

PRISMS

Princeton International School
of Mathematics and Science

Design By Cynthia Yuan '26



PRISMS SUMMER PROGRAM

Dates: June 24 - July 3, 2024

Grades: rising 6-8th

Camp Hours: 8:30 AM - 3:30 PM

Fee: \$1,350

About Us

PRISMS's Summer Program offers engaging and rigorous courses and group activities to develop an interest in science and a spirit of discovery.

Why Are We Different

- ★ **Challenging Curriculum** - We challenge students with rigorous curriculum taught in English, small class sizes, and personalized and interactive learning.
- ★ **Top-notch Equipment** - Students understand and operate cutting-edge lab equipment to enrich their hands-on experience and hone their critical-thinking skills.
- ★ **Experienced and Caring Faculty** - Throughout the program, our teachers build a loving and supportive with their students.
- ★ **Mix & Match** - Students get to choose one AM course and one PM course that most interest them and delve deep into two subjects of their own choice.



Daily Schedule

8:00 - 8:30 AM	Drop-off
8:30 - 11:15 AM	Morning Classes
11:15 - 12:30 PM	Lunch Break
12:30 - 2:45 PM	Afternoon Classes
3:00 - 3:30 PM	House Event
3:30 - 4:00 PM	Pick-up

Early drop-off and late pick-up are available.₂

What's the Matter? Chemistry!



Morning Class (8:30 - 11:15 AM) (FULL)

Afternoon Class (12:30 - 2:45 PM)

Course Description

What makes the colors of fireworks? How do vehicle airbags work? How do batteries work? How do cakes rise? How is evidence collected from crime scenes? How do we check if water is safe to drink? At the heart of these, the answer is chemistry! We'll explore curious phenomena around us like these, and how our eyes are opened to the wows from learning chemistry concepts and hands-on experiments. Chemistry is a superstar in making things happen!



Instructor Introduction

Dr. Randy Weintraub transitioned to science teaching after 25 years in the agricultural and pharmaceutical industries working as research scientist and team leader for environmental and metabolic fate studies of pesticides and drugs. A New Jersey-licensed secondary education teacher, Dr. Weintraub now teaches courses in chemistry, the environmental sciences and nutrition and is passionate about inspiring leaders and scientists of the future.

Dr. Weintraub earned bachelor's, masters and doctoral degrees in Food Science and Nutrition/Environmental Chemistry from the University of Florida, where his research examined human absorption and metabolism of citrus flavonoids and environmental fate of the soil nematicide, ethylene dibromide. His professional and community roles included Princeton Section of the American Chemical Society Chair, Rowan College Science Slam Festival committee member/presenter, Rowan College at Burlington County and Mercer County Community College adjunct faculty and West Windsor Environmental Committee member. Dr. Weintraub enjoys healthy cooking, photography, golf and tennis. He encourages fitness, having completed 21 marathons.



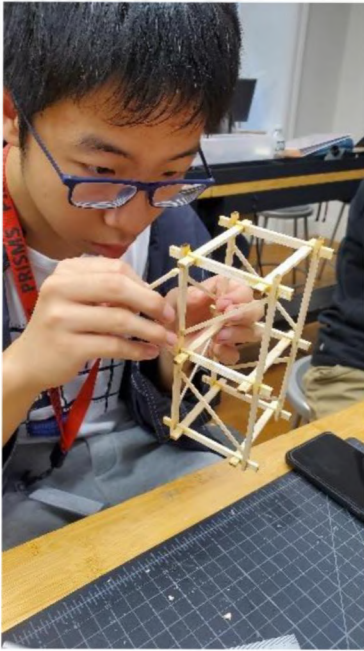
The Sky's the Limit!



Morning Class (8:30 - 11:45 AM)

Course Description

Ever look to the sun or the stars and think, "I want to launch objects into the sky?" Well, now is your chance! Over the course of this week, you will learn about some of the fundamental physics and engineering principles that govern flight and rocketry, design and build your own model airplane, as well as build multiple model rockets and launch them into the sky. Bring sunglasses, because we will be looking up most of the time.



Backwoods Engineering

Afternoon Class (12:30 - 2:45 PM)

Course Description

Before the industrial revolution of the 19th century, everything was designed, cut and built by hand. During this week, we will "unplug" our electronics and take a trip to the past to learn some old-fashioned engineering methods. You will build things such as trestle bridges, a signal tower, a catapult, a cable-stayed bridge, and a raft using wooden spars and ropes. You will learn the principles of stable structures, stress, and load distribution, as well as the six simple machines, how to use them, and how they permeate every aspect of our daily lives.

