      Grade 7,8**

1. Fields Cara, Grade 7      **The Effect of Worm Type on Scraps Eaten and Castings Made**  
Cedarbrook MS, Beth Kenna, Sponsor
2. Laura Darling, Grade 7      **Recycling Water: The Effect of Greywater on Plant Life**  
Cedarbrook MS, Beth Kenna, Sponsor
3. Brigit Ferry, Grade 7      **Tides Effect on the Turbidity of Ocean Water**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
4. Miguel Santiago, Grade 7      **Fall Leaves Fall**  
Penn View Christian School, Reichley, Sponsor
5. Eimile Scibelli, Grade 7      **The pH Level of River, Bottled, Ocean, Tap, and Bay Water**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
6. Nancy Sohlberg, Grade 7      **How Does Rain Affect Water Contamination?**  
Cedarbrook MS, Beth Kenna, Sponsor
7. Sydney Breslin, Grade 8      **Using Nature's Medicines to Remedy Toxic Algae Blooms**  
Penn View Christian School, Reichley, Sponsor
8. William Rebert, Grade 8      **Worm Decomposition**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
9. Kain Turner, Grade 8      **How do impurities in water affect how much water is evaporat**  
Indian Crest MS, Jennifer Odenwald, Sponsor

**UNIT 24      ROOM # 208      Ecology      Grade 9 thru 12**

1. Jeffrey Fishman, Grade 9      **The Environmental Impact of Hydraulic Fracturing**  
Upper Dublin HS, Brian Palme, Sponsor
2. Aishwarya Ramesh, Grade 9      **Pixelating the Night Sky**  
Methacton HS, Robert Helm, Sponsor
3. Margaret Palko, Grade 10      **Agri-ponics: Exploring Aquaponics and Hydroponics**  
Methacton HS, Robert Helm, Sponsor
4. Zoe Chambliss, Grade 11      **Effect of High Soil Permeability on Radish Absorption of Nit**  
Cheltenham HS, L Meldru, Sponsor
5. Amelia Darling, Grade 11      **How do Agents of Nutrient Runoff Affect the Relationship bet**  
Cheltenham HS, Rebecca Sheridan, Sponsor
6. Amy Li, Grade 11      **Survey of Superfund Species to Evaluate Elemental Uptake**  
Upper Dublin HS, Joanne Lilliendahl, Sponsor

**UNIT 24      ROOM # 208      Ecology      Grade 9 thru 12**

7. Bailey Whitman, Grade 11      **The Effect of Human Use in Freshwater Lakes**  
Germantown Academy, Sarah Kesten, Sponsor
8. Kelly Zhang, Grade 11      **Investigation on EMFs from Household Items and Their Effects**  
Methacton HS, Robert Helm, Sponsor
9. Prachi Taneja, Grade 12      **Biodiesel Fuel from Microalgae**  
Methacton HS, Robert Helm, Sponsor

**UNIT 25      ROOM # 209      Engineering      Grade 8,9**

1. Garrett Campbell, Grade 8      **Prosthetic Arms and Their Grips**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
2. Bryce Kauffman, Grade 8      **Keeping it Cool with Recyclables**  
Penn View Christian School, Reichley, Sponsor
3. Harsha Samthanam, Grade 8      **Tread Carefully: An Ultrasonic Tire Tread Depth Gauge**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
4. Connor Williams, Grade 8      **What Ramp Angle will give you the Most Distance?**  
Indian Crest MS, Jennifer Odenwald, Sponsor
5. Gina Zarzycki, Grade 8      **Building Bridges: The Effect of Bridge Design on Weight Bear**  
Murray Avenue Sch, Denise Meyers, Sponsor
6. Michelle Ampofo, Grade 9      **Roller Coaster at Home**  
Cheltenham HS, Rebecca Sheridan, Sponsor
7. Evvan Erb, Grade 9      **Powering an Electronic Device through Thermoelectrics**  
Germantown Academy, Sarah Kesten, Sponsor
8. Joshua Li, Grade 9      **Defending Homes from the Cold**  
Methacton HS, Robert Helm, Sponsor
9. Preethi Mysore, Grade 9      **The Solar Thermal Collector Efficiency Experiment**  
Upper Dublin HS, Brian Palme, Sponsor
10. Billy Yost, Grade 9      **The Effect of the Number of Teeth on a Sprocket at Peak RPM**  
Wissahickon SHS, Meredith Falatek, Sponsor

