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PHS Ethics Bowl competes at nationals

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From April 12–14, PHS's Ethics Bowl team traveled to UNC-Chapel Hill Campus in North Carolina to compete in the 2024 National High School Ethics Bowl Championships, an annual competition where two teams face each other to discuss and evaluate case studies with moral questions or dilemmas. Facing 24 teams from across the nation, PHS's Ethics Bowl team engaged in a series of riveting discussions on ethical dilemmas, placing fifth overall and winning the Judges' Choice Award.

In order to qualify for nationals, each team had to win their respective regional Ethics Bowl competitions. Back in November, the PHS Ethics Bowl team began preparing for the New Jersey High School Ethics Bowl competition that they won in February. During their preparations for nationals, the Ethics Bowl team scrutinized numerous philosophical topics and practiced employing analytical strategies that they have developed throughout their past meetings.

Unlike other discussion-based competitions, such as debate, where judges are instructed to discard their biases, ethics bowl judges may bring in outside knowledge or their own opinions during

the rounds. As a result, co-captain Amanda Sun '24 explains that the questions posed by judges and opposing teams during the tournament rounds are idiosyncratic, often making them challenging for the team to answer on the spot.

"Personal opinions can influence the judges' decisions when asking us hard questions or giving lower points ... but we just have to try our best and just present what we came to the table with," Sun said.

In addition to addressing judges' varying moral beliefs, the team members also had to discuss differences in their own ethical values in order to reach a consensus on a moral framework to apply to potential cases during the national tournament.

"We [spent] so many hours on the plane, in the hotel rooms, in the classrooms, just talking to each other about the cases and just trying to figure out how to resolve each of our individual beliefs and disagreements," Sun said.

While competing with students from across the nation, PHS's team also noted that the geographical origin of other teams influenced how they approached the same moral questions.

"We got to see other people's perspectives for the first time on these new cases and be exposed to new ideas, as opposed to just kind of agreeing with ourselves over and over again," said Sun. "The teams were more diverse geographically. People in the



Alexander Margulis '24, Amanda Sun '24, Priya Brunnermeier '25, Catalina Molina '24, Vivian Clayton '24, Nikolai Margulis '25, Adele Slaymaker '25, and Shumona Bhattacharjya '24 pose for a team photo at Villanova University for the National High School Ethics Bowl regional competition in February.

South have different concerns than those in the West and the East for example, so it was interesting to see how philosophy is taught in different areas."

The geographical diversity of the competing teams was paired with a diverse set of judges with different areas of focus in philosophy.

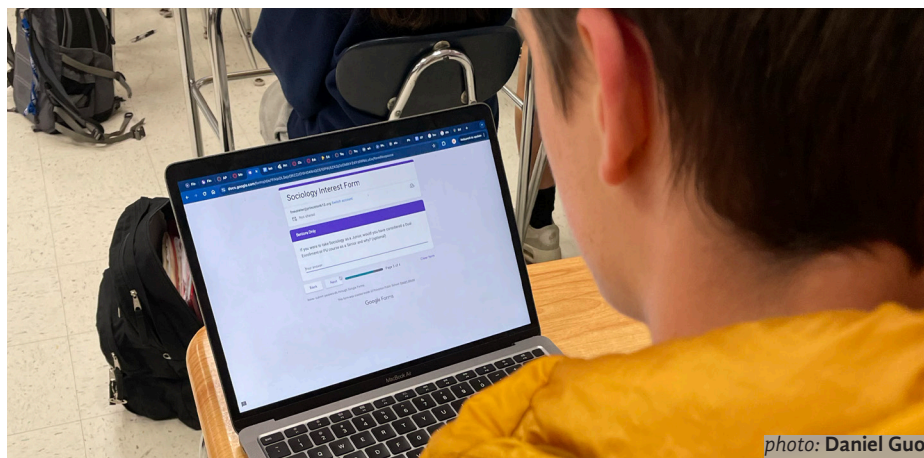
"One judge got really detailed with John Locke's specific language for the social contract, which we hadn't foreseen," said Nikolai Margulis '25. "One of our cases focused on the morality of speculating about Taylor Swift's sexuality. We were asked if pop stars and politicians should

be held to different standards in regard to publicity with their private lives."

The team not only treated the tournament as a chance to broaden their perspectives on ethical viewpoints but also to explore local eateries and events, attending a bluegrass concert and dining out at fro-yo spots. For Margulis, the highlight of the entire experience was the down-to-earth atmosphere during the competition.

"We were all amazed by the spirit of genuine interest in discussion that seemed to fill every match. There was definitely an air of gratitude and excitement among each team," Margulis said.

PHS and TCNJ collaborate in creating dual enrollment program



Finn Neuneier '24 fills out the interest form for the program.

