



ILLINOIS BIOGENEUS



Nanotechnology Lab Wheeling High School

Éanna Hauck presenting her research at the Illinois BioGENEius Challenge in Chicago

INTRODUCTION

-In the modern world, our population is growing at a rate that the fertile land cannot match.
-One-third of the earth's soils are degraded, with the number climbing each day. (Nations, 2022)

PROBLEM

The world's soils can not sustain the growing population. A solution is needed to increase the available arable soil. ZnO nanoparticles could possibly be used to increase plant growth in nutrient-depleted soil.

HYPOTHESIS

If spinach is treated with zinc-oxide nanoparticles in a foliar spray, the plants grown in nutrient-depleted soil will show improved growth in height, fresh weight, and chlorophyll content.

MATERIALS/ PROCEDURE

Main Materials:

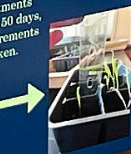
zinc-oxide nanoparticles
in water.
sulfate powder
all-purpose soil
mix
Sand
each seeds



Planting trays with 6 cells were filled with a Dirt/Sand mixture. Then, each cell had 3 seeds planted.



each plants were
own in planting
, and watered
measured every
day. After 35
treatments
After 50 days,
measurements
re taken.



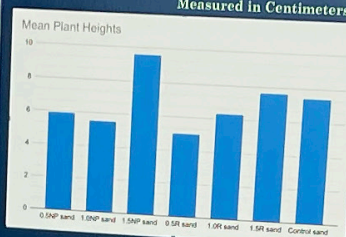
Efficacy of Zinc-Oxide as a Nano Fertilizer for Nutrient-Depleted Soil

Éanna Hauck

Wheeling High School

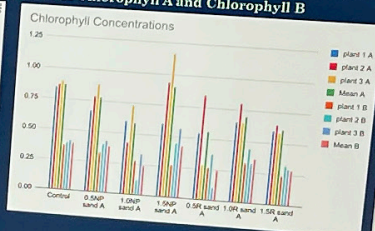
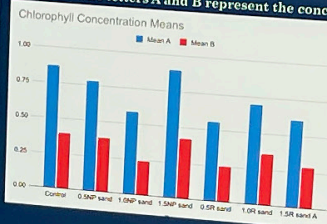
Height

Measured in Centimeters, from tallest leaf of each plant.



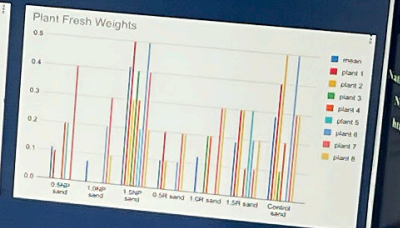
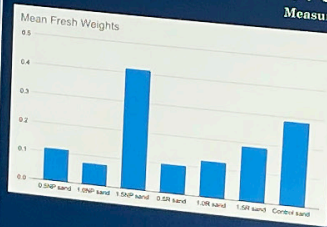
Chlorophyll A and B Concentrations

The letters A and B represent the concentrations of Chlorophyll A and Chlorophyll B



Weight

Measured in Grams



In this issue:

TDP Magazine Welcome Letter	2
2025-2026 TDP Student Leadership Committee	3-6
TDP Student Leadership Retreat	7-8

Getting to Know D214's Unique Educational Spaces	9-10
2025 Summer Course Recap	11-14
2026 AP Exam Dates: May 4-15	15



Anthony Miocic



Laura Shepin

Welcome to the fall edition of the TDP Magazine!

We have seven new members on the Talent Development Program (TDP) Student Leadership Committee and we're excited to introduce them to you in this issue. Along with the veteran leaders, these new committee members will be asked to share their unique viewpoints and experiences as District 214 students. Their insights will help guide the district's enrichment programming in the future.

Also in this edition of the magazine, we'll continue our exploration of District 214's innovative and inspiring educational spaces. In prior issues, we've profiled 110 West (a business incubator space at Buffalo Grove High School), the Mustang Media Room at Rolling Meadows High School, Elk Grove High School's Advanced Manufacturing/Fabrication Lab, and the Health Science Classroom at John Hersey High School. Now, we'll learn more about Wheeling High School's Nanotechnology Lab.

