



Hosted and sponsored by  
**The School of Natural Sciences and  
Mathematics**  
and  
**Stockton University**





School of Natural Sciences and Mathematics

P: 609.652.4546 • F: 609.626.5515

101 Vera King Farris Drive | Galloway NJ 08205-9441  
[stockton.edu](http://stockton.edu)

Date: March 15, 2025  
To: Participants in the 50<sup>th</sup> Annual Jersey Shore Science Fair  
From: Amanda Norvell, Dean of Natural Sciences and Mathematics  
Subject: Welcome to Stockton University

On behalf of President Joe Bertolino, Provost and Vice President for Academic Affairs Michael Palladino, and the faculty, staff and students in the School of Natural Sciences and Mathematics, I welcome you to our Galloway campus. We are excited to see such a robust group of student scientists who represent many of the region's schools. This is a big year for the Jersey Shore Science Fair-it is our 50<sup>th</sup> year and we couldn't be prouder to host this event. Thank you to all the participants, mentors, judges, and volunteers who make a day like this possible.

Congratulations to our future scientists. As you have worked on these projects, you have had the opportunity to learn about the key principles of the scientific method, to develop hypotheses and design experiments to test your predictions. I hope you have found tremendous satisfaction in overcoming the challenges scientists face, for example grappling with unexpected results. The skills you are developing are identical to those needed by researchers, scientists, and professionals around the world as we work to address the global challenges that we face, such as climate change or antibiotic resistance, that require STEM-based solutions.

As you are thinking about your future education, I would like to invite you back to visit the University during our spring Discover Stockton Open House events ([stockton.edu/admissions](http://stockton.edu/admissions)) on Sunday, March 23, 2025. We offer an array of innovative and forward-looking academic programs for undergraduate students, as well as for post-graduate education and certification. Undergraduate degree programs are offered in Applied Physics, Biochemistry/Molecular Biology, Biology, Chemistry, Computer Science, Environmental Science, Geology, Health Science, Marine Science, Mathematics, Nursing, Public Health, and Sustainability, as well as dual degrees in engineering, pharmacy and medicine with our university partners (Rutgers, Rowan and NJIT). Our graduate and doctoral degrees focus on disciplines such as Coastal Zone Management, Communications Disorders, Data Science and Strategic Analytics, Environmental Science, Nursing, Occupational Therapy, Physical Therapy, and Nursing Practice. In addition, we support a farm, arboretum, pinelands research reserve, and a fleet of coastal oceanographic vessels ran out of the Marine Field Station located on the waterfront in nearby Port Republic.

Please visit the Academic Affairs website ([stockton.edu/academic-affairs/academic-schools-programs](http://stockton.edu/academic-affairs/academic-schools-programs)) to learn more about our majors and how a Stockton education can help you reach your goals. Should you want to visit the campus to tour our science facilities, Marine Science and Environmental Field Station in nearby Port Republic, or meet our faculty and students, please feel free to contact the School of Natural Sciences and Mathematics office ([nams@stockton.edu](mailto:nams@stockton.edu)).

I commend you all on a job well done and hope you enjoy the rest of the day.

A handwritten signature in black ink that reads "Amanda Norvell".

EXIT TO PARKING  
LOT

**MIC**  
Loc # 237 - 258

**PHY**  
Loc # 259 - 281

**ZOO**  
Loc # 282 - 305

**TMP**  
Loc # 306 - 327

EXIT TO  
CAMPUS

**MED**  
Loc# 203 -  
236

**MAT**  
Loc # 192  
- 202

**ENV**  
Loc #  
153 -  
191

**ENG**  
Loc # 127 -  
152

**ESS**  
Loc #  
110 -  
126

**BLEACHERS**

**PLEASE READ THIS**

1. Projects must comply with ISEF rules, including;

NO liquids, chemicals, field samples, or tissues  
(plant, animal, human, etc.)-no living or field-  
collected samples or organisms for display

2. Use your location number (Loc #) to find your  
spot

3. There is no power available to any projects

**BLEACHERS**

EXIT TO PARKING  
LOT

**CSC**  
Loc # 103 - 109

**COM**  
Loc# 82 - 102

**CHM**  
Loc # 58 - 81

**BOT**  
Loc # 38 - 57

**BCH**  
Loc # 25- 37

**BSS**  
Loc # 1 - 24

**MAIN ENTRANCE**



# Contents

**All food Service and most appropriate areas for visitors to pass time during the 9:00 am to 12:00 pm judging sessions will be in the Campus Center.**

**All lunchtime Food Service will take place in the Campus Center.**

## **Interested in what Stockton has to offer? Then visit our tables in the Coffee House...**

The Admissions Office will offer a staffed table in the Coffee House area and campus tours at 10:30 AM and 12 PM. Guided tours are also available during the week. You can also visit us during our next open House on **Sunday March 23, 2025**. Call Admissions with questions or to schedule a tour 609-652-4261.

Information tables for the School of Natural Sciences and Mathematics and the Atlantic Cape Community College will be in the Coffee House area as well.

# Jersey Shore Science Fair Program

## March 15, 2025

### **7:45 – 8:45 am**

Project Registration – no earlier please

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### **7:45 – 9:00 am**

Safety inspection. **Displays must comply with ISEF regulations.**

Students, please wear registration badges and remain by your displays

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### **8:00 – 9:00 am**

Judges will meet in the Campus Center Event Room

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### **9:00 – 12:00 pm**

Project judging. Students must wear registration badges and remain by their projects until 12 noon. Judges have until noon to visit and/or revisit projects. In order to be evaluated, students must be present. If a student leaves to use the restroom, please tell the person next to you in case judges come by at that time.

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### **12:00 – 1:00 pm**

Project area opens to the public. **Student, please leave projects on display until 1:00 p.m.**

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### **1:00 – 1:15 pm**

Students may take down displays

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### **1:15 pm**

Awards Ceremony – All ages and categories, Sports Center

# Code of Conduct

*For teachers, relatives and friends of the participants and other guests:*

The Science Fair provides an opportunity for students to talk with judges about their science projects. For this to occur without distraction, it is important that, during the judging period, the judges and students be left undisturbed. Therefore, between 9:00 am and noon, while judging is taking place, everyone except the judges and the students are asked to leave the immediate judging area. Individuals having questions about the judging process are asked to bring those questions to the Judging Center in the Campus Center Event Room.

Students must wear registration badges and remain by their projects until 12 noon. Judges have until 12:00 PM to visit and/or revisit projects – in order to be evaluated students must be present. If a student leaves to use the restroom, please tell the person next to you in case judges come by at that time.

Thank you for your cooperation.

## JSSF Acknowledgments

**Dr. Amanda Norvell** – Dean, School of Natural Sciences and Mathematics, Stockton University

**Dr. Christine Schairer** – JSSF Director and Safety Officer, Stockton University

**Rosanne Weiss** – Chief Judge, Retired FAA

**Miguel Borbon**- Logistical Management, Stockton University

**Steve Evert**- Former Stockton University Representative and Logistical Management Stockton University

**Adriane Sicknick** – Media and Publication Specialist, Stockton University

**Lou Regan** –Web Developer, Stockton University

**Marie Jelinski** – Special awards and business operations

# Special Awards

The Jersey Shore Science Fair Committee and the School of Natural Sciences and Mathematics would like to acknowledge the following groups for providing special awards to the participants of the 48<sup>th</sup> annual Jersey Shore Science Fair:

**The Natural Science and Mathematics Department** – The NAMS Department awards gift certificates to the 1<sup>st</sup> place projects in the Upper-level divisions.