Bengu Bulbul, Emil Kapur and Maiya Qiu,
CONTRIBUTING WRITERS

The College of New Jersey (TCNJ) is opening doors to higher education for PHS students through its new dual enrollment program, an initiative aimed at elevating learning while promoting equity among students and giving them a head start in their collegiate journey.

"We know we have very high quality teachers, we know we have programs that are very, very competitive, even against college level programs," said PHS Principal Cecilia Birge. "So we think that our students deserve having [the] recognition of taking [a college level program], and not to mention the financial benefits that your enrollment brings along."

Birge also highlighted the program's founding principles: a commitment to academic excellence, equity, and financial accessibility. In order to maximize student learning time to uphold educational quality, one distinctive feature that sets this program

apart from PHS's other partnerships, such as those with Mercer County Technical Schools, is its full integration within the PHS campus. Unlike traditional dual enrollment programs, which often require students to leave campus, this program will be entirely housed at PHS, ensuring that students can engage in college-level coursework without compromising their high school experience.

"We really wanted our students to have the full blown PHS experience, not a partial one here and the partial one at another school," said Birge. "We also want our partners in the dual enrollment program to be really the top notch kind of partners who can bring innovative ideas who share our educational philosophy, [and] so, that's how we [identified] TCNJ as a partner."

Students signing up for the dual enrollment program will receive essential information in September, including their TCNJ email address and portal details. Upon completion of the course with a grade of a C or higher, students will receive credits from PHS, three TCNJ credits, equivalent

to a full college course, and the TCNJ transcript. To participate, students need to pay a fee of \$550 before the start of the program. However, the program provides substantial cost savings for families.

"As you may or may not know, college-level courses cost about \$3,000. So \$550 is a significant saving for most of our families at PHS. [Additionally], families will have 529 plans, which is a college savings and investment plan that they can use the money from to pay for this course too," Birge said.

In order to facilitate a smooth transition into the two schools' partnership, PHS will only offer Sociology for the first year of the program alongside the already existing Sociology Accelerated course at PHS. The course will be taught by Elizabeth Taylor, a history teacher at PHS currently teaching AP U.S. History and the present high school-level Sociology Accelerated course.

"The Sociology course actually started out as an AP pilot program. The College Board was considering an AP Sociology course, and Princeton was one of the schools that piloted it, so the class had already been designed as a college level course," Taylor said.

However, even after the College Board ultimately made the decision to not include AP Sociology in its course catalog, PHS continued teaching sociology following the same college level curriculum.

"It always [disappointed me] that students were doing essentially a college level class but not getting the credit they would through an AP class. So as I thought about other schools offering dual enrollment, it seemed perfect for [this course]. Students do the same work they're doing now, but get college credit at the end, [which] seemed like a perfect fit," Taylor said.

When deciding whether the program will be held entirely at PHS, one of the most common considerations is if TCNJ professors will be brought in, or if the courses will be taught by PHS teachers. Birge provides insight into this aspect of the program's structure, highlighting the importance of the teacher's role in the process.

"[This] program is very much a teacher dependent program, meaning that Mrs. Taylor was actually approved by TCNJ to be a qualified instructor to teach at a college level course," Birge said.

Students signing up for next year's courses will have the option between enrolling in a regular Accelerated Sociology class, or enrolling in TCNJ-Sociology as a part of the dual enrollment program.

"Both sets of students will be placed in the same classroom [during the same period]. Mrs. Taylor would differentiate her teaching so that students who are in the dual enrollment program will receive a bit more instruction, probably have some more teaching, reading, and assignments to be completed to ensure that they meet the criteria at the TCNJ level," Birge said.

Additionally, students enrolled in the sociology class will benefit from gaining college credits, providing them with an upper hand when they go to college, given their previous experiences in college style courses.

"I [had] multiple students who [decided] to pursue sociology in college as undergraduates, and they [had] to start back at Sociology 1 because they [did] not have any credit for it," said Taylor. "So now, hopefully, most of these students will be able to skip Sociology in college and move on to a more advanced level class."

Students deserve having the recognition of taking [a college level program].

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PHS watches the solar eclipse

Aritra Ray, STAFF WRITER

Beginning on Monday, April 8, at 2:09 p.m., the moon's shadow darkened the grounds of PHS as a solar eclipse traveled from Texas to Maine. Although Princeton was not in the path of totality, it did experience 90 percent eclipse, with peak totality at 3:24 p.m.. Students gathered outside PHS to experience the celestial event, observing the solar eclipse with viewer cards, thin cards with solar-filter cutouts that block ultraviolet and infrared lights, provided by the school in partnership with the Interstellar Mapping and Acceleration Probe (IMAP) organization at Princeton University.