**UNIT 26      ROOM # 210      Engineering      Grade 10,11,12**

1. Gavin Rees, Grade 10      **Driving a 3D-printed Exoskeleton with Nylon Artificial Muscl**  
Germantown Academy, Sarah Kesten, Sponsor
2. Ethan Zhao, Grade 10      **Using Muscle Wire in a Robotic Finger**  
Germantown Academy, Sarah Kesten, Sponsor
3. Ji-eun Kim, Grade 11      **Can You Drink Out of Air?**  
Wissahickon SHS, Michael Shultz, Sponsor
4. Ari Meles-Braverman, Grade 11      **Stainless Steel Not Brainless Steel**  
Cheltenham HS, Rebecca Sheridan, Sponsor
5. Hari Santhanam, Grade 11      **Porosity of Metal Foams using Ultrasound**  
Methacton HS, Robert Helm, Sponsor
6. Erin Solomon, Grade 11      **Optimizing Application of the Dye Sensitized Solar Cell**  
Souderton Area SHS, Karen Frazier, Sponsor
7. AJ Abrevaya, Grade 12      **The Effect of a Hydrophobic Spray on Tire Traction**  
Germantown Academy, Sarah Kesten, Sponsor
8. Miranda Jen, Grade 12      **Design and Fabrication of an Oscillating Water Column**  
Methacton HS, Robert Helm, Sponsor
9. Kristin Wang, Grade 12      **Design and Fabrication of an Oscillating Water Column**  
Methacton HS, Robert Helm, Sponsor

**UNIT 26      ROOM # 210      Engineering      Grade 10,11,12**

10. Trent Weiss, Grade 12      **Controlling Graphene Electrical Properties Using Silicon Dop**  
Germantown Academy, Sarah Kesten, Sponsor

**UNIT 27      ROOM # 211      Earth and Space      Grade 8,12**

1. Rory Ahrens, Grade 8      **Stop a Flood: Changing Sandbag Material and Orientation**  
Cedarbrook MS, Beth Kenna, Sponsor
2. Hannah Lewis, Grade 8      **Rocket Science: How does fin height affect distance flown?**  
Indian Crest MS, Jennifer Odenwald, Sponsor
3. Henry Price, Grade 8      **The Effect of Layered Ground Materials on Rate of Water Flow**  
Indian Crest MS, Jennifer Odenwald, Sponsor
4. Ben C Smith, Grade 8      **GPS Uses: How They May Help Measure Ionic Storms?**  
Cedarbrook MS, Beth Kenna, Sponsor
5. Jason Won, Grade 8      **Gravitational Acceleration of an Object in Water**  
Sandy Run MS, Jeanie Kellock, Sponsor
6. Olivia Yates, Grade 8      **Are You Seeing Stars?**  
Penn View Christian School, Reichley, Sponsor
7. Rahul Truter, Grade 12      **What Our Sun Is Trying To Tell Us**  
Methacton HS, Robert Helm, Sponsor

**UNIT 28      ROOM # 213      Mathematics      Grade 7,8,9**

1. E Justice Odenwald, Grade 7      **In It to Win It: Does the way you fold a raffle ticket affect**  
Indian Crest MS, Jennifer Odenwald, Sponsor
2. Alexa Kennel, Grade 8      **Stay or Switch? That is the Question**  
Penn View Christian School, Reichley, Sponsor
3. Thomas Ruggiero, Grade 8      **The Magic of Squares**  
Indian Crest MS, Jennifer Odenwald, Sponsor
4. Normen Yu, Grade 8      **Will You Get Home in Finite Time in Infinite Space**  
Sandy Run MS, Jeanie Kellock, Sponsor
5. Jake Zweiback, Grade 8      **How Fast is Your Computer?**  
Cedarbrook MS, Beth Kenna, Sponsor
6. Addie Olsen, Grade 9      **The Probability of Success: Rolling in the Dough**  
Gwynedd Mercy Academy HS, J Saunders, Sponsor
7. Jeremy Wang, Grade 9      **A Mathematical Study of HCC's Biomarkers**  
Methacton HS, Robert Helm, Sponsor
8. Amanda Yang, Grade 9      **Analyzing Influenza Trends**  
Upper Dublin HS, Brian Palme, Sponsor
9. Karthik Yegnesh, Grade 9      **A Biostatistical Study of Ebola Drug Side Effects**  
Methacton HS, Robert Helm, Sponsor