We'll also report on some of last summer's TDP summer enrichment courses. These classes allowed students to explore passions, have fun, and make friends, all while learning new skills like cooking on a budget, playing the guitar, or filmmaking.

Best regards,

Anthony Miocic

■ anthony.miocic@d214.org

Laura Shepin

■ laura.shepin@d214.org

D214 Talent Development Program Coordinators

TDP Student Leadership Committee

The TDP Student Leadership Committee is a student-led board that is composed of one junior and one senior class member from each of the District 214 high schools. Students meet four times per year in order to provide a student perspective on TDP programming. Each member was selected to serve on this committee. Students were identified by building administration for their success in various advanced classes and leadership potential.

Mission Statement:
“To communicate to students and families the rigor of advanced education while assisting students in their pursuit of success.”



Please help us welcome them to their leadership role this year!

2025-26 Committee Members

- Buffalo Grove High School**
Aarav Patel – Senior | 2026
Owen Erickson – Junior | 2027
- Elk Grove High School**
Reagan Malone – Senior | 2026
Alanis Rivera – Junior | 2027
- John Hersey High School**
Stefan Rios-Popovic – Senior | 2026
Lila Nanisetty – Junior | 2027

- Prospect High School**
Siena Mirandola – Senior | 2026
Chase Koury – Junior | 2027
- Rolling Meadows High School**
Logan Hammond – Senior | 2026
Molly Dudle – Junior | 2027
- Wheeling High School**
Yaretzi Lozano – Senior | 2026
Odelia Gbekou – Junior | 2027

Continued on next page.

2025-26 TDP Student Leadership Committee



Question:

Why I'm excited to serve on the 2025-26 District 214 TDP Student Leadership Committee:

Buffalo Grove High School



► AARAV PATEL

Co-curricular Activities: Math Team (Captain), Coding Team (Captain), Marching Band (Soloist, Section Leader), Symphony Orchestra (Soloist), District Honors Orchestra (Soloist), Wind Ensemble, District Honor Band, Academic Challenge for Engineering and Science Team, Scholastic Bowl, Robotics Club, Coding Club

- I'm excited to serve on the TDP Student Leadership Committee because it's nice to be able to meet new people throughout the district. It's also exciting to be able to help people through AP Ready Night. Serving on this committee is a great way to contribute to the community while developing my leadership skills.



► OWEN ERICKSON

Co-curricular Activities: Varsity Football (Captain), Varsity Baseball, Blue Crew (Junior President), CAP/D25 Afterschool Program (Activity Leader)

- I am excited to be someone that people can turn to when they want an advocate for change within the district.

Elk Grove High School



► REAGAN MALONE

Co-curricular Activities: Varsity Cross Country and Track, Health Occupation Student Association (Treasurer), Gren Nation (Leader and Social Media Administrator), Student Ambassador, Student Athletic Leadership Team, Lifeguard and Swim Coach.

- I am excited to work with people from different schools to connect with each other and see what insight we can offer from a student's perspective!



► ALANIS RIVERA

Co-curricular Activities: Varsity Flag Football, Varsity Track and Field, Pro Swim Academy (Customer Service Representative)

- I'm excited to serve on the District 214 Leadership Committee because I believe everyone deserves the opportunity to challenge themselves and become better versions of themselves.



2025-26 TDP Student Leadership Committee (continued)



Question:

Why are you excited to serve on the 2025-26 District 214 TDP Student Leadership Committee?

John Hersey High School



► STEFAN RIOS-POPOVIC

Co-curricular Activities: Jewel-Osco (Home Shopper)

- I am excited to serve on the TDP committee because I feel like it is a great way to share ideas for improvement across the district from the perspective of a student rather than a teacher or administrator.



► LILA NANISSETTY

Co-curricular Activities: Marching Band (Section Leader), Symphonic Band, Scrubs Club, Student Council, Bowling Team, Science Olympiad, Peer Tutor, Animal Shelter (Volunteer), Good Neighbors Network (Volunteer)

- I am so thankful for being selected for this opportunity to take on this leadership role and to represent my school. I am excited to meet students from around the district and to work with other representatives to discuss the future of the Talent Development Program.