Dr. Joy Barnes-Johnson, Science Supervisor for Grades 6–12, initiated the process of communicating with teachers earlier this year to plan for the viewing of the solar eclipse as a part of her vision to make this school year more memorable for science students within PPS.

"How are we going to help every child experience science in a meaningful way? This year, we've had two celestial events. We had the partial eclipse in October, and then there's this one," said Barnes-Johnson. "My primary role as the supervisor is to cast vision in the beginning and make sure that we have a process in place to bring things into alignment with our vision."

Getting solar eclipse viewers for students across the district was a collective effort between Barnes-Johnson, Littlebrook teacher Martha Friend, former PPS teacher Dr. Steven Carson, and Princeton University.

"Dr. Carson is a veteran teacher here in Princeton. He's got ... relationships with the faculty at the university. So, he was already working behind the scenes with Martha Friend over at Littlebrook [to] work with the university ... on getting [solar eclipse] viewers," Barnes-Johnson said.

Carson, a 7th grade science teacher at Princeton Middle School, has a passion for Earth Science. He was previously a researcher in the U.S. National Oceanic and Atmospheric Administration's Geophysical Fluid Dynamics Laboratory, and has worked with Princeton University's Department of Geosciences. Given the two solar eclipses that were set to occur during the school year, Carson began planning early in the year.

"I've always been interested in science and ... astronomy. My first eclipse was probably back when I was in middle school ... we watched [it in] my backyard and my dad put together a little screen that we could project the sun onto. It was just such a fun time and I've seen other eclipses since that time ... I went to see the total eclipse in 2017 and it was pretty exciting," said Carson.

He wanted to bring the celestial spectacle to his students, and allow everyone to experience this event, given that the next solar eclipse in mainland United States is in 20 years. "I contacted the IMAP program and got in touch with people there. They had told me that they had boxes of 1,500 viewers. I didn't really need that many of them for the middle school but then when I talked to Dr. Barnes-Johnson, I realized that 1,500 would be a good number for [PHS]," Carson said.

The solar eclipse glasses that were provided to PHS were the result of a

partnership between the district and Princeton University, specifically the Astrophysics Department and IMAP. Barnes-Johnson hopes to build upon the schools' connections in order to provide more stem-related opportunities for PPS students in the future.

"[The glasses] were a complete donation, which is just beautiful ... I'm hoping to build on this so that we have several ways in which Princeton Public Schools can benefit from our close proximity with Princeton University. Making sure that we are able to capitalize in a meaningful way is key. My goal is to have more outreach opportunities where we can accept the outreach of the university and other organizations who want to support stem engagement," Barnes-Johnson said.

With the university's donation of the solar eclipse viewers providing a unique experience for students to safely view the eclipse, both Barnes-Johnson and Carson agreed that the opportunity was a chance for students to apply their scientific knowledge to phenomena in the real world.

"We already spent some time modeling eclipses in the classroom but having this event happen makes it more real to [the students]. They could actually see some things we had talked about in the classroom ... which is truly really helpful in our science curriculum," Carson said.



photo: Matias da Costa



Danny Monga '25, Maggie Tang '25, and Manuela Boarato '25 watch the solar eclipse with their viewers.



PTO volunteers distribute viewers and pretzels for students at the PHS front entrance.

PHS Profile: Jennifer Li

Claire Tang, NEWS & FEATURES CO-EDITOR
Maxime DeVico, and Anna Petrova,
CONTRIBUTING WRITERS

Born and raised in Cranbury, New Jersey, Jennifer Li served as a Peer Group leader, a trumpet player in Studio Band, and participated in various community service activities as a student at PHS. Now, having worked as a math teacher at PHS for six years, Li teaches Pre-Calculus Accelerated, Applications and Modeling of Math, and AP Calculus AB and BC within the classrooms she used to sit in as a student.

Li credits much of her initial desire to pursue a job in the educational field to the meaningful relationships she built with PHS teachers as a high schooler. Continuing her heavy involvement with PHS's community and extracurriculars, Li currently serves as Student Council Advisor and has worked as a Music Mentoring program substitute teacher and Speech and Debate coach in the past. Through these activities, Li hopes to serve as a mentor figure for students both in and outside of her math classes.

"The different things I experienced as a student here make me a teacher that is more approachable. [It] gives me [a] unique connection to students in that I went through the same things [they] did," said Li. "I had a lot of different inspiring teachers [here], and the connections I had here with my teachers made me want to come back and teach here. Mr. Bongiovi actually had a great influence on [me] and made me feel like [teaching] would be a fun career."

