

breaking the code

Biomedical science classes examine DNA through sensory response.

discovering DNA

Students built DNA models for a hands-on learning activity.



Students collaborated during a hands-on activity where they constructed and sketched DNA models. Freshman **Ava Gabay, Violeta Pescarmona, Emma Herce Gonzalez, and Sofia Hoppe** built and drew various nucleotides, base pairs, and structural models to better visualize genetic organization. The interactive process allowed them to apply classroom concepts more tangibly. "This activity really allowed me to better understand DNA, and I really enjoyed it," said Gabay. *Photos by Stephanie Sanchez*

Looking over the sample carefully, junior Sophia Gonzalez slowly transferred a small DNA sample using a micro pipette during a biotechnology lab experiment, collecting data about her own sensory response that would later be compared to her genetic results.

"This step reflected my interest in experiential learning and reinforced how meaningful science can be when it directly involves the individual," Gonzalez said.

The lab, which took place over the course of three days, explored how a single change in DNA could determine whether someone can taste a bitter compound known as PTC. By using techniques such as DNA extraction, polymerase chain reaction (PCR) and gel electrophoresis, the class examined how inherited genes connect to observable human traits and everyday human experiences.

"This unit was really interesting because we were able to see how genetics can directly affect something we experience, like taste," senior Darwin Vargas Salmeron said.

After extracting the DNA samples and preparing them for testing, the class amplified specific gene segments through PCR and separated the fragments using gel electrophoresis. Later in the experiment, a PTC paper strip helped confirm the results by showing whether each participant could actually detect the bitter taste.

"Seeing our DNA results and then comparing them to whether we could taste the strip made the science feel much more real," junior Andrea Cavallaro Said.

STORY **Simone Dusek**



COLLECTING HER SAMPLE, Junior **Sophia Gonzalez** transfers liquid into a test tube. Gonzalez later compared her sensory response data to her results. "It made the lab feel more real because it was about us," Gonzalez said. *Photo by Simone Dusek*

DURING THE LAB, senior **Darwin Vargas Salmeron, Dimarco Benjamin,** and juniors **Valentina Oneil, Andrea Cavallaro, and Luca Oliveira** carefully transfer their DNA samples into labeled tubes. Students followed precise steps to achieve their results. "It was cool seeing how something so small in our DNA could actually explain what we were tasting," Vargas Salmeron said. *Photos by Simone Dusek*

real worldcare

Biomedical science seniors observed medicine in action as they toured multiple departments across Jackson Health System's main campus on Nov. 19. The seniors visited the Lynn Rehabilitation Center, the transplant intensive care unit at Jackson Memorial Hospital, the neonatal intensive care unit at Holtz Children's Hospital, and the Ryder Trauma Center, where they observed trauma alerts and learned how interdisciplinary teams responded to critical cases. "I really enjoyed getting to see all these different health care facilities and learning more about them," senior Martin Norena-Tettke said. *Photos by Yoly McCarthy.*