Prospect High School



► SIENA MIRANDOLA

Co-curricular Activities: Art Club, Associated Student Body, Service Club, Prospect Gives Back, National Honor Society, Knightmedia

- I am very excited to serve on the 2025-26 District 214 TDP Student Leadership Committee to support my fellow classmates in academically challenging classes. I also can't wait to develop the TDP community and to help students access opportunities to thrive beyond the classroom.



► CHASE KOURY

Co-curricular Activities: Varsity Lacrosse (Captain), DECA, Club Lacrosse, Service Club, Operation Snowball, Ultimate Frisbee, Pickleball Club (Founder), Internship (Finance Department, City of Rolling Meadows), Cortland's Garage (Busboy)

- I am excited to be part of TDP so I am able to give an insight on AP and college level courses teachers might not hear all of the time. I am ready to change how advanced classes will look for the better and make them more manageable.

2025-26 TDP Student Leadership Committee (continued)



Question:

Why are you excited to serve on the 2025-26 District 214 TDP Student Leadership Committee?

Rolling Meadows High School



► LOGAN HAMMOND

Co-curricular Activities: Rotary Interact, Student Council, Robot Rumble, Peer Tutor, Scholastic Bowl, Francesca's (Host)

- I am excited to represent my school in the Talent Development Program because I not only get the opportunity to help others but also to show my skills as a leader.



► MOLLY DUDLE

Co-curricular Activities: DECA, Class Council, Varsity Soccer, Club Soccer, Comet Custard

- I am excited to meet and work with other people from the district to help others learn more about what TDP is!

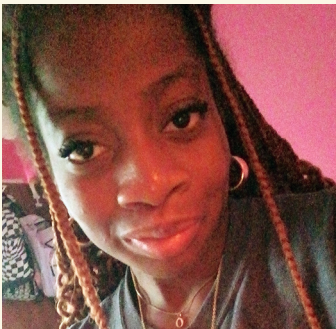
Wheeling High School



► YARETZI LOZANO

Co-curricular Activities: Math Team, Mock Trial, Debate, National Honor Society, Marching Band (Section Leader), District Honors Orchestra, Musical, Band Council (President), SEL Committee

- I am excited to participate in a leadership role through TDP. Being part of this organization allows me to contribute to a team that values initiative, collaboration, and positive impact. I'm eager to bring my energy, ideas, and commitment to the role, and to learn from others while helping to lead and inspire those around me.



► ODELIA GBEKOU

Co-curricular Activities: Cat Pack, Winter Cheer, Softball Team

- I'm excited to serve on the 2025-26 TDP Student Leadership Committee because I can help represent students and maybe make their voices heard.

TDP Student Leadership Retreat



Members of the TDP Student Leadership Committee were able to enjoy glorious summer-like weather when they gathered for their annual fall retreat. The morning began with an outing to Topgolf; students engaged in friendly competition and got to know each other by sharing stories about college visits, exchanging tips about the college application process, and discussing summer jobs and school internships. In the afternoon, the group reconvened at Forest View Educational Center and participated in a wide-ranging conversation on topics such as how to better prepare students for success in AP classes, the implications of AI in the classroom, and concerns about mobile phone use.

See additional photos on page 8.



TDP Student Leadership Retreat (continued)



Getting to Know D214's Unique Educational Spaces

District 214 is committed to providing students with exceptional learning opportunities that support their college and career readiness. To enrich these experiences, all District 214 schools feature innovative learning spaces that foster creativity, collaboration, and engagement in pathway-aligned curriculum. To learn more about these learning spaces, in this issue we'll explore **Wheeling High School's exciting Nanotechnology Lab.**



Nanotechnology Lab Wheeling High School

Opened in 2013, the Nanotechnology Lab feels like a professional space for conducting research. It is outfitted with state-of-the-art equipment: two scanning electron microscopes, two atomic force microscopes, two scanning tunneling microscopes, a gold sputter coater, and a 3D optical surface profiler for imaging surface topography and surface roughness. This cutting-edge equipment affords students the opportunity to investigate substances down to the nano and atomic scale; access to this kind of highly specialized equipment is something few high schools across the country offer.