**Institute of Electronics and Electrical Engineers** – The IEEE and Women in Engineering (WIE) award special prizes to the top projects in computer science and/or engineering.

**The Paul Saraduke, Jr. Award** – The top upper-level physics project will receive an award made possible through a generous gift from the Saraduke family as a living memorial to Paul Saraduke, Jr. Paul was a member of the Stockton NAMS staff, and served regularly as a judge. This award is given in hopes that those that receive it will be encouraged to further pursue their interest in physics.

**American Chemical Society** – Awards two prizes to the projects in upper and intermediate chemistry divisions.

**Atlantic Cape Community College** – Provides an award to the top projects for Junior medicine and engineering categories.

**Save Barnegat Bay organization** will present an award for the top project representing Barnegat Bay. Save Barnegat Bay is a 45-year-old grassroots organization whose mission is to restore and protect the Barnegat Bay Ecosystem. Their environmental education programs strive to teach about Barnegat Bay and its conservation. Their campaigns engage everyone without the watershed to be more conscientious of how they are affecting the bay and its wildlife for the future.



# Schools in JSSF 2025

<b>Absegami High School</b>
<b>Academy of Allied Health and Science</b>
<b>Ambassador Christian Academy</b>
<b>Atlantic County Institute of Technology</b>
<b>Barnegat High School</b>
<b>Biotechnology High School</b>
<b>Bishop McHugh Regional Catholic School</b>
<b>Chelsea Heights elementary</b>
<b>Christian Brothers Academy</b>
<b>Colts Neck High School</b>
<b>Egg Harbor Township High School</b>
<b>Folsom Elementary School</b>
<b>Freehold High School</b>
<b>Galloway Township Middle School</b>
<b>High Technology High School</b>
<b>Holmdel High School</b>
<b>home-malhotra</b>
<b>home-prasad</b>
<b>Howell Middle School South</b>
<b>Lacey Township High School</b>
<b>Lakewood High School</b>
<b>Mainland Regional High School</b>
<b>Manalapan High School</b>
<b>Manalapan-Englishtown Middle School</b>
<b>Manasquan High School</b>
<b>Margate-Tigue Middle School</b>
<b>Marine Academy of Technology &amp; Environmental Sciences (MATES)</b>
<b>Marlboro Memorial Middle School</b>
<b>Matawan Regional HS</b>
<b>Monroe Township High School</b>
<b>Orme Home School</b>
<b>Pilgrim Academy</b>

<b>Ranney School</b>
<b>Rumson Fair Haven Regional High School</b>
<b>Smithville School</b>
<b>Sovereign Avenue School</b>
<b>Stanford Online High School</b>
<b>Texas Avenue School</b>
<b>The Marine Academy of Science and Technology (MAST-Sandy Hook)</b>
<b>Toms River High School East</b>
<b>Toms River High School North</b>
<b>Toms River High School South</b>
<b>Toms River Intermediate East</b>
<b>Toms River Intermediate North</b>
<b>Toms River Intermediate South</b>
<b>Trinity Academy</b>
<b>Wall High School</b>
<b>West Cape May Elementary School</b>
<b>William R. Satz Middle School</b>

# JSSF 2025 Judges and Affiliations

Rosanne Weiss	Atlantic Community College
Timothy Alexander, JD, MBA	Drexel University
Anna Alexander, LMFT	Atlantic County Democratic Committee
Armen R. Amirian	Gemological Institute of America (GIA)
Sumit Balgavhar	New Jersey Institute of Technology
William C Beard	Federal Aviation Administration (FAA)
Marie A Behnke	No Affiliation
Henry Behnke	No Affiliation
Dymtro Berbasov	Stockton University
Haniyah V Bey	Atlantic Cape Community College
Marium Bhatti	Stockton University
Gaurang M Bhavsar	RAPS ( Regulatory Affairs Professionals Society)
Andrew T Bove	Atlantic Cape Community College
Michael Breslin	Stockton University
Cheryl D Browne	LS TECHNOLOGIES
Karen Brundage-Johnson	Atlantic Cape Community College
Joseph F Burns	IEEE
Karyn A Camilo	Siegfried USA
Lynn S CATERSON, ESQ	American Association of University Women
Judith E Coburn	ACITech
Dick Colby	Stockton University
Dave Colucci	Stockton University
Gabriele H Coslop	ACITech
Dennis M Covello	Retired Educator- High School
Christine Covello	None
Jamie C Covello	State of New Jersey
Timothy J Cwik	Atlantic Cape Community College
Holly M Cyrus	FAA Tech Center AvSTEM
Gayle R Dabate	Federal Aviation Administration (FAA)
Maricela Delgadillo	New Jersey Water Environment Association (NJWEA)
Dianne T Dieterly	Atlantic Cape Community College
Lauren DiGiovanni	Atlantic Cape Community College
Maria P Doyle	Atlantic Cape Community College
Logan J Ferry	U.S. Navy
Michelle Fitzgerald	Egg Harbor Township High School
Kathleen Ghanavati	Retired
Richard A Goldberg	Mullica Township Schools
Rosmary Goldberg	Retired
James M Gorman	Retired Education coordinator for Operating Engineers
Darrell L Gray	Retired
Michael Hackett	Community College of Philadelphia
Azeb A Hailu	NAVSUP WSS
Grant Hamstra	Galloway Township Ambulance Squad
Shaileshbhai V Kaklotar	Amneal Pharmaceuticals Inc.
Alex Konkel	(No Affiliation)

Bhavinbhai G Lakhani	Project Controls Specialist at DACK Consulting Solutions, Inc
Scott M Larew	Kennedy/Jenks Consultants, Inc.
Shanan Levin	Federal Aviation Administration (FAA)
Kai Liu	LS TECHNOLOGIES
John E Livezey	Atlantic Cape Community College
Carrie Anne Lyons	New Jersey Water Environment Association (NJWEA)
Ed Mack	FAA Tech Center, retired
Vashi Mahadeo	Stockton University
Sirini Mandalapu	Federal Aviation Administration (FAA)
James R. Mauroff	Federal Aviation Administration (FAA)
Jolanta E Mazurkiewicz	New Jersey Water Environment Association (NJWEA)
Ryan McCourt	Egg Harbor Township High School
Lisa A McGeoch	Federal Aviation Administration (FAA)
Latoya Mcglone	Atlantic Cape Community College
David L Morlando	Retired
Sandra J Morlando	Retired
Hazel A Mueller	Stockton University
Gerhard Mueller	Stockton University
Craig M Mulhern, Jr	Stockton University
Sadie X Novak	Rutgers University
Juan E Ortiz	(No Affiliation)
Mark Palmer	Palmer Atlantic Properties, LLC
Amitkumar Patel	(No Affiliation)
Prakashkumar Patel	Pharmaceutical
Elizabeth Pollock	Stockton University
Joyce A Pratt	Atlantic County Democratic Committee
Madhu Punjabi	(No Affiliation)
Vikas K Rai	MSKCC
Marc Richard	Stockton University
Stacey M Rodenas	Galloway Township Ambulance Squad
Carolyn P Rush	no affiliation
Jehili A Sanchez	Stockton University
Brendan Santangelo	Camden County College
Christina G Savich	Atlantic Cape Community College
Kimberly A Scata	Duffy Law Group
Melanie Schroer	Stockton University
Vivek S Shah	no affiliation
Steve E Shenk	FAA Tech Center, retired
Mary Simpson	Atlantic Cape Community College
Kathleen Spaeth	Green Team Member and Master Gardener
Debra Sommers	Retired
Michael Suleiman	Atlantic County Democratic Committee
Lorraine Suleiman	Atlantic County Democratic Committee
Mahmoud Suliman	Wayne State University
Ashley Sullivan	Atlantic Cape Community College
John S Summerill	ATEC
Ann M Tinsley	Atlantic City School District