**UNIT 29      ROOM # 245      Mathematics      Grade 10,11,12**

1. Justin Barcusky, Grade 10      **Solving Circles with More Circles**  
Lower Moreland HS, Denise Meyers, Sponsor
2. Michael Chinn, Grade 10      **A Statistical Analysis of Monte Carlo Integration**  
Wissahickon SHS, Michael Shultz, Sponsor
3. Richard Niu, Grade 10      **Effective Use of the P/E Ratio for Equity Security Dynamics**  
Germantown Academy, Sarah Kesten, Sponsor
4. Calvin Chan, Grade 11      **Using Blocking to Reduce Confounding and Variability**  
Upper Dublin HS, Dawn Pav, Sponsor

**UNIT 29      ROOM # 245      Mathematics      Grade 10,11,12**

5. Frederick McElwee, Grade 11      **Comparing Quality Metrics of Providers of Pediatric Patients**  
Germantown Academy, Sarah Kesten, Sponsor
6. Hannah Schmidt, Grade 11      **Determining Sample Size**  
Souderton Area SHS, Karen Frazier, Sponsor
7. Jason Xu, Grade 11      **Yogurt and Blood Pressure**  
Upper Dublin HS, David Price, Sponsor
8. Patrick Ledwith, Grade 12      **Mathematics of Quantum Field Theory**  
Germantown Academy, Sarah Kesten, Sponsor

**UNIT 30      ROOM # 247      Microbiology      Grade 7,8**

1. Michelle Nikhinson, Grade 7      **Is the 5 Second Rule Real?**  
Murray Avenue Sch, Denise Meyers, Sponsor
2. Ashley Uppani, Grade 7      **Yeast Fermentation**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
3. Matthew Watanabe, Grade 7      **The Clean Truth About Handwashing**  
Murray Avenue Sch, Denise Meyers, Sponsor
4. Rebecca Banner, Grade 8      **Germ Be Gone: Which Disinfectant Kills E.Coli the Best?**  
Cedarbrook MS, Beth Kenna, Sponsor
5. Jonathan Cheng, Grade 8      **How Different Sweeteners Affect Yeast Growth**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
6. Alden Ford, Grade 8      **How Different Sweeteners Affect Yeast Growth**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
7. Jena George, Grade 8      **Which Types of Food Does Mold Grow Fastest On?**  
Murray Avenue Sch, Denise Meyers, Sponsor
8. Maya Hoffman, Grade 8      **Biowarfare: Can T4 Kill E. Coli?**  
Penn View Christian School, Reichley, Sponsor
9. Lily Howard, Grade 8      **A Breath of Fresh Air: The Effect of Various Breath Treatmen**  
Murray Avenue Sch, Denise Meyers, Sponsor
10. Rebekah Lee, Grade 8      **Clouds of Yeast: How does the temperature of water affect th**  
Indian Crest MS, Jennifer Odenwald, Sponsor
11. Jessica Murawsky, Grade 8      **Disinfectant Wipes**  
Murray Avenue Sch, Denise Meyers, Sponsor
12. Amy Son, Grade 8      **Silver Solution**  
Penn View Christian School, Reichley, Sponsor

**UNIT 31      ROOM # 249      Microbiology      Grade 9**

1. Sophia Breslin, Grade 9      **Bioplastics Engineered w/ Natural Materials to Produce Antim**  
Christopher Dock Mennonite HS, Kathleen Holden, Sponsor
2. Katie Hahn, Grade 9      **Say No to Drugs**  
Souderton Area SHS, Karen Frazier, Sponsor
3. Makenna Kregel, Grade 9      **Which Cleaning Solution Reduces the Most Amount of Bacteria**  
Souderton Area SHS, Karen Frazier, Sponsor
4. Lillian Nguyen, Grade 9      **What is the Effect of Different Types of Fabrics on the Grow**  
Souderton Area SHS, Karen Frazier, Sponsor
5. Shreya Sisodia, Grade 9      **The Effect of Natural Herbs and Plants on the Growth of Skin**  
Souderton Area SHS, Karen Frazier, Sponsor
6. David Stone, Grade 9      **The Effect of Acne Medication on Bacterial Growth**  
Souderton Area SHS, Karen Frazier, Sponsor