Students in the class Honors Nanotechnology first learn about what the field of nanotechnology is, how the equipment in the Nano Lab works, and what it can do. Once they've decided on their research topics, students make observations with

their eyes. Then, they go even deeper, and use the Nano Lab's equipment to examine how the structure of substances on a very small scale impacts their function. Students also learn how to discover gaps in current research and then work to fill those gaps with their own, original studies. One group last year created a novel synthesis for a self-healing dextran hydrogel coating to prevent bone implant corrosion. This year, students are fine tuning that research and will present it for publication in a scientific journal.

The students working in the Nano Lab are afforded a real-world experience. They are forced to learn patience and resilience as sometimes materials are difficult to image and experiments fail; students sometimes have to redesign and repeat their work. This hard work is worth it, however, as Wheeling students achieve very high levels of success in

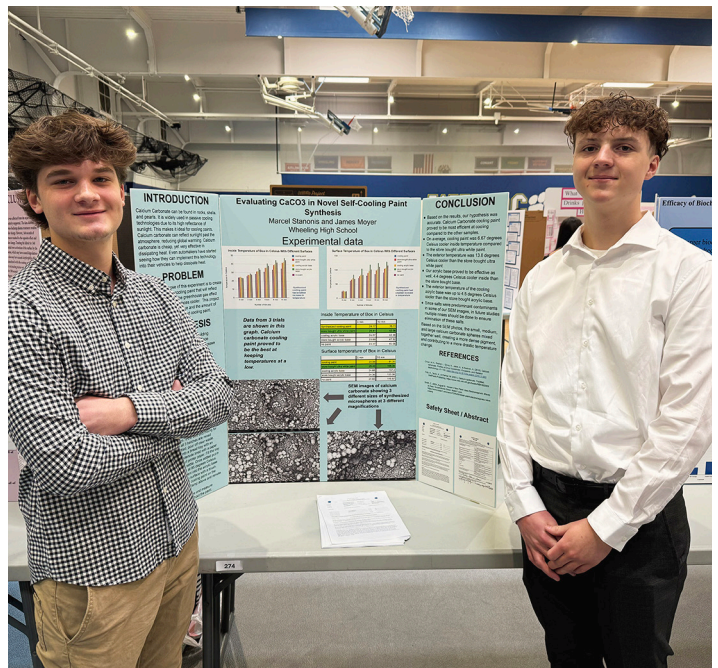
Nanotechnology Lab Wheeling High School (continued)

regional and state competitions. Last year, all 18 student projects won golds at regional level competition, and WHS received all golds at the state competition, as well. Students won many cash awards for best-in-category engineering, biochemistry, and pediatric cancer research, to name just a few. WHS also has had several projects chosen as semi-finalists in the BioGENEius Illinois Challenge, with one project earning 2nd place and an \$800 award. That same project was also chosen for the Regeneron International Science and Engineering Fair (ISEF), an elite competition attended by students