Joseph J Trout  
Naitik Verma  
Joan B Vicari  
Benita P Villar  
Erin E Wannan  
Ida M West Jones

Stockton University  
Green Team Member and Master Gardner  
Retired  
Stockton University  
Rowan University  
U.S. Navy

# Jersey Shore Science Fair 2025

## Participants & Projects

# Delaware Valley Science Fair Eligibility

The following winners of the Jersey Shore Science Fair will be eligible to attend the Delaware Valley Science Fair (DVSF) **Tuesday, April 1 through Thursday, April 3:**

Delaware Valley Science Fair (DVSF)  
Drexel University  
236 Randall Hall  
3141 Chestnut Street, Philadelphia, PA 19104  
www.dvsf.org

## The following awarded projects are eligible to attend DVSF:

### ***Juniors – 6-8 Grade***

1st and 2nd place only, all categories including teams

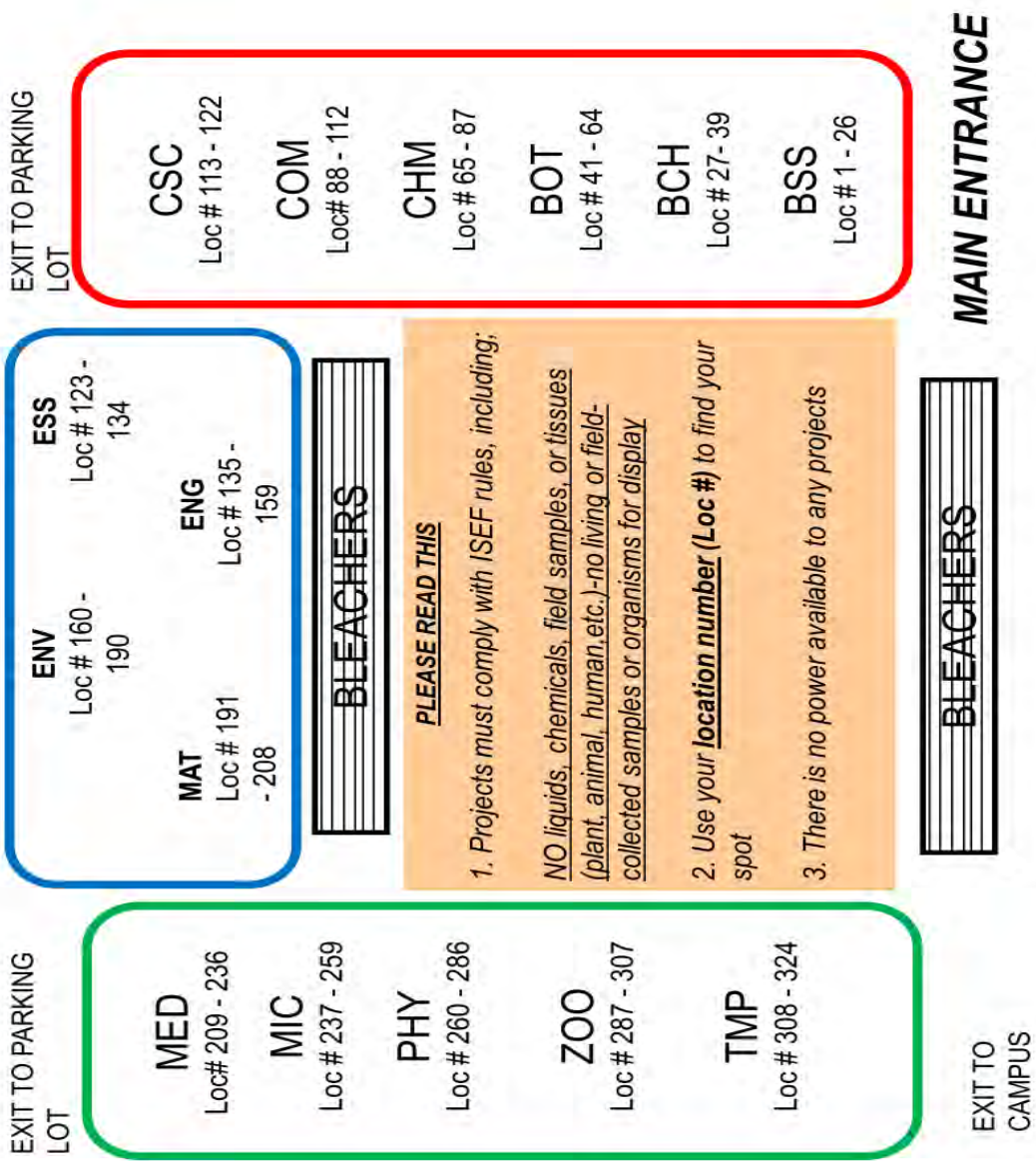
### ***Intermediate – 9-10 Grade***

1st, 2nd and 3rd place except Team category 1st place only

### ***Upper – 11-12 Grade***

1st, 2<sup>nd</sup>, and 3rd place except Team category 1st place only

***Set-up and event detail for the DVSF can be found on the JSSF webpage***





# JSSF 2025 Participating Projects

## Behavioral and Social Sciences - BSS

### Junior BSS

J BSS 1	Viviana Arroyo	Do You See What I See? A Visual Search Gender Race
J BSS 2	Elijah Anwar	Behavior of Birds
J BSS 3	Arissa Nawal	Classical Conditioning
J BSS 4	Jamie Nguyen	Concentration Chaos! How Do Different Sounds Affect Our Ability to Concentrate?
J BSS 5	Fotini Thalassinou	Does Color Affect Taste

### Intermediate BSS

I BSS 1	Siya Malhotra	Teen Stress Comparison from Different Generations
I BSS 2	Rhea Dudwala	Magnetic Orientation in Northern Diamondback Terrapin Hatchlings
I BSS 3	Addison Vincelli	The Neuroscience of Memory: A Study of the Correlation Between Working Memory Stimulus and Theta Wave Activity
I BSS 4	Zain Voegborlo	Does One's Personality Provide Bias Towards Color, Shape, Fonts or Advertising as a Whole?

