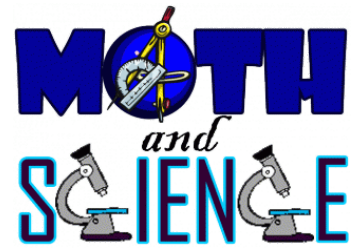


West Orange High School

Institute for Mathematics and Science

IMS 9 & 10 Newsletter



January 2025

Happy New Year, IMS families!

During the second marking period of the 2024-2025 school year, students participating in our IMS program were provided the opportunity to attend five different guest speakers as well as a Networking Event.

Professional speakers included a doctor of veterinary medicine, a doctor of physical therapy, and an immunologist at NYU's School of Medicine who works with lung infections. Dean Antoine from the Rutgers School of Engineering also visited us to discuss their programs and the [Governor's School](#), which takes place after 11th grade (see also [Governor's School at Drew](#) and [TARGET](#) for females).

Our December IMS Networking Event included current and former IMS students (grades 9 through 12) and pizza was served! Current IMS students were encouraged to informally chat with 11th and 12th graders who have been taking AP courses and applying to college. A second edition of this event will take place in May after AP exams have been completed.

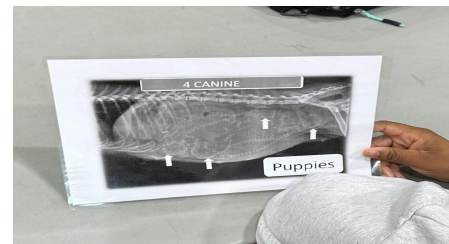
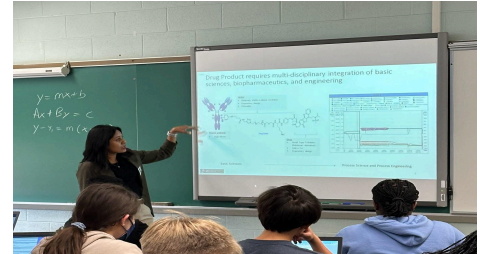
In addition, students continued to participate in the NJML Math contest events and Science League teams were chosen to participate in upcoming events. We look forward to upcoming field trips in March for both IMS 9 and IMS 10 students.

We enjoy working with the IMS students and are pleased to be able to provide these opportunities. Please reach out if you have any questions.

Dr. Jessica Nuzzi

IMS Program Coordinator

jnuzzi@westorangeschools.org



IMS School Counselor News

Madelin Fernandez-Perez, School Counselor

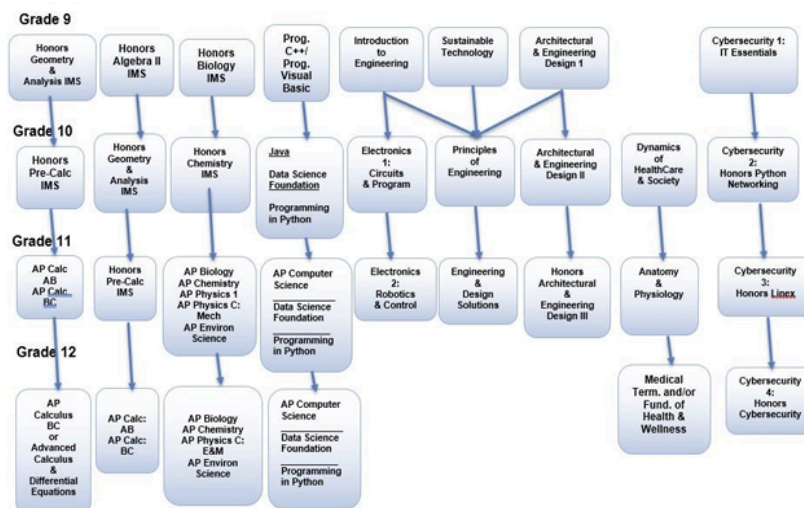
Greetings IMS families!

As the first half of the year comes to an end, it is a great opportunity for our students to reflect on their progress. Families can access their child's first semester grades via [PowerSchool](#). We encourage you to reach out to your child's school counselor and/or teacher if you have any questions about their progress.