The Sky's the Limit! & Backwoods Engineering



Instructor Introduction

Mr. George Heim completed his Bachelor's degree in Physics at Moravian University, with minors in Computer Science and Mathematics and then went on to earn his Master's degree in Computer Engineering at the New Jersey Institute of Technology in 2020. Prior to working at PRISMS, Mr. Heim worked as a camp counselor and a high school math and science tutor. At PRISMS, he teaches Applied Engineering 2, Industrial Design, and is also a research mentor for the Applied Physics research lab.



Biology Innovators

Afternoon Class (12:30 - 2:45 PM)

Course Description

Welcome to Bio Innovators Camp, where young minds become scientists, artists, and environmental stewards all in one! At Bio Innovators, students embark on a thrilling journey into the world of biotechnology and genetics.

From extracting DNA from everyday foods to creating unique works of art using bacteria or yeast, our students dive into hands-on experiments that blend science and creativity. Students will learn about sustainability by creating their own bioplastics from plants. The adventure continues with genetic engineering experiments, where budding scientists learn to manipulate genes for a better understanding of the living world.

Instructor Introduction

Mr. Steven Brownstein received his Bachelor's degree from Pennsylvania State University and his Master's Degree in Biological Sciences from Rutgers University. He has 10 years of experience in education which included teaching high school Biology courses, as well as, developing STEM programming for after school programs in the Philadelphia area. He has a passion for community-based education including developing assistive technology for the disability's community. At PRISMS, he teaches Honors Biology and Neuroscience. He is also a research mentor for the neuroscience lab.



Math and Art: Hands on Connections

Morning Class (8:30 - 11:15 AM)
Afternoon Class (12:30 - 2:45 PM)



Course Description

In this class, students will use math as a starting point to create interesting visual design and musical rhythmic patterns. For the first hour of each day, students will develop and refine a knowledge of mathematical functions and their corresponding graphs as the basis for creating visual artwork through *Desmos*. The second hour, students will explore mathematical functions and patterns as the basis for creating fun and engaging rhythmic drumming patterns. Students will develop drumming skills by engaging in drum circle ensemble playing, and explore and create together patterns inspired by our study of math.

Instructor Introduction

Dr. Andrew Bleckner has a Ph.D. in music composition from the University of Pennsylvania, and a Masters in Mathematics Education from Chestnut Hill College. As a composer, Dr. Bleckner has been recognized as an important voice in the composition of new music, and has received composition awards, grants, and fellowships from ASCAP, the Mid-Atlantic Arts Foundation, the American Composers Forum, the University of Pennsylvania, and the MacDowell Colony. Dr. Bleckner has also received commissions from the Singing City Choir, The Commonwealth Youthchoirs, Dale Warland Singers, Westminster Choir College, the Virginia Beach Symphony, Bryn Mawr Presbyterian Church, Virginia Wesleyan University, and Voces Novae et Antiquae. In addition to his choral works, Dr. Bleckner's music has been performed by ensembles such as the American Composers Orchestra and the Civic Orchestra of Chicago.

Dr. Bleckner has been a high school math teacher for the past 11 years. He enjoys making the math classroom a safe and fun learning environment where the magic and beauty of math are explored. He is excited to lead hands-on projects in art and music this summer at PRISMS that are inspired by concepts and ideas in mathematics.



“Who Am I?": Memory and Imagination at Play

Morning Class (8:30 - 11:15 AM)

Course Description

Memories make us who we are. What is your earliest memory? Why do you remember some people and not others, some incidents or places and not others? What does that say about you? Writing about your memories will help you discover who you are.

In this course you will read short excerpts of memories about family, friendship, school, holidays, and even pets! You will discover how authors use their imaginations and techniques to turn memories into art.

As a writer, you will work on fun and challenging activities to jog your memories and inspire your writing. You will dig into the details and nuances of memory, as we discuss how to create vivid characters and settings. You will draft, revise, edit, and polish several vignettes about your memories. You'll also practice giving and receiving feedback in workshops. At the end of the program, you will leave with a portfolio of writing, showcasing your skills and achievements.

Instructor Introduction

Dr. Juan Yu earned her BA, MA and PHD degrees in English Language and Literature and an MFA in Creative Writing. A novelist, Dr. Yu has years of experience in teaching English language, literature, and culture to students of all ages. Dr. Yu loves working with students and is dedicated to fostering a dynamic and supportive space for young writers.