### Upper BSS

U BSS 1	Olivia White	Digital Learning Tools: Enhancing Equity in Education
U BSS 3	Saketh Satti	Accounting for Linguistic Diversity when Detecting Mental Illnesses through Social Media Posts
U BSS 4	Dia Avalur	Enhancing Communication and Social Interaction in Individuals with Landau-Kleffner Syndrome Using Machine Learning-Based EEG Predictions
U BSS 6	Elena Chu	Olfactory Senses in Correlation with Academic Performance
U BSS 7	Samantha Volfman	A Comparative Analysis of Productivity with and without Music
U BSS 9	Joel D'Souza	Cognify – Neural network for EEG-based cognitive state detection.
U BSS 10	Reagan Haley	The Effect of Priming on the Human Mind and How Suggestion Influences Perception
U BSS 12	Talia Sophinos	Eye Tracking With and Without Visual Impairments
U BSS 13	Minna Liang	Lack of Participation in Women's Golf
U BSS14	Christopher Hall	The Old, the New, and the Computer: A comparative study between human coaching styles and computer generated styles to improve swimmer technique
U BSS 15	Vivi Zeng	Music Performance Anxiety in Student Actors and Musicians
U BSS 16	Saathvik Gubbala	A Novel Ensemble Learning Approach Integrating Structural MRI Data for Accurate ADHD Diagnosis and Behavioral Assessment
U BSS 17	Ayon Hajra	Investigating Gut-Brain Axis Modulation in Drosophila melanogaster Through Spectrophotometric and Behavioral Analysis of Dietary Effects
U BSS 18	Jane Dale	Investigating the Effects of Social Media on Adolescent Loneliness and Well-Being

# Biochemistry - BCH

## Junior BCH

J BCH 1	Jordyn Kelly	Eye See You: A Comprehensive Look at Eye Color Among a Family Tree
J BCH 2	Aathmika Bala	How Does Hormone Ethylene Affect the Ripening Process of an Apple?
J BCH 3	Izdihar Stella	What Fruity DNA!
J BCH 5	Luna Choc-Perez	Are Humans Genetically Related to Strawberries?
J BCH 6	Lucas Keddiss	How Do Different Measures of Salinity Affect the Lacto-Fermentation of Cucumbers

## Intermediate BCH

I BCH 1	Owen Soheily	Analyzing the Effects of Antioxidants of Oxidative Stress
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## Upper BCH

U BCH 1	Sydney Cohen	Phytosphingosine as a Treatment against <i>Candida albicans</i> in <i>Galleria mellonella</i> larvae
U BCH 2	Ben Hersch	The Effect of Naturally Occurring MyoD Regulators on Planarian Regeneration
U BCH 3	Eric Vincent Bernardo	Food Waste To Energy
U BCH 4	Zoey Smith	Synthesizing Gastrodermal Tissue of Bionic Corals with Temperature Acclimated Symbionts
U BCH 5	Chloe Wnek	An Alternative Suture Method Synthesized from Chitosan Based Marine Invertebrates
U BCH 6	Divyam Dave	Computational Discovery of Quorum Sensing Inhibitors Among FDA-Approved Drugs
U BCH 7	Navya Shah	Engineering Optimization of <i>S. omiyaensis</i> Trypsin for Type I and IV Collagen Hydrolysis Specificity

# Botany – BOT

## Junior BOT

J BOT 1	Devansh Gupta	Which Liquid Supports Plant Growth The Most?
J BOT 3	Manav Surana	How Does Different Types of Light Affect the Growth of a Plant?
J BOT 4	Takshil Patel	What Light Affects Vitamin C In An Orange The Most?
J BOT 5	Adam Schulein	Does Color Affect How Much Water Celery Absorbs?
J BOT 6	Tatiana Rios-Ortiz	Thirsty Plants: How Do Different Liquids Affect the Growth Rate of Plants?
J BOT 7	Jasmine Shell	Musical Marigolds
J BOT 8	Viviana Pecchia	Grooving to Grow From the Power of Music
J BOT 9	McKenzie May	Bloom Boosters

## Intermediate BOT

I BOT 1	Jenna Lin	Creating Efficient Methods for Sustainably Growing Bean Sprouts Indoors for Food Deserts
I BOT 2	Akshit Gupta	The Effects of Varying Amounts of Gibberellic Acid (GA3) on the Stem Diameter and Height of a <i>Tagetes Erecta</i> when Influenced by Thermotropism

I BOT 3	Ava Tarditi	Temporal Changes in Water Quality and Phytoplankton Communities within Inlets of Barnegat Bay
I BOT 4	Gillian Alcid	Using the Invasive Plant Phragmites ( <i>Phragmites australis</i> ) to Create an Eco-Friendly Fabric
I BOT 6	Kanata Sasaki	The Analysis and Impact of Using Chlorophyll Liquid at Different Life Cycles of the Wisconsin Fast Plant.

## Upper BOT

U BOT 2	Marianne Sackinger	The Effect of Different Water Levels on the Closing Time of <i>Mimosa pudica</i>
U BOT 4	Lilian Boyd	An Assessment of the Health of <i>Zostera marina</i> Under Varying Light Intensities
U BOT 6	Jeff Rey	Rain dependency
U BOT 7	Samay Prabhu	Plantara: A Deep Ensemble Framework for Real-Time Stress Quantification & Adaptive Intervention via Multi-Modal Approaches in <i>Solanum lycopersicum</i>
U BOT 8	Amalie Werner	DNA and Forestry Analysis of <i>Pinus rigida</i> and Pygmy Pines in New Jersey
U BOT 9	Surya Gedipudi	AquaplantScan: A Novel AI-Powered Framework for Aquatic Plant Species Detection and Invasion Prediction

## Chemistry - CHM

### Junior CHM

J CHM 1	Parnitha sri Pati	Acetaminophen Resolvinester conjugate is an alternative to Acetaminophen
J CHM 2	Aiden Kim	How Much Carbamide is Needed to Hit (or get closest to) Recommended Ice Pack Temperatures?
J CHM 3	Akhil Velampalli	Dull to Dazzling: Testing Change in Copper Corrosion Using Acidic and Basic Liquids
J CHM 4	Vidisha Patel	Which type of liquid makes the tallest gummy bear?
J CHM 5	Desire Iyanoye	Best Bubble Brand
J CHM 6	Selena Nguyen	Does hair color affect the strength of hair after chemical lightening?
J CHM 7	Parinitha Pati	Acetaminophen Resolvin ester conjugate is an Hepato protecting Acetaminophen prodrug
J CHM 8	Henry Travis	Fire vs. Snake
J CHM 9	Thomas Keating	Melting Melty Metal
J CHM 10	Krish Patel	Unveiling the Rainbow: Analyzing Different Light Sources with a Homemade Spectroscope
J CHM 11	Kaia Leeds	Acetone vs Non-Acetone Nail Polish Remover: Which one is more effective?
J CHM 12	Kathleen Dorrick	Rice Rice Baby

### Intermediate CHM

I CHM 1	Acim Savich	Determining the Best Type of Artificial Sports Grass by Chemically Analyzing Run Off
I CHM 2	Rehan Pagarkar	The Effect of Varying pH Levels on the Efficiency of Calcium Alginate-Encapsulated Catalase Enzymes in Hydrogen Peroxide Solutions
I CHM 3	Melia Lange	The Effects of Element Combinations on the Crystallization of Silk Flowers
I CHM 4	Reese Larew	Impacts of Different Storage Methods on the Longevity of Sodium Bicarbonate
I CHM 5	Kyan Smith	What is the Strongest Bioplastic?