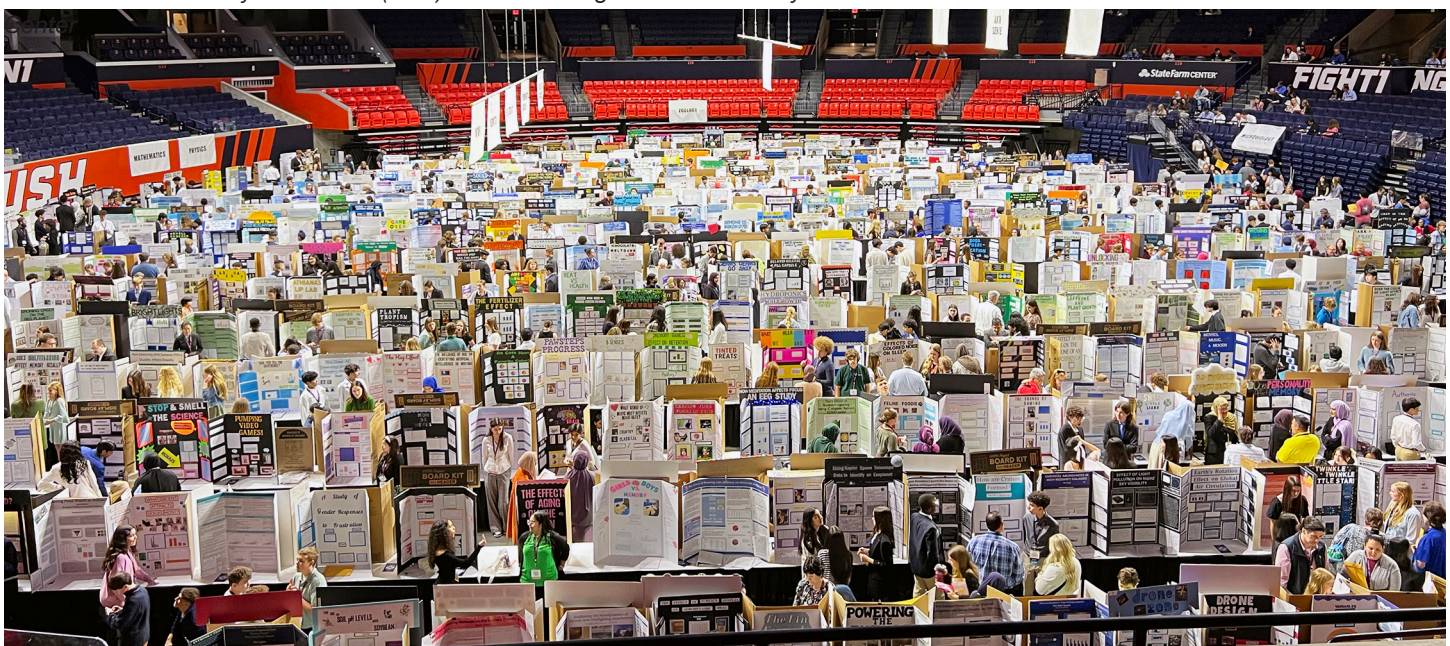
chosen from 75 countries around the world. Another one of WHS's projects was the only project chosen to represent Illinois in the U.S. Stockholm Junior Water Prize competition, with an all-expense paid trip to the three-day competition in June.

Students who experience the Nano Lab are grateful for this unique experience. Not only are many inspired to pursue majors such as environmental science, engineering, and marine biology, they leave WHS with the technical skills, the scientific mindset, and the determination to achieve success in the STEM research world.

from left to right: Jenny Dawson, James Moyer and Marcel Stanonis at the Illinois Junior Academy of Science (IJAS) State Challenge



Illinois Junior Academy of Science (IJAS) State Challenge at the University of Illinois State Farm



TDP Summer Recap

Students from throughout District 214 enjoyed the TDP Summer Experience where they learned new skills, practiced teamwork, had fun, and formed new friendships. Here's a look back at some of the unique and engaging classes offered.

Reality Style Cooking

Teacher: Tracy Dudzik (JHHS)

Always exciting, Reality Style Cooking challenged students to learn new techniques and to demonstrate their culinary prowess. Competitions focusing on cupcakes, homemade stuffed crust pizzas, and cookies tested each team's skills and creativity. The winning cookie recipe was a blueberry cream cheese confection that was elevated with a cream cheese drizzle topping. On the final day, students participated in the Iron Chef Competition. With just 50 minutes to plan, cook, and plate their food, teams had to create a dish with the secret ingredient of ground beef. The winning team earned the title of Iron Chef Champions by whipping up delicious homemade tacos featuring sautéed green peppers and onions, refried beans, and a custom taco seasoning blend. The dish was beautifully garnished with fresh limes, cilantro, sour cream, and a dash of sriracha sauce.



Cooking on a Budget

Teacher: Karen Zeug (FVEC)

Cooking on a Budget was a Summer Experience class designed to teach students how to prepare a shopping list, comparison shop, understand unit pricing, follow recipes, eliminate food waste, and substitute ingredients when necessary. Participants practiced these skills by cooking a delicious dessert for 12 people that only cost \$4.56 to make, preparing pancakes from items already found in the pantry, and making a budget-friendly "Stretch Meal" with pasta and chicken that provided a full meal and leftovers for the next class. The culminating event was the Great Budget Cookoff in which three teams of students competed to make the most complete, healthy, and appealing meal with only \$25.00 to spend.