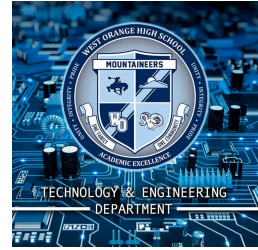
School counselors are in the process of meeting with their students to discuss course selection for the 2025-2026 school year. Each student will receive a copy of their course requests to further discuss with their parent/guardian. We encourage families to review the [Program of Studies](#) to learn more about the courses offered. A letter will be sent home in June that lists the courses for which your child registered. As a component of the IMS program, each 9th grade student is required to select a STEM elective designed to provide students with practical and experiential application of their learning in the core math and science class. Our 10th grade students are encouraged to further explore STEM courses to better prepare for their post-secondary plans. We welcome continued conversations to help plan for the next school year.

On behalf of the school counseling office, we thank you for your continued support.



Technology & Engineering

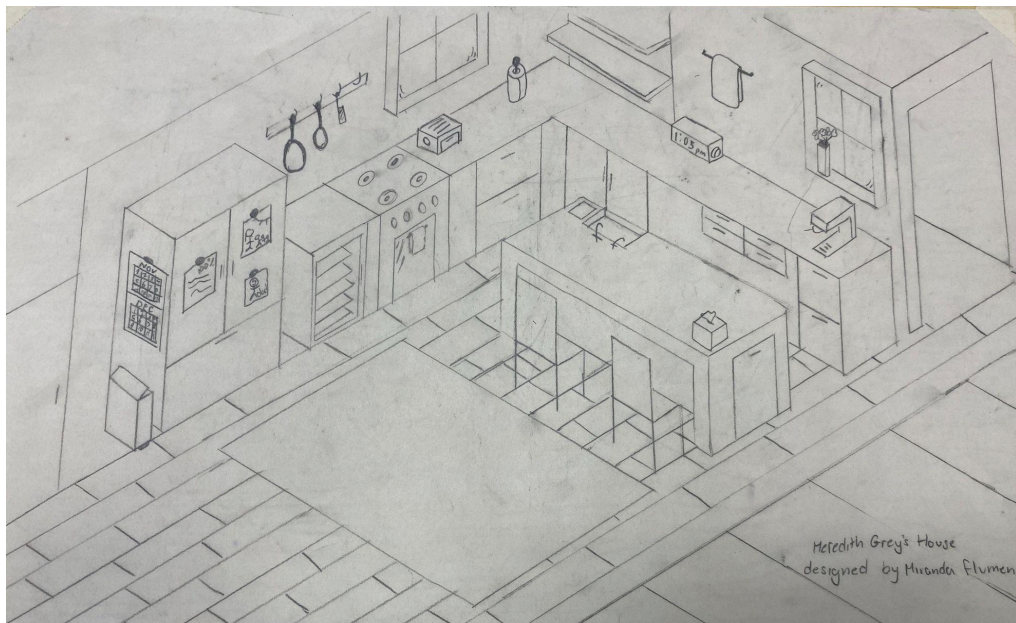
Mrs. Celi, Technology & Engineering Coordinator/Teacher of
Architecture and Engineering Design



Architectural and Engineering Design 1

Happy New Year! The students are starting 2025 strong by finalizing their isometric kitchen design. Students had the choice to design a kitchen for their very own celebrity clients, fictional or non-fictional. Students researched their clients and incorporated design choices based on their lifestyles. Students finalized the project with digital presentations which were presented to the class. For our final unit of the semester, students are learning about 3D prototyping and printing. They are exploring the use of Computer-Aided Design software (CAD) and the impacts of technology in the design industry.

Take a look at one example from the kitchen design project below:



Designed by: Miranda Flumen

Kitchen designed for Meredith Grey from Grey's Anatomy



Honors Biology IMS 9

Tagen Jacobus, Teacher of Biology

tjacobus@westorangeschools.org

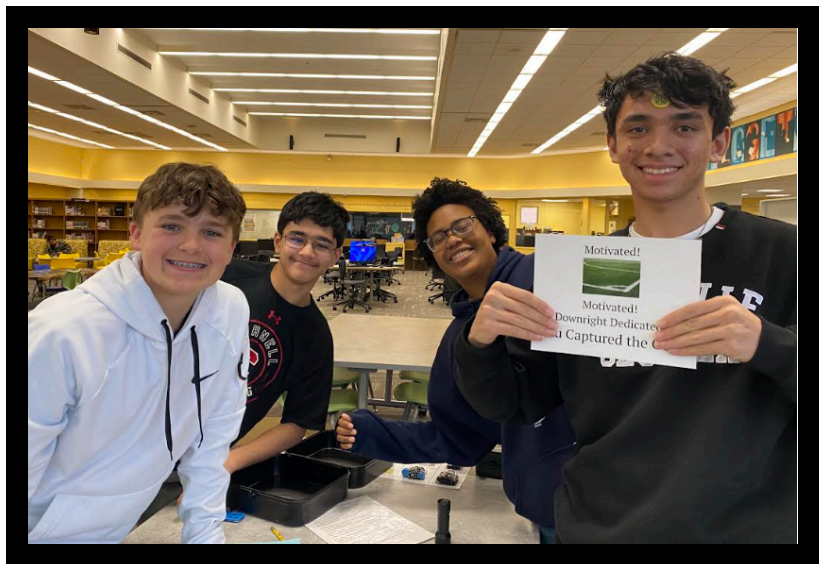
Greeting IMS Families,

Last month students had a great time using problem solving skills to break into the box with challenging clues. Critical thinking was a must and collaboration was key! Please enjoy the photo below showing one of our winning groups first to break in.

We are just about to close out our DNA, RNA and Protein Synthesis Unit. Over the past few weeks we have been modeling many body processes that allow us to grow and function like making proteins, more DNA and new cells. Next we will dive into Genetics which is always exciting. Students will be working on a Genetic Disorder Project throughout this Unit and present their work.

Happy New Year!

Mrs. Jacobus



Honors Algebra II IMS 9

Katherine Bryant, Teacher of Mathematics

Dear families,

Happy New Year! This month we will be working with rational functions. The students have already added, subtracted, multiplied, and divided with them. Next, we will be graphing them. In February, we will be working with inverse and radical functions.

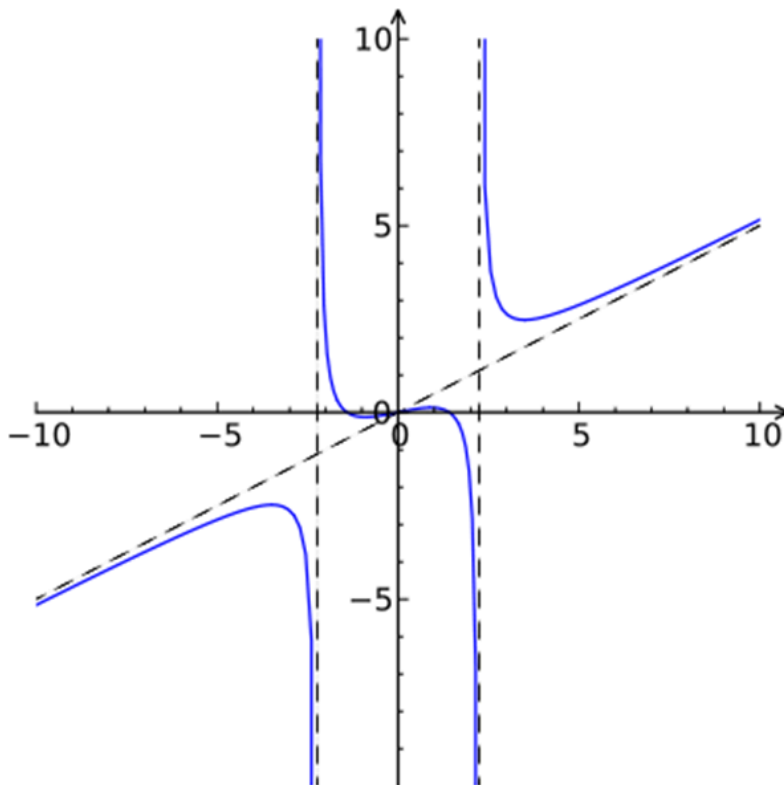
The IMS students take great initiative in completing all tasks. They work well collaboratively to problem solve, think critically and are a great team of self starters.

They have shown amazing improvement since the start of the school year and I am extremely proud of their work.

Sincerely,

Ms. Katherine Bryant

kbryant@westorangeschools.org



Honors Geometry & Analysis IMS 9/10

Samantha Heller, Teacher of Mathematics

Happy New Year IMS students & families!