## Upper CHM

U CHM 1	Zachary Ciappa	Synthesis of Chitosan Nanoparticles as a Method to Regulate Cyanobacterial Abundance in Aquatic Environments
U CHM 2	Cleatus Oakes	Comparative Analysis of Sodium Polyacrylate and Polyacrylamide for Nanofiltration Applications
U CHM 3	Kelly Yuan	Development and Drug Release Analysis of Long-acting Cariprazine Micro- and Nano-crystals
U CHM 4	Kriti Srivastava	Continuation of Integration and Optimization of Cu <sub>2</sub> O and TiN Nanoparticles for Enhanced Solar Cell Efficiency
U CHM 5	Sravanti Manikonda	Analyzing the Effect of Varying Temperatures on the Degradation of 2-Acetoxybenzoic acid Into Salicylic Acid

## Computer - COM

### Junior COM

J COM 1	Nithura Arun	How Can Training an AI Model Affect Its Ability to Detect Plant Diseases?
J COM 2	Morgan Kirschenbaum	The Struggle is Real! Can You Tell the Difference Between Real and Fake?
J COM 3	Liam Marshall	Which Programming Language can do Math Equations the Fastest?
J COM 4	Jared Dennis	Did You See That? Sensing Objects with Code
J COM 5	Mahati Kashyap	A Comparison of Machine Learning-Based Models for Cardiovascular Disease Prediction

### Intermediate COM

I COM 4	Elizabeth Whittle	Comparison of U.S. Wind Power and Fossil Fuel Energy Capacity and Land Usage
I COM 5	Saanvi Chandra	Deep Learning Model for Multi-Class Classification of Optical Coherence Tomography Data in Retinal Disease Detection
I COM 6	Sehee Cho	Predicting Land Surface Temperature in Urban Heat Islands Using a Convolutional Neural Network

### Upper COM

U COM 1	Ethan Bodner	Can machine learning models reliably predict the FDA approval outcome of drugs based on minimal data points?
U COM 2	Emily Sierra	AI Detection + Digital Literacy
U COM 5	Jake Matthews	Dogecoin Price Prediction with Machine Learning
U COM 7	Luksh Malhotra	Autonomous Drone Navigation with Computer Vision
U COM 10	Maya Bhasin	Prediction of Next-Day Fire Spread With Weather Data and NDVI: Comparing Different Models
U COM 15	Ming Zhang	Modular Swarm Ship System for Generalized Maritime Tasking
U COM 17	Tvisha Prasad	Federating Learning for Medical Datasets
U COM 18	Jophy Lin	Advancing Diabetic Retinopathy Detection: Reducing Misdiagnosis Using Deep Ensemble Learning and Uncertainty Estimation (Year 2)
U COM 19	Rahul Patel	Sparse Autoencoders Reveal Universal Feature Spaces Across Large Language Models
U COM 20	Shreyans Shah	Youtube Videos for Public Health Literacy? A Machine Learning Approach to Curate Patient Safety Videos
U COM 21	Justin Okorie'	MapGan: Iterative Uncertainty Map for Refined Image-to-Image Translation
U COM 22	Niyel Hassan	Integrative Multiomics Analysis for Alzheimer's Disease Subtyping and Biomarker Discovery

## Consumer Science - CSC

### Junior CSC

J CSC 1	Simran Kalia	What is the effect of different types of moisturizers on skin hydration levels?
J CSC 2	Travis Schieferstein	Which Wick Withers Fastest?
J CSC 3	Helena Sibilila	Waterclor Separation
J CSC 4	Sadie Benson	The Most Effective Way to Waterproof Uggs
J CSC 5	Victoria Hasenbein	Brighten Your Smile
J CSC 6	Ella Paszewicz	Wash Away the Stain
J CSC 7	Vanessa Sahl	Cleaner vs Carpet

## Earth and Space Science - ESS

### Junior ESS

J ESS 1	Vandita Gabbita	What Effect Does Microgravity Have on Seed Germination?
J ESS 2	Ishita Rastogi	How does the concentration of acetic acid in ocean water affect the rate at which seashells deteriorate?
J ESS 3	Matthew Vander Pyl	The Weather App Showdown
J ESS 4	Sophia Chorpennig	Beneath our Feet: Deciphering Soil's pH-Altering Effects on Water

### Intermediate ESS

I ESS 1	Averyl Xu	Automated Detection and Velocity Estimation of Celestial Objects using Astronomical Images
I ESS 2	Maya Baireddy	Analysis and Modeling of Gravitational Waves from Binary Black Hole Mergers
I ESS 3	Kaitlyn Weitzell-Sanchez	Investigating the Relationship Between Microplastics and Dissolved Solids in Rain Water
I ESS 4	Sriyan Yarlagadda	Using Different Machine Learning Models to Predict Exoplanets and Comparing their Accuracy

### Upper ESS

U ESS 1	Sophia Gao	Refining the Transit Ephemeris of Exoplanet Candidate TOI-3726: Ground-Based Follow-Up Observations Improve Period Precision by Order of Magnitude
U ESS 2	Adrit Sikdar	Astroscan - A deep learning pipeline for the classification and habitability evaluation of exoplanets
U ESS 3	Suchit Basineni	El Niño–Southern Oscillation and Atlantic Multi-decadal Oscillation Impact on Hurricanes in the North Atlantic Basin
U ESS 4	John Pedersen	Relationship between temperature (celsius), size (mm), and swim speed (mm/s) <i>Brachionus rotundiformus</i> .
U ESS 5	Morgan Zylinski	Analyzing the Biogeochemical Properties of Threatened Salt Marsh Habitats in an Altered Estuarine Ecosystem
U ESS 6	John Chang	Satellite-Based System for Arsenic Contamination Detection
U ESS 7	Wesley Wan	Developing a Machine Learning Model for Accurate Local Temperature Prediction
U ESS 8	Rahul Gupta	HELIOS: Hybrid Enhanced Learning for Integrated Operational Sun-Weather Forecasting

## Engineering - ENG

J ENG 1	Omuwa Izah	Determining the Effectiveness of a Ultrasonic, Auditory and Tactile Feedback Systems for the Blind and Visually Impaired
J ENG 2	Evan Roth	Can a miniature wind turbine produce enough energy to make a light illuminate a small room?
J ENG 3	Agrim Jain	How accurately can an Arduino-based weather station, combined with a machine learning algorithm, predict short-term weather conditions?
J ENG 4	Jack Harr	Sock Shackles
J ENG 5	Sophia Bui	Which WOOD You Use? Testing the Strength of Wood Types in Bridge Construction
J ENG 6	Isabella Salazar Snell	To Light or Not to Light...
J ENG 7	Alexa Askins	Withstanding the Game
J ENG 8	Fenway Carson	Rain, Rain Go Away

## Intermediate ENG

I ENG 1	Andrei Mitchell	Shoes That Make The Transition To Barefoot Shoes Smooth And Injury-Free
I ENG 2	Ryan Hsu	A Wearable Exoskeleton for Reducing Lumbar Load
I ENG 3	Dmytro Osyka	The Impact of Air Cooling on The Dimensional Accuracy of Components Printed With Polyethylene Terephthalate Glycol Using Fused Deposition
I ENG 4	Nicholas Gilbert	How Stretching Propellers can Improve Aircraft Efficiency While Reducing Drawbacks of Large Propellers
I ENG 5	Melanie Haug	Shoes that Utilize the Repulsive Force of Neodymium Grade n52 Magnets to Levitate

## Upper ENG

U ENG 1	Yuxuan Hong	Efficiency Comparison and Optimization of Direct Drive and Gear Motors in Robotic Applications
U ENG 2	Anabelle Ahteck	SkeleSens: An Acoustic-Based Sensor Using a Hidden Markov Model for Hand Gesture Recognition
U ENG 3	Henry Cantor	Novel method for concussion detection in high school athletes
U ENG 5	Daivik Jajoo	Optimization and Reliability of analog resistive switching memory in neuromorphic computing
U ENG 6	Ryan Macom	A Material Change Due to Spiking Problems in Cross Country Spikes
U ENG 7	Aarav Upadhyay	Yevla: A Novel Cost-Effective UAV for Search and Rescue Operations
U ENG 9	Samantha Capili	The Development of a Hydroelectric Turbine System Powered by Running Water in Storm Drains
U ENG 10	Raphael Oliveira	Water Filtration
U ENG 11	Sunklap Schwarma	AquaGuard: A Multimodal Device for Real-Time Drowning Detection in Swimming Pools
U ENG 12	Mags Kelleher	A.M.P.L.I.F.Y.: Augmented Modular Prosthetic for Long-term Individualized Functionality
U ENG 13	Suvit Asnani	Efficacy of a Custom 3-D Printed Patellar Support to Reduce Patellar Mobility
U ENG 14	Siddharth Shankar	Using Analog Inputs to Simplify Complex Computations

## Environmental Science – ENV

### Junior ENV

J ENV 1	Hope Swansinger	Clam Clean-up Crew
J ENV 2	Aanya Desai	How does flocculation clean up drinking water?
J ENV 3	Gabriella Iznjuk	How Effective are Storm Drain Designs in Preventing Plastic Pollution?
J ENV 4	Rithika Mannem	Which Filtration System Leads to the Best Drinking Water?