Within the walls of her own classroom, Li strives to create an environment where students are not afraid to ask questions or make mistakes, especially in classes with curriculums that students often feel intimidated by, such as Pre-Calculus Accelerated. To address students' unfamiliarity with new and complex concepts, Li tries to explore the practical application of them.

"Math is in so many different things in the real world, even if we don't realize it. Everybody's using that in their daily lives," said Li. "In my Applications and Modeling

of Math class, we're working on a project on how to buy a car. That's [something] people actually experience in real life, so I think that's important to be able to learn about that now."

To help maximize student engagement with course material, Li creates colorful in-class presentations and answer keys for study reference, drawing from her long time hobby of bullet journaling and calligraphy. However, throughout her time and experiences as a teacher, Li has learned that maintaining a patient attitude in the classroom is the best way to address student disengagement.

"Being a teacher, you often have to reteach things or be okay with kids who aren't always paying attention and give them the chance to learn again [at] other times," Li said.

Li's patient approach to teaching is noticed by her students. Carina He '26, a student in Li's Pre-Calculus Accelerated class, appreciates Li's ability to create a learning environment that fits the needs of each student.

"She puts a lot of effort into the work that she does, and she's a really kind person," said He. "In class, she pays a lot of attention to student participation, comprehension, and engagement."

Li always planned to have a teaching career. Growing up, Li's father, an avid tuba player, encouraged her initial dream of being a music teacher, fostering her love for music. Taking after her father's musicianship, Li began experimenting with instruments, playing piano, then the violin and later the trombone at Cranbury Middle School before ultimately choosing to play trumpet at PHS. Driven by her skills in multiple instruments and her participation in Studio Band, Li applied to various music programs including those of the Berklee College of Music, University of the Arts, UMass Amherst, Penn State, and Duquesne University.

"I did not get into music school. Auditions were always something I was really bad at," said Li. "My dad actually wanted me to keep pursuing music school and take a gap year to practice more, just to get more comfortable with that whole process."

However, Li decided that continuing her education in college the following year was more important, and, drawing from her affinity for math in school, Li decided to major in math and received her bachelor's degree from UMass Amherst. Li combined



graphic: Avantika Palayekar

her plans to enter an educational career with her college education and taught as a teaching assistant for undergraduate college classes.

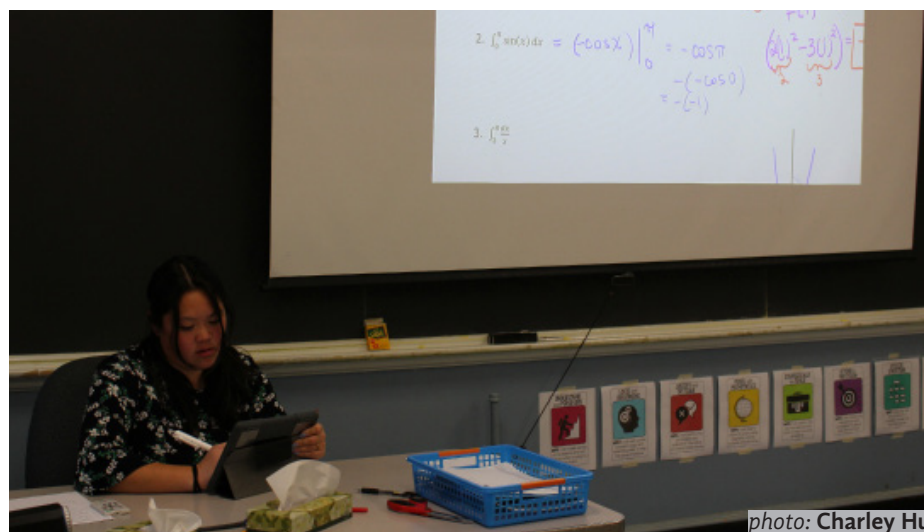
"When I was a teaching assistant, I really liked helping my peers understand the content and being able to have that moment of 'oh, I get it,'" Li said.

After bumping into her former physics teacher, Mark Higgins, at the gym, Li learned about an open position in PHS's math department. Seeing it as both an opportunity to fulfill her aspirations for teaching and reconnect with her alma mater, Li ended up applying for and receiving the position of math teacher at PHS.

"I'm actually super happy with the path I ended up on, because I wouldn't be able to work here at PHS if I continued pursuing music," said Li. "The culture at PHS is so different from a lot of typical high schools."

In her limited free time, Li enjoys playing at Tuba Christmases, a holiday gathering of tuba players, with her father during the holiday season. Despite her teaching schedule, Li still makes time for maintaining her physical health and frequents the gym, often attending gym classes and initiating workout sessions with other teachers in PHS's math department.