**UNIT 31      ROOM # 249      Microbiology      Grade 9**

7. Madeline Vassallo, Grade 9      **Exploring the Effectiveness of Acne Medications**  
Souderton Area SHS, Karen Frazier, Sponsor
8. Michael Watanabe, Grade 9      **Which Cutting Board is the Cleanest?**  
Lower Moreland HS, Denise Meyers, Sponsor
9. Molly Welby, Grade 9      **Control I the E. coli**  
Perkiomen School, M Irven, Sponsor

**UNIT 32      ROOM # 251      Microbiology      Grade 10,11,12**

1. Shayam Farmand, Grade 10      **Using Zinc Oxide to Reduce Resistance: A Novel Efflux Pump I**  
Methacton HS, Robert Helm, Sponsor
2. Sanjna Shelukar, Grade 10      **Effect of UV-Induced Mutations on E.Coli Zone of Inhibition**  
Wissahickon SHS, Michael Shultz, Sponsor
3. Megan Swintosky, Grade 10      **The Effect of Various Antibiotics on the Microbiome Gut Flor**  
Christopher Dock Mennonite HS, Kathleen Holden, Sponsor
4. Molly Handel, Grade 11      **The Effect of pH on Pro-biotic Survival Rate**  
Wissahickon SHS, Michael Shultz, Sponsor
5. Manan Rohilla, Grade 11      **Antibacterial Activity of Silver Ions**  
Methacton HS, Robert Helm, Sponsor
6. Sonam Saxena, Grade 11      **Do Artificial Sweeteners have a Negative Impact on Gut Micro**  
Methacton HS, Robert Helm, Sponsor
7. Kevin Wang, Grade 11      **Honey: A Possible Sugar Substitute**  
Upper Dublin HS, H Boyer, Sponsor
8. Joshua Herman, Grade 12      **The Effect of Mouthwashes on Bacterial Growth**  
Germantown Academy, Sarah Kesten, Sponsor
9. Nisha Saxena, Grade 12      **Green Gut**  
Methacton HS, Robert Helm, Sponsor

**UNIT 33      ROOM # 253      Physics      Grade 7**

1. Reza Ali, Grade 7      **Egg Drop**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
2. Aaron Blower, Grade 7      **Pulling You Down: How Does Drag Affect Flight?**  
Cedarbrook MS, Beth Kenna, Sponsor
3. Phillip Grabovsky, Grade 7      **Magnetic Linear Accelerator**  
Murray Avenue Sch, Denise Meyers, Sponsor
4. Samantha Knoblauch, Grade 7      **The Effect of Color on the a temperature of Water**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
5. Ryan Lim, Grade 7      **The Effectiveness of Shoe Insoles to Absorb Shock**  
Sandy Run MS, Jeanie Kellock, Sponsor
6. Peter Malitas, Grade 7      **Time to Freeze**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
7. Anthony Mangan, Grade 7      **Building a Paper Raft Powered by Surface Tension**  
Murray Avenue Sch, Denise Meyers, Sponsor
8. Nathan Mann, Grade 7      **Let's Roll!**  
Murray Avenue Sch, Denise Meyers, Sponsor
9. Erin shea Mirabella, Grade 7      **The effect of carbonation on the reaction between coke and m**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
10. Victor Rowello, Grade 7      **The Effect of Heat on Elasticity**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor

**UNIT 33      ROOM # 253      Physics      Grade 7**

11. Ashmitha Sivakumar, Grade 7      **Insulation Situation**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
12. Cassidy Sudell, Grade 7      **String Bass Coatings**  
Murray Avenue Sch, Denise Meyers, Sponsor
13. Frank Wang, Grade 7      **The Physics of Musical Harmony**  
Sandy Run MS, Jeanie Kellock, Sponsor