J ENV 5	Noah Lessig	How Does Temperature Affect The Reproduction of Dinoflagellates?
J ENV 6	Ryder Chiappisi	Let's Break it Down: The Real Truth Behind Reusable Straws
J ENV 7	Ava Abdrabouh	Will Forky Survive the Biodegradable Breakdown?
J ENV 8	Talia Salomone	Can a Dozen Make a Difference?
J ENV 9	Shawn Gubbala	BitterGuard:Plastic with a purpose
J ENV 10	Emma Abdrabouh	Water Bout Purity
J ENV 11	Isabella Bove	How Does Shellfish Filtration Affect Water Purity?
J ENV 12	Evelyn Slaven	Does Water Temperature Affect the Growth of an Aquatic Plant?
J ENV 13	Jacob Brotsker	Sand Dune Erosion
J ENV 14	Elly Robinson	Bye Bye Birdie

### Intermediate ENV

I ENV 1	Zayan Keezhana	Effect of the Herbicide Dicamba on Green Algae <i>Volvox barberi</i> Growth Rate
I ENV 2	Kiersten Cygal	Effects of differing salt concentrations in local environments on populations of <i>Dugesia tigrina</i> according to their tolerance and behavior
I ENV 3	Ashwin Kolli	Effects of Salicylic Acid on the Regeneration Rate of <i>Dugesia tigrina</i>
I ENV 4	Kellyn Miller	Water Quality Analysis of a Densely Populated Lagoonal System in a Fragile Ecosystem
I ENV 5	Tyler Steinbrunn	Analyzing Ornithological Biodiversity in Waffle Wetlands in Barnegat Bay, NJ
I ENV 6	Alexandra Kuzloski	Comparing the Number of Microplastics found in Jellyfish from Different Areas Around Barnegat Bay

### Upper ENVL

U ENV 1	Sabrina Lo	Developing Sustainable and Efficient Dyeing Methods for Eco-Friendly Fashion
U ENV 2	Erin Misa	Effects Of Dumping Industrial Waste Into A Polluted River On The Growth Of Bacteria
U ENV 3	Rohan Avalur	Multi-Modal Climate and Remote Sensing Approach to Forecast Harmful Algal Blooms
U ENV 5	Arjun Patel	Effect of the Herbicide Dicamba on <i>Drosophila Melanogaster</i>
U ENV 7	Dante Kanterezhi-Gatto	Recycling Eutrophication
U ENV 9	Declan Reibrich	A Confined Aquifer Algorithm Finding Suitable Areas For Water Extraction Facilities.
U ENV 11	Maya Abdelaal	Utilizing Moving Bed Biofilm Reactor (MBBR) Technology to Biofilter Natural Water Systems
U ENV 12	Urvi Patel	Impact of Dissolved Organic Carbon on UV-C Bacterial Inactivation Efficacy of Water
U ENV 13	Aarthi Gunasekaran	A Natural Cost-Effective Solution to Pharmaceutical Contamination in Drinking Water
U ENV 14	Shea Doherty	The Impact Laundry Cycles have on the Amount of Microplastics Released Into our Water
U ENV 15	Benjamin Smelyansky	The Effects of Sand Replenishment Projects on the Water and Sand of New Jersey Beaches
U ENV 16	Arjun Paturkar	Relationship Between Temperature and Movement Speed of Ants ( <i>Dorymyrmex bureni</i> )
U ENV 17	Hamza Akbahr	The study of curcumin on <i>drosophila melanogaster</i>
U ENV 18	Kyle Wlazlowski	Assessment of Dissolved Inorganic Nitrogen Across Local Canal Systems Utilizing Standard Processes
U ENV 19	Lily Nadler	Analyzing Water Quality and Anisoptera Nymph Abundance in Northwest Ocean County Lakes
U ENV 20	Jasmine Guo	Predicting Extreme Weather Events with Machine Learning
U ENV 21	Micaela Marrinhas	Comparison of Gallic Acid Content Across Tree Species Native to the New Jersey Pine Barrens

## Mathematics - MAT

### Junior MAT

J MAT 1	Kavya P Patel	Which is more likely? Rolling a sum of at least 18 with 3 ten-sided dice or 5 six-sided dice
J MAT 3	Dominick Troiani	What is the most effective sequence of moves to solve a Rubix cube in the fastest time?
J MAT 4	Kavya B Patel	The Probability Puzzle
J MAT 5	Jaxon Gazia	Facing the Dice: Exploring Fairness and Randomness

### Intermediate MAT

I MAT 1	Rishil Patel	Exploring the Dynamics of Circle Inversion and Its Effects on the Pappus Chain Theorem
I MAT 2	Scott Young	Examining the Pacific Decadal Oscillation and Atlantic Multidecadal Oscillation Correlation

### Upper MAT

U MAT 2	Vasudevan Govardhanen	Formal Verification of Elliptic Curve Cryptography Systems Using a Typed Lambda Calculus
U MAT 3	Abhiansh Pathak	Using Economic Indicators To Create a Predictive Model of Future CO2 Emissions in the United States
U MAT 4	Ishaan Shriram	Predicting the Effect of Environmental Factors on Air Pollution via Mathematical Modeling and Predictive Analysis of the Air Quality Index
U MAT 5	Samay Patel	Modeling the Impact of Environmental Toxins on Cellular Mutation Rates

## Medicine and Health - MED

### Junior MED

J MED 1	Hamza Atchukatla	How can Trisodium Citrate work as an Anticoagulant?
J MED 2	Akshaya Velampalli	Why Can't We Just Swallow Insulin Pills
J MED 3	Iyanoluwa Ayannusi	Steady Vibe: Revolutionizing Parkinson's Through the Study of Rehabilitation Therapy Glove
J MED 4	Maya Famelio	Rapid Relief: How Fast Do Pain Relievers Really Work?
J MED 6	Samantha Steigerwalt	Battle of the Balms