TDP Summer Recap (continued)



Becoming a Multimedia Storyteller

Teacher: Jason Block (PHS)

In Becoming a Multimedia Storyteller, students were able to experience a variety of story forms, including recording and editing podcasts and writing breaking news stories. Their week culminated in putting their newly learned skills to the test by creating photo stories about the Reality Style Cooking course that was taking place the same week. Students took a variety of photos during their visit to the cooking class, showing their knowledge of the rule of thirds, point of view, and zoom, all while also interviewing the young chefs and their teacher so they could write detailed captions. The new multimedia storytellers also learned how to identify a newsworthy story, how to write a lede, and how to “stack” a story, among many other foundational media skills.

Guitar

Teacher: Jen Troiano (PHS)

In this Summer Experience class, students had the opportunity to engage in making music. Participants learned finger picking as well as how to tune their instruments and read notes. The new musicians progressed quickly, learning over ten chords in four short days. These chords were used to perform a number of songs, such as the Beatles’ mournful “Eleanor Rigby,” Ben E. King’s classic “Stand By Me,” and The Cranberries’ intense protest song “Zombie.”



Filmmaking 101

Teacher: Kevin Modelski (EGHS)

In this class, attendees explored the art of storytelling through visuals and audio while learning the fundamentals of framing camera shots to enhance narrative impact. They experimented with lighting, color, and creative techniques, drawing inspiration from their own experiences as movie-watchers to develop a unique style and voice. Working collaboratively, students pitched story ideas, wrote scripts, created storyboards, filmed and edited footage, and exported their short films to share with the class. Finally, they presented their videos and reflected on the different filmmaking techniques used throughout the process.



TDP Summer Recap (continued)

All Creatures Great and Small: A Look into Veterinary Science

Teacher: Kirsten Eubanks (RMHS)

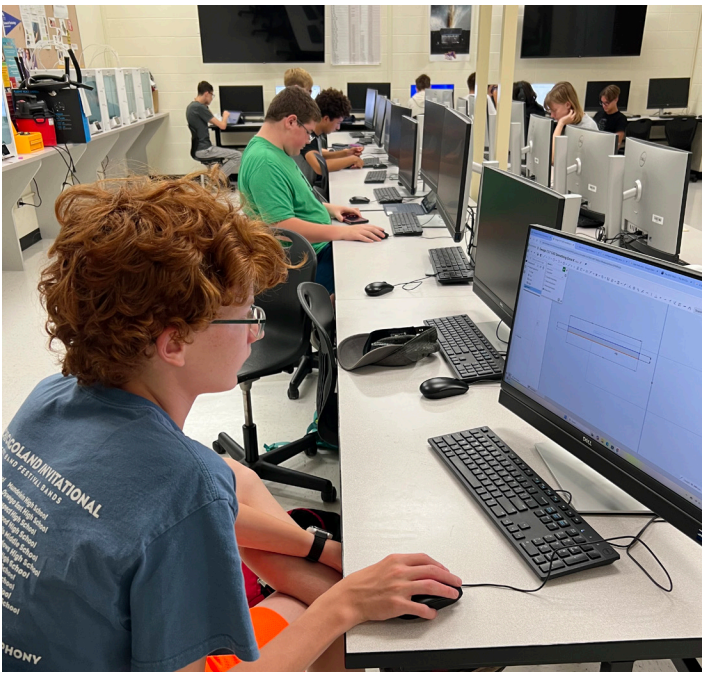
Students learned about some of the key exams completed in the veterinary clinic, including how to perform a physical exam using a stethoscope and pen lights, how to draw blood from a fake dog leg using syringes, and how to properly perform a fecal float and fecal smear to check for parasites. For hands-on experience, participants completed a physical exam with a therapy dog at the school. Students also practiced providing care, for example, giving injections, suturing up a wound, and wrapping a leg to protect injuries and promote healing. Learning culminated with the dissection of a pig heart, which gave participants an up-close look at some of the internal systems of an animal.



STEM/CAD

Teacher: Nicholas Schaefer (BGHS)

The STEM/CAD class kicked off with an engineering challenge designed to help participants build teamwork and communication skills. From there, students jumped into their first 3D modeling project, personalized Spotify code keychains. On the second day, students were introduced to the basics of Onshape, a free and accessible 3D modeling software that they then used in a friendly competition to design the most effective organizational system. By the third day, students were refining their skills and learning to approach problems like engineers, considering factors such as cost, practicality, and ease of construction when designing parts. Finally, students designed and built 3D printed creations that would support or enhance one of their hobbies or interests, thereby applying their design skills to solve a problem in their own lives.