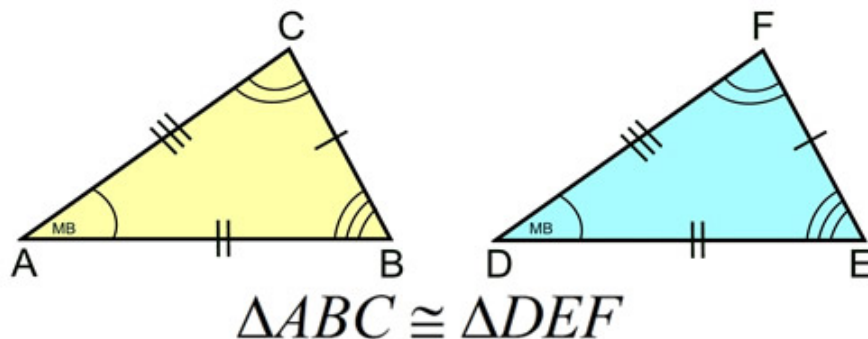
I hope everyone was able to have an enjoyable and healthy holiday season! We have been hard at work in Geometry over the past couple of months. We have built on our foundation to master Transformations, Transversals, and Congruent Triangles. We even created individual town maps given various parameters that enforced the angle relationships found between Parallel Lines cut by Transversals.

We are currently wrapping up our Triangle Congruence chapter and will extend our focus on the different centers found within triangles. We will then take a short pause to review and prepare ourselves for our upcoming Comprehensive Exam at the end of the month. After the Comprehensive Exam, we will turn to our Similarity unit where students will eventually analyze and understand the patterns of various Fractals.

I would also like to express how proud I am of my IMS students for continuing to put their best foot forward in Geometry. Their perseverance and determination has allowed us to continue to learn about this interesting and complex mathematics subject. So, thank you to my wonderful students (and their supportive families) and keep up the great work!

Sincerely,

Ms. Heller



Honors Chemistry IMS 10

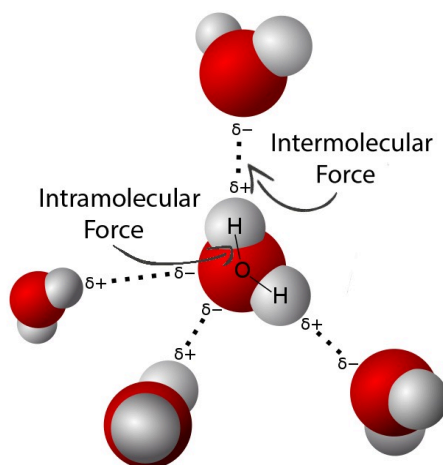
Mrs. Hodges , Teacher of Chemistry

thodges@westorangeschools.org

Happy New Year,

The students are starting 2025 by wrapping up our study of chemical compounds, learning the properties and nomenclature of covalent and ionic compounds.

In the next few days the IMS Chemistry students will begin studying intermolecular forces (IMF). IMF is a very conceptual unit that helps students comprehend why some compounds change phase easily or resist changing phase.



Honors Precalculus IMS 10

Dr. Jessica Nuzzi, Teacher of Mathematics

Dear IMS Precalculus families,

The students have been working diligently through our last unit of Trigonometry. After learning the Trigonometric Identities that mathematicians have derived over the ages, our mathematicians will have mastered all the Trigonometry topics they will need for Calculus. We will be summarizing and assessing all of our Unit Circle and Right Triangle knowledge from the first half of the year in the coming weeks.

In the third marking period, we will review, revise, and extend our knowledge from Algebra 2 regarding functions, their families, and their characteristics. I know the students will work hard to ensure they understand everything they first visited during Algebra 2.

Students took the first step to plan their coursework for next year, for which we discussed their options for taking Calculus. If you or your child have any questions about these options, please feel free to reach out to me.

Additionally, students have been doing a stellar job participating in our New Jersey Math League contest. We will begin to work on creating teams to compete in the Essex County Math League where the top five students participating in the preparation will compete for Precalculus (or Statistics, if enrolled). Look out for some positive results from this competition in May!

Finally, the application process for the Mathematics Honor Society (Mu Alpha Theta) will begin in March and I hope IMS 10 students consider applying to participate next year!

Best wishes for a healthy and happy new year,

Dr. Jessica Nuzzi