### Immediate MED

I MED 2	Shiv Patel	The Effects of Varying Levels of <i>C. cyminum</i> on the Regeneration of Cells in <i>Dugesia Tigrina</i>
I MED 3	Mustafa Tanyel	Effect of Fatty Acid Supplementation on Alzheimer's Disease in <i>C. elegans</i>
I MED 4	Lorelei Gaus	Effect of Various Collagen Protein Supplements and a Red Light Source on <i>Dugesia Tigrina</i> Head Blastema Regeneration Rates
I MED 5	Vedant Awasthi	The Impact of Thiamine Supplementation on Behavioral Hallmarks in <i>Drosophila melanogaster</i> with Huntington's Disease
I MED 6	Daniel Chang	Exploring Deep Learning in Dysarthric Speech for Potential Clinical Applications
I MED 8	Jerry Huang	Effect of Exposure to Sub-Freezing Temperature on Memory Degradation in <i>Dugesia tigrina</i>
I MED 9	Jay Desai	Automated Detection and Classification of Thoracic Pathologies in Digital Radiography using ResNet Architecture
I MED 10	Shreena Desai	Investigating Cross-Linking Effects on Bioplastic Stability for Biomedical Applications



## Upper MED

U MED 1	Rushyukta Nelabhotla	Lichen Planus
U MED 2	Jordyn Hansel	A CRISPR-based approach to targeting a pathogenic TLR7 gene variant in systemic lupus erythematosus
U MED 3	Marissa Flores	How Effective Are Preventative Concussion Headbands?
U MED 5	Tatianna Febles-Perez	The Benefits of Proton Radiation Therapy over Traditional Photon Therapy
U MED 6	Vincent Li	Effect of NSAIDs on Ovary Size in Piwi-NT Mutants as a Metric of Stem Cell Proliferation
U MED 9	Jordyn Hansel	A CRISPR-based approach to targeting a pathogenic TLR7 gene variant in systemic lupus erythematosus
U MED 10	Siddharth Kedharnath	HeartSense: An Ensemble AI System for Cardiovascular Risk Prediction and Early Intervention
U MED 11	Haley Ryan	Investigating Nicotinamide Mononucleotide's Impact on Piwi Pathways and Germline Stem Cell Dynamics in Drosophila To Address Reproductive Aging
U MED 12	Isabelle Parga	Brain Imaging Effect on the Research of Alzheimer's Disease
U MED 13	Jessica Lowe	The Correlation Between Types of Consumption At Infancy And Childhood Leukemia
U MED 15	Emily Kim	The Effects of Phenytoin on Germline Stem Cell Health in Wild-Type drosophila melanogaster
U MED 16	Guy Manor	How the Amount of Protein Consumed Effects Level of Perceived Soreness After a Workout
U MED 18	Emersyn Freund	Impact of Age on Visual Reaction Time
U MED 19	Annabel Zheng	A comparative study on whether chicken skin or gelatin is a better human skin substitute to measure moisture content
U MED 20	Jason Wang	Using Deep Learning to Diagnose Glaucoma
U MED 21	Rishith Shah	Tumor Classification via AI
U MED 22	Shaurya Srivastava	Comparison of Long Short-Term Memory Neural Network, Random Forest, and SEIRD Models for H5N1 Spread in the United States
U MED 23	Henry Billington	Sleep Correlation to Watt Production in a Lifting Environment
U MED 24	Addif Bondy	Haploinsufficiency of lysosomal enzyme genes in Alzheimer's disease
U MED 25	Sunkalp Chandra	Detection of Age-Related Macular Degeneration (AMD) using Retinal AI Foundation Models

## Microbiology - MIC

### Junior MIC

J MIC 1	Gabriel Slowinski	What is the dirtiest surface in the house?
J MIC 2	Bryce Dunn	The Five Second Myth: Does Bacteria Follow the Clock?
J MIC 3	Tessa D'Alessandris	Light it Up! Do Different Light Variations Affect Bacterial Growth?

### Intermediate MIC

I MIC 1	Julia Mason	A Study of the Growth of Staphylococcus epidermidis after Independent and Combination Treatments of Red Light, Chlorophyll, and Acetic Acid Therapy
I MIC 2	Caden Cregg-Wedmore	The Effect of Curcumin on the Efficiency of Chloramphenicol Terminating Pseudomonas fluorescens
I MIC 3	Mischa Jain	The effect of salicylic acid and curcumin on the proliferation of S. epidermidis
I MIC 4	Jody Laura Gan	The impact of different concentrations of isopropanol alcohol on Rhodococcus rhodochrous's ability to degrade Polyethylene Terephthalate
I MIC 5	Timothy Saks	Analysis of Monoterpene Fragrances' Effects on the Proliferation of Staphylococcus epidermidis

I MIC 6	Alexandra Kanterezhi-Gatto	Bacillus subtilis Degradation of Polyurethane Plastic
I MIC 7	Jay Patel	Determining if Antiseptics Affect the Antibiotic Resistance of Escherichia coli in Association with Ampicillin
I MIC 8	Angela Xu	The Combination of Ellagic Acid and Melatonin for the Enhancement of Antiproliferative Induction in Escherichia coli

### Upper MIC

U MIC 1	Bisola Fasakin	Comparison of Reproductive Health and Microbiome of Two Females
U MIC 2	Kiera Blum	The Effect of Probiotics on Disease Prevention in the Gut Microbiome in High School Students
U MIC 3	Dorisa Sun	A Boost of Dopamine?: Blue light on alpha-synuclein aggregation in C. elegans and D. melanogaster dopaminergic neurons
U MIC 4	Sapna Patel	The effects of ionizing radiation on the antimicrobial efficacy of fluoride toothpaste against the oral pathogen Enterococcus faecalis
U MIC 5	Treya Ghosh	Computational analysis of metagenomic data to understand intra-amniotic inflammation associated with pregnancy outcomes
U MIC 6	Natalie McGovern	The Impact of Microbial Activity on Pollution and Climate Change
U MIC 7	Melanie Cantor	Resistance to Enrofloxacin, Novobiocin, and Kanamycin of Staphylococcus epidermidis via Conjugation by Escherichia coli.
U MIC 8	Isabella Morgan	An Analysis of Carbon Sequestration and Inorganic Nitrogen Bioavailability using Photosynthetic Microorganisms Under Varying Conditions
U MIC 9	Joanne Chen	The Effects of the Combination of Raffinose, Gingerol, and Shogool, on the Growth of Streptococcus Mutant at Different Concentrations
U MIC 10	Srujan Nair	Achromobacter xylosoxidans modulates Pseudomonas aeruginosa virulence through a multi-target mechanism of competition

## Physics - PHY

### Junior PHY

J PHY 1	Aaron Patel	Does Shapes Affect How Fast An Object Falls?
J PHY 2	Anay Patel	How magnets are affected by temperature.
J PHY 3	Pranav Krishnan	How does color affect the absorption of light?
J PHY 4	Saveer Jambhekar	How do sounds affect human hearing and surrounding objects?
J PHY 5	Dina Abdelaal	Can Different Colors of a Light Bulb Produce a Different Temperature?
J PHY 6	Jocelyn Perry	Does the surface affect distance?
J PHY 7	Eshan Siddik	Rolling vs Sliding
J PHY 8	Charles Becica	Can You Sort It?
J PHY 9	Ifeoluwa Ayannusi	Mirror Near, Power Clear: Can Reflection Boost the Gear
J PHY 10	Heet Brahmhatt	Investigating the Impact of Magnet Arrangement on Gauss Rifle Velocity
J PHY 11	Paige Peterson	Chutes and Landings
J PHY 12	Kylie Wolcott	Flinging Physics

### Intermediate PHY

I PHY 1	Arushi Sood	Evaluating the Obscuring Effects of Textiles on Acrylic and CR-39 Lenses
I PHY 2	Alex Oh	How Topological Surface States Affect Thermoelectric Properties, Measured in (Bi1-xInx)2Se3 Thin Films Using Arduino and LabVIEW