"I love the relationships I get to build [here]," said Li. "It's crazy that I've seen a few rounds of students starting as freshmen and then graduating here now, and some of them I've still kept in touch with after graduation. I love people and being able to work with people, whether it's my coworkers, colleagues, or the students that I get to teach."



Ms. Li uses her iPad to walk through a math problem with her students.

Tower investigates: Is PHS actually recycling?

Harry Dweck, Leila Guitton, Reed Sacks, and Meiya Xiong, STAFF WRITERS

At the conclusion of the 2022-23 school year, long-standing custodian Gary Harris retired, leaving behind an enduring legacy of hard work and kindness in the PHS community. Harris was devoted to promoting recycling at PHS, a passion that began in a previous career at a paper company.

A majority of recyclable waste at PHS ends up in the landfill as a result of PHS students' general lack of environmental awareness when discarding garbage. These findings were part of an investigation by the Tower prompted by claims made by Harris about the substantial ineffectiveness in the PHS waste management system.

Throughout his tenure, Harris observed a reluctance among students and faculty to recycle; there were often recyclable pieces of trash in bins bound for the landfill and vice versa.

PHS Custodian Jennifer Gonzalez agrees with Harris, adding that this makes her job significantly harder.

"When I look at the trash, it's mixed," said Gonzalez. "Students don't care and don't recycle correctly."

While Gonzalez and other custodians try to separate recyclable material from trash, she admits that often there isn't enough time to sort through everything, so they are forced to throw out all the contents of the recycling bin.

Matt Bouldin, the Princeton Public Schools Business Administrator and Board Secretary, said that the most common factor that causes recycling to go to the landfill is when students improperly throw food waste in with recyclable material.

"A container of recyclable products contaminated with as little as one food product becomes landfill waste," Bouldin said.

PHS AP Environmental Science teacher James Smirk has been a significant figure in collecting data on PHS recycling. He and several students conducted a waste audit



A student throws her trash in the recycling bin.

concerning the PHS recycling process and came to a similar conclusion.

"Most of our recycling is contaminated with food waste. This creates a situation where recyclable material will be returned to the general waste stream. Most schools solve this by targeting cafeteria waste, but because of our break system and the number of students who eat in classes, focusing on the cafeteria has a limited impact," Smirk said.

As a result of waste cross-contamination, very little eventually makes it to the district's recycling processor, Republic Services Recycling Center. PHS has one recycling dumpster, compared to three landfill dumpsters.

Given the limited impact of sustainable waste management efforts aimed at the cafeteria, PHS has turned to other solutions. Jenny Ludmer, a program manager at Sustainable Princeton, focuses on educating the PPS community regarding sustainable practices in an effort to make its recycling more efficient.

"Education and outreach for everyone in the building is key to achieve a clean recycling stream," Ludmer said.

Clear signs specifying which waste items to put in the recycling and which to put in the bin bound for the landfill are helpful in countering food waste contamination,

it is not a complete solution; students often throw waste in the larger bin that they see first, regardless of the type of waste. Ultimately direct signs combined with a school-wide recycling education program is necessary to realize true progress in sustainable waste management.

"Consistent and sustained education and outreach for everyone in the building is key to achieve a clean recycling stream," Smirk said.

Sylvan Waldman, an incoming leader of the PHS for Climate Action club for the 2024-25 school year, acknowledged the importance of further education efforts.

"I definitely think that there's a good amount of students familiar with the recycling process at PHS, but unfortunately I just don't think it gets out to enough people," Waldman said.

PHS students also participate in promoting sustainability through conducting waste audits, cleaning up waste, and performing community advocacy. In particular, the PHS for Climate Action Club has led an effort for more sustainability and an effective waste management system.

"We [have] recycled old scrap paper into new paper to make cards ... we've hosted bake sales, planned protests, made petitions, [and] donated to eco-friendly charities and initiatives," Waldman said.

PHS research team moves on to nationals

Avantika Palayekar, Yi-Tian Xiong, and Yunsheng Xu, CONTRIBUTING WRITERS

The PHS Research Team, who were announced NJ State Winners in January, have advanced to the next stage of the Samsung Solve for Tomorrow Competition. They now represent New Jersey as one of the ten national finalists, competing for the chance to win \$100,000 worth of Samsung products for PHS.

"I mean, [qualifying for nationals] is a really good feeling. We worked really hard. And I think if you track our growth since September, it's been amazing," said Hayah Mian '25, the lead psychologist of the team.

Between winning states and qualifying for nationals, the team has expanded the capabilities of their first prototype, a stuffed armadillo called Che'w that can teach the endangered Guatemalan language of Mam. At nationals, the team will be presenting at Samsung's headquarters in Washington D.C. on April 29.