**UNIT 34      ROOM # 254      Physics      Grade 7,8**

1. Moira Ferry, Grade 7      **Temperature's Effect on Color**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
2. Cole Graham, Grade 7      **Effects of Mass On Distance Traveled**  
Sandy Run MS, Jeanie Kellock, Sponsor
3. Emily Kirk, Grade 7      **The Effect of Solutions on Magnets**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
4. Lou Liedtka, Grade 7      **Hot or Cold:How Does Temperature Affect a Magnet's Strength?**  
Cedarbrook MS, Beth Kenna, Sponsor
5. Clayton Ostroff, Grade 7      **Comparing the Performance of Baseball Bats**  
Murray Avenue Sch, Denise Meyers, Sponsor
6. Jillian Saloma, Grade 7      **The Effect of Volume on Altitude Traveled**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
7. Arushi Tiwari, Grade 7      **Exploring Capillary Action**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
8. Carolina Fraser, Grade 8      **Printing Your Way to Better Reception**  
Penn View Christian School, Reichley, Sponsor
9. Edward Lemanowicz, Grade 8      **Does Gravity Affect Velocity?**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
10. Luke Lotsis, Grade 8      **How Do Balls Fly with Their PSI**  
Penn View Christian School, Reichley, Sponsor
11. Aidan Melinson, Grade 8      **Sunsational Power**  
Ancillae-Assumpa Academy, Vanessa Melinson, Sponsor
12. Igor Tugluk, Grade 8      **What Ratio of Sand to Cement Makes the Strongest Concrete?**  
Murray Avenue Sch, Denise Meyers, Sponsor
13. Jongwon Yeo, Grade 8      **My Attraction to Light Refraction**  
Murray Avenue Sch, Denise Meyers, Sponsor

**UNIT 35      ROOM # 255      Physics      Grade 8**

1. Margaret Bond, Grade 8      **Bridges: Truss, Suspension, and Beam**  
Murray Avenue Sch, Denise Meyers, Sponsor
2. Yerin Chang, Grade 8      **Microwave Radiation's Effect on Organisms**  
Murray Avenue Sch, Denise Meyers, Sponsor
3. Gabrielle Fortier, Grade 8      **Colors Colors Everywhere**  
Indian Valley MS, Causland, Sponsor
4. Julia Jablonski, Grade 8      **Flammable Fabrics**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
5. Brian Lee, Grade 8      **Exploring the Mpemba Effect**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
6. Gabriella Magazzeni, Grade 8      **How do different types of Truss Bridges effect how much weig**  
Murray Avenue Sch, Denise Meyers, Sponsor



**UNIT 35      ROOM # 255      Physics      Grade 8**

7. Justin McGriff, Grade 8      **Pendulum-Swingers**  
Sandy Run MS, Jeanie Kellock, Sponsor
8. David Palko, Grade 8      **Kiln Drying Lumber in a Conventional Kitchen Oven**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
9. Sam Phillip, Grade 8      **Bottle Rocket Noses**  
Murray Avenue Sch, Denise Meyers, Sponsor
10. David Randall, Grade 8      **Observing Radioactive Decay with a Cloud Chamber**  
Sandy Run MS, Jeanie Kellock, Sponsor
11. Conor Smith, Grade 8      **The Effects of Temperature on Rubber Bands**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
12. Justin Suh, Grade 8      **Measuring Concentration of Sugar in a Liquid Using a Laser**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
13. Sydney Waterman, Grade 8      **How do Different Materials Affect the Sound Pressure of a So**  
Murray Avenue Sch, Denise Meyers, Sponsor