TDP Summer Recap (continued)

College Application Head Start for First Generation Rising Seniors

Teachers: Kara Fisher (RMHS), Anthony Miocic (EGHS), and Joanne Amador-Zapada (WHS)

This unique, fee-free TDP class was created to support students who will be the first in their family to attend college—or the first to attend college in the United States. Students learned all about the admission process and received one-on-one guidance as they started their applications. Invited guests included admissions representatives who shared their positive impressions of District 214 students and this mentorship program.

“ Getting to interact with the first-generation student group from D214 was a highlight of my work this summer! Being a first-generation college student myself, I’m uniquely aware of the barriers and challenges that can arise. I was so impressed with the maturity, enthusiasm, and eagerness of this particular group of students. They were inquisitive, engaged, and by taking this proactive approach to their college search and application process, are bound for success. Because of their willingness to engage and take advantage of resources available to them, they are the type of students who won’t be afraid to ask questions and find their place when they arrive on their future college campus. I’m grateful to have been even a small part of their journey toward finding the right college fit! ”

Rosa Glombicki, Assistant Director of Regional Recruitment, Marquette University Admissions

“ This is my third summer reviewing essays for the D214 seniors, and once again, I was impressed with what I read. It’s always amazing to me how the students are willing to share their stories, take feedback and generally make me feel like part of their community instead of just the “college lady” who visits once a year. I know that this group of students will have MANY college choices when the admission decisions start rolling in. ”

Julie Nelson, Assistant Dean of Admission, Xavier University



2026 AP Exam Dates: May 4-15

Week 1

Test Date	Morning Session 8:00 AM (local time)	Afternoon Session 12:00 PM (local time)
Mon, May 4, 2026	<ul style="list-style-type: none"> Biology Latin 	<ul style="list-style-type: none"> European History Microeconomics
Tue, May 5, 2026	<ul style="list-style-type: none"> Chemistry Human Geography 	<ul style="list-style-type: none"> United States Government and Politics
Wed, May 6, 2026	<ul style="list-style-type: none"> English Literature and Composition 	<ul style="list-style-type: none"> Comparative Government and Politics Physics 1: Algebra-Based
Thurs, May 7, 2026	<ul style="list-style-type: none"> Physics 2: Algebra-Based World History: Modern 	<ul style="list-style-type: none"> African American Studies Statistics
Fri, May 8, 2026	<ul style="list-style-type: none"> Italian Language and Culture United States History 	<ul style="list-style-type: none"> Chinese Language and Culture Macroeconomics

Art and Design

Friday, May 8, 2026 (8:00 p.m. ET), is the deadline for:

- AP Art and Design students to submit their three portfolio components as final in the AP Digital Portfolio.

Week 2

Test Date	Morning Session 8:00 AM (local time)	Afternoon Session 12:00 PM (local time)
Mon, May 11, 2026	<ul style="list-style-type: none"> Calculus AB Calculus BC 	<ul style="list-style-type: none"> Music Theory Seminar
Tue, May 12, 2026	<ul style="list-style-type: none"> French Language and Culture Precalculus 	<ul style="list-style-type: none"> Japanese Language and Culture Psychology
Wed, May 13, 2026	<ul style="list-style-type: none"> English Language and Composition German Language and Culture 	<ul style="list-style-type: none"> Physics C: Mechanics Spanish Literature and Culture
Thurs, May 14, 2026	<ul style="list-style-type: none"> Art History Spanish Language and Culture 	<ul style="list-style-type: none"> Computer Science Principles Physics C: Electricity and Magnetism
Fri, May 15, 2026	<ul style="list-style-type: none"> Environmental Science 	<ul style="list-style-type: none"> Computer Science A

Please note:

- Schools in all locations must begin the morning exam administration between 8 and 9 a.m. local time and the afternoon exam administration between 12 and 1 p.m. local time.
- AP coordinators should order late-testing exams for students who would like to take exams that are scheduled for the same time.

Wednesday, April 30, 2026 (11:59 p.m. ET) is the deadline for:

- AP Seminar and AP Research students to submit performance tasks as final.
- AP Computer Science Principles students to submit their Create performance task as final.