"Our focus back then was just trying to make a prototype work, and I feel like now it's trying to get the presentation [for nationals] together by working on

the script and the video," said Sofia Son '25, one of the programmers on the team. "We [also] want to improve on the current prototype we're going to present with."

One of these improvements is the development of movement through motors. With the motors, the robot will be able to hug and wave, allowing for more animal-like movements and a more friendly appearance so that a user does not feel stressed or anxious when interacting with the robot. On the programming side, the team has focused on gathering enough language data so that the robot can maintain complex communications with users and vary its answers with AI and machine learning.

"At the moment, the robot is not intelligent. It doesn't use machine learning or AI because we don't have enough data," said Debdeep Sen '26, another programmer on the team. "Eventually we'll have neural networks for the language once we have enough data, so it'll actually understand what you're saying."

In order to get this data, the team has partnered with indigenous Mam-speaking communities in Cajola, Guatemala;

Oakland, California; and Morristown, New Jersey, as well as university professors from the University of Kansas and Princeton University.

As the team works on improving the functionality of the robots, they are also increasing the sustainability of their designs, which is one of the main goals of the project. Previously, they had created a stuffed armadillo, Chico, which was scrapped due to issues surrounding the ethics of the manufacturing process and sustainability of their material sourcing. Now, they are collaborating with Fluffmonger, a company that designs environmentally friendly plushies, which are then assembled in local Mam-speaking communities, including in Guatemala.

"We wanted to move towards a locally and more ethically produced solution ... and [Fluffmonger] just [sends] us these blueprints for making stuffed animals, and then we stitch [them together]," Son said.

The team uses cloth made from recycled materials and clothes that are hand-sewn by local communities. Post-competition, the team hopes to transform their project into an ethical and sustainable business.



photo: Matias da Costa

Leopoldo Gessner '27, Ruhee Hedge '25, Sofia Son '25, Hayah Mian '25, Thibaut DeVico '24, Matias da Costa '25, Debdeep Sen '26, Amy Lin '25, Daniela Gonzalez '24, and Dany Melchor Garza '24 pose for a team photo after their call with Governor Murphy.

"The plan is for [the project] to become a business model after the competition. Our goal is to teach younger research students and middle schoolers how to build the robots because we want to be able to teach our students digital literacy along with the different languages ... A lot of us in the project are juniors, so [after] next year we leave. We want to keep [the project] going at PHS," Mian said.

PPS Superintendent Kathleen Foster to stay an additional year



Kathleen Foster previews her calendar for the day.

Avantika Palayekar, Yi-Tian Xiong, and Yunsheng Xu, CONTRIBUTING WRITERS

In a Board of Education meeting on March 15, the board announced its decision to extend Dr. Kathleen Foster's employment as interim superintendent to June 30, 2025.

However, because Foster is retired, she can only be employed by PPS, Princeton Public Schools, for a limited period of time as per New Jersey state law. Therefore, before the decision can be implemented, the district must receive permission from the New Jersey Department of Education in order to allow Foster's extension of contract.

Regardless, despite Foster's relatively recent appointment as interim superintendent since November of last year, she has seemingly brought her past experience as both a teacher and administrator in order to fulfill her role as superintendent.

"[Foster] has really spent many years [in the educational field]. She led [the Robbinsville school] district with a lot of healing power when they went through traumatic events," said Princeton High School principal Ceclia Birge. "Now post-pandemic, our district and the whole world has experienced so much trauma,

and I really don't think we could've found a better leader than she is."

In addition, Foster's approaches and viewpoints as an educator also help her work with the Board of Education when making decisions.

"Foster has the student first approach ... [Foster and the Board] are all aligned and that's what's important," said Dafna Kendal, President of the Board of Education. "She's decisive when making decisions but she always considers all viewpoints ... I think that's an excellent quality for a leader to have."

Even when basing her decisions on the benefits of the students and the district in general, Dr. Foster keeps everyone who constitutes the greater Princeton community in mind.

"I think a strength of any leader is the ability to listen and learn ... I learned beside many other people. And certainly, I also really want to make sure that we engage the full community of stakeholders ...

listening to staff members, listening to administrators, listening to community members, and most importantly, listening to students," Foster said.

However, even with Foster's experience, she still faces challenges with her job.

"One of the most difficult pieces is looking at making sure that we keep on track with our strategic planning goals and the long term planning ... There are things that get in the way ... and we have to make sure that whatever decision we're making [is] for the best interest of our students," Foster said.

Despite the challenges, Foster loves what she does and is excited to continue her work until the end of next year.

"I'm thrilled to be [a superintendent]. I love this community," said Foster. "I love the internal community [of] administrators, the Board of Education, staff, and parents who all care so much about our students. And so I'm really excited ... to be [to be employed for] the next year."