**UNIT 36      ROOM # 256      Physics      Grade 8,9**

1. Elizabeth Berzin, Grade 8      **Does the Hardness of Water Affect Its Index of Refraction?**  
Murray Avenue Sch, Denise Meyers, Sponsor
2. Mathew Chemplayil, Grade 8      **Thermocouple Testing**  
Murray Avenue Sch, Denise Meyers, Sponsor
3. Stanton Godshall, Grade 8      **What affect does weight have on the acceleration of a Kawasa**  
Indian Crest MS, Jennifer Odenwald, Sponsor
4. Mark Klinchin, Grade 8      **Using Math and Science to Better Understand Wi-Fi**  
Murray Avenue Sch, Denise Meyers, Sponsor
5. Jacob Leon, Grade 8      **Let There Beam Light!**  
Murray Avenue Sch, Denise Meyers, Sponsor
6. Carley Lustig, Grade 8      **Frisbee Physics**  
Murray Avenue Sch, Denise Meyers, Sponsor
7. Jessica Malinsky, Grade 8      **Does Light Affect the Rate at which Food Spoils?**  
Murray Avenue Sch, Denise Meyers, Sponsor
8. Ameen Nawfal, Grade 8      **Magnetic Levitation: Experiments with Anti-Magnets**  
Indian Crest MS, Jennifer Odenwald, Sponsor
9. Nishant Salian, Grade 8      **Hydro Wheels**  
Murray Avenue Sch, Denise Meyers, Sponsor
10. Claire Tse, Grade 8      **Catalyzing Synthetic Photosynthesis with Biomimetic Catalys**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
11. Neha Vagvala, Grade 8      **Can Glycerin or Corn Syrup Improve Your Bubble Solution?**  
Arcola Intrmd Sch, Cathy Stewart, Sponsor
12. Sam Pak, Grade 9      **Effect The Turning Plate Has on the Way Food Is Cooked**  
Wissahickon SHS, Michael Ford, Sponsor
13. Cathy Zhou, Grade 9      **The effect of distance on radiation**  
Wissahickon SHS, Melissa Ryan, Sponsor

**UNIT 37      ROOM # 258      Physics      Grade 9**

1. Abigail Butt, Grade 9      **The effect of water on force to move**  
Wissahickon SHS, Melissa Ryan, Sponsor
2. carolyn frank, Grade 9      **The effect of oils on the viscosity of acrylic paint**  
Wissahickon SHS, Melissa Ryan, Sponsor

**UNIT 37****ROOM # 258****Physics****Grade 9**

3. Blake Geisler, Grade 9 **The Effect of Temperature Solute on Dissolving Rate**  
Wissahickon SHS, Meredith Falatek, Sponsor
4. Jessie Joblin, Grade 9 **effect of acidity on current through circuit**  
Wissahickon SHS, Melissa Ryan, Sponsor
5. Michael Kavka, Grade 9 **The Effect of Temperature on Battery Life**  
Lower Moreland HS, Denise Meyers, Sponsor
6. Grace Kim, Grade 9 **The Effect of Battery Type on Strength of Electromagnet**  
Wissahickon SHS, Mary Burgoyne, Sponsor
7. Sahas Kurumety, Grade 9 **Lighting up the world, one bottle at a time**  
Methacton HS, Robert Helm, Sponsor
8. Longan Loi, Grade 9 **The Mpemba Effect**  
Upper Dublin HS, J Winship, Sponsor
9. Aiden Marcellis, Grade 9 **The effect of surface material on length of spikes**  
Wissahickon SHS, Melissa Ryan, Sponsor
10. James Ralph, Grade 9 **The Effects of Current Frequency on a Transformer's Magnetic**  
Lower Moreland HS, Denise Meyers, Sponsor
11. Jacquelyn Shaffer, Grade 9 **Effects of Wavelengths on Amount of Heat Absorbed**  
Wissahickon SHS, Michael Ford, Sponsor
12. Brett Sudell, Grade 9 **Does the dimple count on a golfball affect it's distance and**  
Lower Moreland HS, Denise Meyers, Sponsor
13. Caleb Watt, Grade 9 **Need for Sleep**  
Methacton HS, Robert Helm, Sponsor