I PHY 3	Eric Guo	Enhancing Sensitivity in Quantum Optomechanical Systems through Quantum Control
I PHY 4	David Pevzner	THE NUMEROV METHOD: NUMERICALLY COMPUTING ELECTRON DISTRIBUTION WITHIN HYDROGEN ATOMS

### Upper PHY

U PHY 1	Rohan Arni	Analysis of the Structure of Fast Radio Burst Signals Using Variational Autoencoders
U PHY 2	Ritwik Singh	Adaptive Blade Pitch Control: A Novel Approach to Increasing Wind Turbine Efficiency
U PHY 3	Arth Thummar	A Comparative Analysis of Mother Wavelets in Discrete Wavelet Transform for Optimizing Detection in EEG Signals"
U PHY 4	Maxim Guale	Optimizing Wireless Energy Transfer for Sustainable Applications
U PHY 5	Jonathan Lin	Leveraging Acoustic Physics and AI to Enhance Music Quality and Streaming Economics for Artists

## Zoology - ZOO

### Junior ZOO

J ZOO 1	Rita Escajadilo	Magnetic Marvels: Unlocking the Secret Behind Planaria's Magnetic Regeneration
J ZOO 2	Alliyana Rios-Ortiz	Lights On Lights Off...What Do Guppies Prefer?
J ZOO 3	Adam Kassenoff	Does the threat of containment change the effectiveness of a hydrophobic barrier for Physarum polycephalum?
J ZOO 4	Arabella Cristelo	Chilly Caterpillars: A Test of Temperatures
J ZOO 5	Lily Voss	Racing Hearts: Daphnia Heart Rates vs. Energy Drink Exposure

### Intermediate ZOO

I ZOO 1	Lucas Brinster	Assessment of Cold Shock as a Modulator of Gustatory Plasticity in <i>C. elegans</i>
I ZOO 2	Aumrit Khanwani	Effect of Electrolyte Chemical Compounds in Common Sports Drinks (Trisodium Citrate, Monopotassium Phosphate, and Brilliant Blue FCF) on Planaria Reg
I ZOO 3	Joshua Reyes	The Effect of Brief Exposure to White Light on the Phototactic Response of Brown Planaria ( <i>Dugesia tigrina</i> ) Across Different Spring Water pH Levels
I ZOO 5	Arianna Zilioli	A Study Into The Effect of Natural Pesticides on <i>Vanessa cardui</i> and Their Choice of Diet
I ZOO 6	Aarush Shah	5-HTP Induced in Planarians' Effects on Cellular Regeneration
I ZOO 7	Isabella Sadsad	The Effects of Varying Humidity on the Properties of Spider Silk
I ZOO 8	Isabel Kopsaftis	Pattern and Contrast Analysis of <i>Malaclemys terrapin</i> Hatchlings in the Ultraviolet Spectrum
I ZOO 9	Summer Sprague	Testing the Effectiveness of Varied Natural Substrates for Coral Reef Restoration
I ZOO 11	Alex Mazurczyk	The Effect of Vibration on Planarian Regeneration Speed
I ZOO 12	Tia Thomas	Frequency and Type of Phytoplankton Species Consumed by <i>Crassostrea virginica</i> in Barnegat Bay, NJ
I ZOO 13	Hritika Dorai	Effect Ultraviolet Light, Blue Light, and Infrared Light has on the number of eggs produced by the <i>Drosophila melanogaster</i>

### Upper ZOO

U ZOO 1	Vinil Polepalli	A Novel Engineered Hub-and-Spoke Robotic System to Seek and Suppress Spotted Lanternfly Populations
U ZOO 2	Naveen Jimenez	Prenatal Alcohol Exposure and its Effects on Reproduction Rate and Offspring Size of <i>Drosophila melanogaster</i>

U ZOO 5	Priyasha Sinha	Neurons vs. Neural Networks: Comparing the Learning Curves of <i>Mus musculus</i> and AI through Maze Navigation
U ZOO 6	Cassara Yannarelli	Sublethal Effects, as a Result of Increasing Temperature, on Growth and Morphology of <i>Epinephelus striatus</i> Larvae
U ZOO 7	Nicholas Billows	Relationship Between Water Temperature (Celsius) and Swim Speed (mm/s) on <i>Brachionus rotundiformis</i> .
U ZOO 8	Anna Werner	The Viability of Using <i>Apis mellifera carnica</i> to Detect Covid
U ZOO 9	Violet Fischer	An Assessment of Copper Exposure on the Reproduction and Condition of <i>Nassarius obsoletus</i>

## Team Project - TMP

### Junior TMP

J TMP 1	Krishna Goswami, Zoe Grey Jacinto	Which Are More Fragile; Igneous or Sedimentary Rocks?
J TMP 2	Reanne Artezuela, Zoey Polhemus	The effects of competition on the different Myers-Briggs types.
J TMP 3	Annelis Santos, Areesha Tanoli	Can plants grow without soil?
J TMP 4	Erisha Nawar, Maseeha Yousaf	Does the type of acid determine how fast an object rusts?
J TMP 5	Hannah Mooney, Benjamin Witte	"Water Glass Music", the Effect of Densities in Sound.
J TMP 6	Shahriyar Amaan, Mohammed Taqi	Quantum Computing Explained

### Intermediate TMP

I TMP 1	Aditi Paschimiray, Bhavya Patel, Selena Wang	The Antibacterial Effects of Ayurvedic Herbs (Turmeric, Saffron, Ginger) on <i>Staphylococcus epidermidis</i> and Their Potential Applications
I TMP 2	Ivan Pan, Aryan Patel	Do natural surfactants help enhance drug solubility?

### Upper TMP

U TMP 1	Sophia Cambria, Ruby Gaun	The Percent of Matching Bifurcation Points in Fingerprint Patterns of Identical Twins versus Fraternal Twins
U TMP 2	Finn Carlston, Christopher Economou	The Effect of Footwear on Vertical Jump Height of High School Football Players
U TMP 3	Nicholas Llanos, Martin Ramirez Larios	Investigating the Effects of Artificial Food Dye on <i>Drosophila Melanogaster</i>
U TMP 4	Hannah Daley, Rebecca Goodes	The Effect of Sleep Duration On Waking Blood Glucose in Type I Diabetics
U TMP 5	James Kiley, Alex Olan	The Effect Of Pre-Bedtime Phone Usage on Quality of Sleep: Analyzing Sleep Stages, Efficiency, and Sleep Performance in Teenagers
U TMP 6	Cate Sullivan, Juliette Weisbord	Effects of Hydrogen Peroxide on Plant Growth
U TMP 7	Zach Halpern, Bobby Tamashunas	The Effect of Different Temperatures on the Preservation of 5 Different Types of Bread with Varying Ingredients and Preservatives
U TMP 8	Roman Cea, Armen Krikorian	The Physiological and Psychological Effects of Cold Showers
U TMP 9	Amdrew Casazza, John Duffy	The Influence of the Time of Day on Highschool Students' Cognitive Performance

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U TMP 10	Ava Boyle, Mia Sullivan	Assessing Fecal Coliform Sources and Contamination Along Jeffrey's Creek, Barnegat Bay, New Jersey
U TMP 11	Lillian Cole, Abigail Jones	Influence of Land Development on Marsh Soil Dynamics in Barnegat Bay, NJ
U TMP 12	Avery Larew, Aarya Sood	INVESTIGATING THE ROLE OF UVB IN THE GROWTH OF MALACLEMYS TERRAPIN TERRAPIN

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