OPINIONS

PHS's HIB self-assessment

Harry Dweck, STAFF WRITER

PHS's last publicly reported score for its harassment, intimidation, and bullying (HIB) self-assessment is from 2022. It received a 46/78, six points short of state requirements. The assessment is reviewed annually by school administration and evaluates the school's preventative HIB programming, implementation of NJ policy, and overall climate for reporting concerning behavior.

To students, though, this score may not be so surprising. In many ways, our school presents a hostile environment — hurtful rumors spread quickly and jokes with racism, sexism or homophobia are part of normal conversation. The most common type of HIB this year is physical confrontation stemming from name calling, according to Diana Lygas, the PHS Dean of Students.

This predicament is not normal. The truth is that our school is faced with a significantly worse environment than neighboring high schools — presuming the accuracy of school self-assessments. The West Windsor-Plainsboro high schools scored 75/78 on their HIB self-assessment, while Montgomery High School received a 77/78.

PHS's main strategy to combat bullying is by reporting instances of HIBs. The only HIB-related category that PHS gave itself full points on the self-assessment was proficiency in HIB reporting. In fact, PHS's HIB lawyer, Alicia D'Anella, has even called our increase in HIB reports "not a bad thing" in a 2023 information session.

"The more we learn about [HIB] ... the more we can spot it," said D'Anella. "So sometimes an increase in reporting is indicative that we're doing better."

But the amount of HIB reports at PHS doesn't correlate with new reporting policies or an expansion of the definition of HIB. Instead, there are consistently high levels across many years, excluding COVID-19. There were an average of 24 HIB reports from 2014 to 2020, 26 last year, and

24 this year (so far). This points to a systemic issue. In a community dedicated to improving student life, what matters most is preventing bullying from happening in the first place. Documenting HIBs isn't a bad thing on its own; it just doesn't change things much.

There are a few explanations for why PHS's current reliance on HIB reporting to address bullying isn't working. For one, our reporting system is guided by a faulty principle. The NJ Department of Education mandates that the Board of Education operate on an "impact over intent" policy. This means that instances of HIB are often evaluated based on the reactions (impact) of the victim, not the intent of the perpetrator. In New Jersey, if one student harms another student, but the victim does not express a strong reaction, the perpetrator will often receive mild punishment. Naturally, the perpetrator may be left with the misconception that their actions were not harmful or even acceptable. The "impact over intent" approach also doesn't take into account the fact that victims might feel pressured to downplay their experience for fear of retribution. Moreover, reporting and disciplining one individual might improve their behavior but will have little impact beyond that. In short, despite the long-winded and time-intensive HIB reporting protocol, the overall school climate is not being transformed.

Of course, many of the shortcomings of our system aren't entirely the fault of our administrators or guidance counselors — a lot of PHS's reporting policy is decided at a state level. But that doesn't mean that we can't or shouldn't have other initiatives. Other schools, like Montgomery High School, have already recognized that given all the problems with NJ's reporting policies, other measures are needed. In 2022, Montgomery High School scored 15/15 for their HIB related Programs and Approaches, and 6/6 for HIB Curriculum and

Instruction. Meanwhile, the PHS self-assessment proves we have a long way to go; PHS received a 5/15 in the HIB Programs and Approaches category and a 3/6 in the HIB Curriculum and Instruction category.

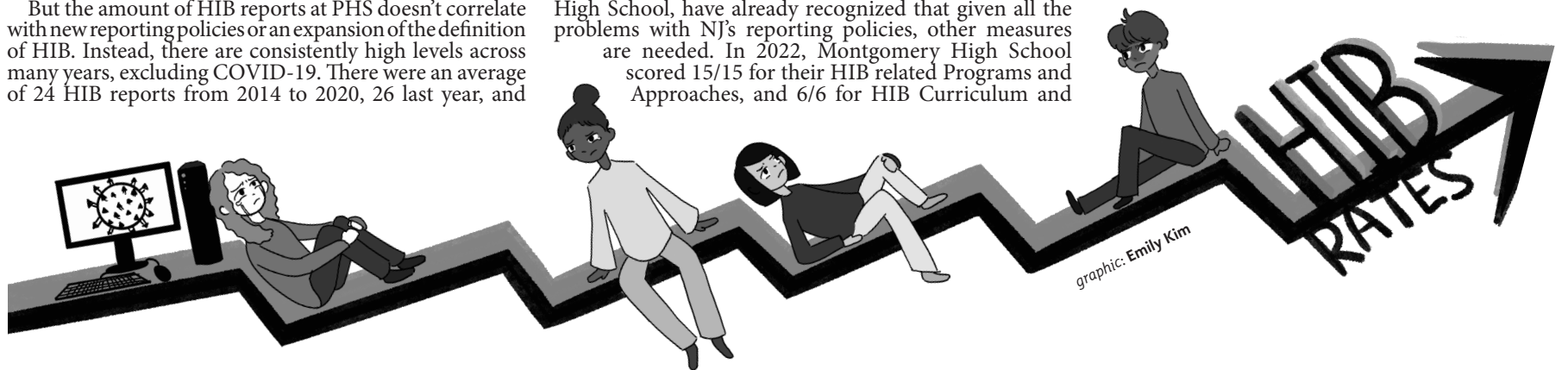
John McMichael, the director of student counseling services and the district's anti-bullying coordinator recognizes PHS's weakness.