**UNIT 38****ROOM # 260****Physics****Grade 9,10**

1. Dominic Adamo, Grade 9 **Fish Take Flight**  
Souderton Area SHS, Karen Frazier, Sponsor
2. Harry Chernak, Grade 9 **The Effect of Angle of Attack on Lift Generated**  
Wissahickon SHS, Michael Ford, Sponsor
3. John Dickson, Grade 9 **The truth about lacrosse mesh**  
Wissahickon SHS, Melissa Ryan, Sponsor
4. Linnea Hummel, Grade 9 **The effect of the type of material on the signal strength**  
Wissahickon SHS, Melissa Ryan, Sponsor
5. Bennett Oskanian, Grade 9 **Effect of Charge Time of LiPo Battery on Speed of Model Car**  
Wissahickon SHS, Michael Ford, Sponsor
6. Michaela Rosle, Grade 9 **Spatter Matters**  
Souderton Area SHS, Karen Frazier, Sponsor
7. Jarrett Ross, Grade 9 **Roller Coaster Marbles: Converting Energy**  
Cheltenham HS, Rebecca Sheridan, Sponsor
8. Michael Steitz, Grade 9 **effect of the material of baseball bat on speed of the ball**  
Wissahickon SHS, Melissa Ryan, Sponsor
9. Sook-Hee Evans, Grade 10 **Building an X-Ray Machine and Assessing Image Clarity**  
Germantown Academy, Sarah Kesten, Sponsor
10. Joseph Maiale, Grade 10 **The Effect of Materials on Wifi Strength**  
Wissahickon SHS, Michael Shultz, Sponsor
11. Nicholas McCreesh, Grade 10 **What Materials Conduct an Electric Current Best?**  
Lower Moreland HS, Denise Meyers, Sponsor
12. Glenn Oh, Grade 10 **Can you accurately predict the concentration of sugar in wat**  
Lower Moreland HS, Denise Meyers, Sponsor
13. Connor Winters, Grade 10 **Preventing Cancer: One Turf Field at a Time**  
Lower Moreland HS, Denise Meyers, Sponsor

**UNIT 39      ROOM # 262      Physics      Grade 10,11**

1. Emerson Colby, Grade 10      **Efficiency of Hot Air Balloons in Different Temperatures**  
Lower Moreland HS, Denise Meyers, Sponsor
2. Katya Farber, Grade 10      **What is the best container to store your medicine in?**  
Lower Moreland HS, Denise Meyers, Sponsor
3. Julianna Magazzeni, Grade 10      **Solar Cells**  
Lower Moreland HS, Denise Meyers, Sponsor
4. Leah Simpson, Grade 10      **Scientific Skating Spins**  
Upper Dublin HS, Leanne Jones, Sponsor
5. Daniel Barychev, Grade 11      **The Efficiency Varying Forms of Electromagnetic Generation**  
Lower Moreland HS, Denise Meyers, Sponsor
6. Noah Carver, Grade 11      **The Effect of Isolated Zenith Distance Zones on GPS Accuracy**  
Upper Dublin HS, J Schmidt, Sponsor
7. Samantha Panich, Grade 11      **Use of Artificial Synovial Fluid for Joint Replacements**  
Lower Moreland HS, Denise Meyers, Sponsor
8. Avery Price, Grade 11      **Experimentations on Drag**  
Souderton Area SHS, Karen Frazier, Sponsor
9. Sam Scoll, Grade 11      **Seebeck Effect: Measuring Electrical Energy of Thermal Energy**  
Lower Moreland HS, Denise Meyers, Sponsor

**UNIT 40      ROOM # 264      Zoology      Grade 7 thru 11**

1. Atara Saunders, Grade 7      **The Effect of Low Calorie Diet on Alzheimers**  
Cedarbrook MS, Beth Kenna, Sponsor
2. Soo-Un Jeong, Grade 9      **Music is the Cure for Stressed Cats. What about the Science**  
Upper Dublin HS, Joanne Lilliendahl, Sponsor
3. Winslow Weiss, Grade 9      **The Molecular Evolution of Autotrophs**  
Upper Dublin HS, Brian Palme, Sponsor
4. Mikayla Fassler, Grade 10      **The Effects of Alcohol on Regeneration**  
Germantown Academy, Sarah Kesten, Sponsor
5. Lindsay Naber, Grade 10      **Effect of Ocean Acidification on Artemia franciscana**  
Germantown Academy, Sarah Kesten, Sponsor
6. Alex Smith, Grade 10      **An Investigation of Aphids and their Environment**  
Germantown Academy, Sarah Kesten, Sponsor
7. Jonathan Charendoff, Grade 11      **The Effect of Lowered pH, dissolved O2 and Increased Temp. o**  
Cheltenham HS, Rebecca Sheridan, Sponsor
8. Zackery Moyer, Grade 11      **Can Dark-eyed Juncos Smell Danger**  
Souderton Area SHS, Karen Frazier, Sponsor