"It's one thing to be reactive, ... to handle HIB allocations when they come up. But we do need to do a better job on being proactive, [we] have the data right there showing that," McMichael said.

PHS could start to improve by increasing accessibility. Most HIB policies are hidden in large documents with a lot of jargon or in long, dry videos. Nowhere on the district's anti-bullying page is there a clear overview of school procedure. PHS should also have recurring mandatory sessions throughout the year for students that clearly outlines what an HIB is, what to do when involved in an HIB, and how the district handles them. If students are consistently reminded of what qualifies as an HIB and what the consequences are before they are involved in an investigation, they would probably be less inclined to be involved in the first place. In this way, PHS will also send a clear message to students that bullying is morally wrong.

No matter what new policies are implemented, fundamentally, we need initiatives that will bring about a shift in school culture.

"Is it too strong to say that people forgot how to interact peacefully? I don't know," McMichael said, aptly highlighting this need for change.



Our shallow academic performance

Stephanie Liao, CONTRIBUTING WRITER

Freshman year can be stressful — you have more responsibilities, a new social playground to navigate, and much more homework compared to middle school. However, I also find myself worrying a lot about an issue I shouldn't have at such an early stage of my life: college. At PHS, academic excellence is normalized to the point where any deviation from it might as well mean failure. This increasingly competitive academic landscape calls for a new type of student — someone who can easily fill up their Common Application activities list and summarize each of them under 150 words. It often seems like everyone around me is one of these exemplary students, which in turn incentivizes me to accomplish as much as I can to appear successful. Unfortunately, many students share that mentality, which creates a highly superficial and performative academic culture at PHS.

In my own experience, this type of environment has compelled me to join courses and student organizations based on how good they would look on my college application. It appears that many others feel the same way: according to an anonymous survey of PHS students who take AP courses, 69.8 percent are taking accelerated or AP classes for the primary purpose of looking good on college applications. However, performative culture goes beyond just taking an advanced class — I often find myself viewing each class period as an opportunity to put on a show. What can I say to sound like a

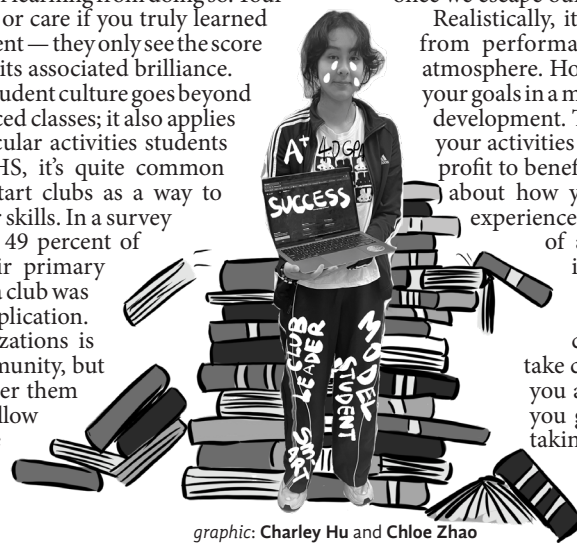
bright student? How little work can I do while still receiving good grades? This is the reason some students read SparkNotes instead of the assigned book, or use ChatGPT for their notes. Students may take these shortcuts and appear competent, but they don't actually advance their learning from doing so. Your peers don't know or care if you truly learned from the assignment — they only see the score you received and its associated brilliance.

Performative student culture goes beyond just taking advanced classes; it also applies to the extracurricular activities students engage in. At PHS, it's quite common for students to start clubs as a way to demonstrate their skills. In a survey of PHS students, 49 percent of respondents agreed that their primary purpose in starting or joining a club was to look good on their college application. Having many student organizations is beneficial for the school community, but in many cases, students register them without actually intending to follow through and have productive meetings.

When the only objective of one's academic career is to get into a good college, they lose

the purpose of what school is ultimately for: education. College isn't the end-all-be-all of life, and there are so many skills taught in school that can be beneficial in the future. Filling up our lives with empty promises of intelligence is a recipe for disaster once we escape our bubble of college applications.

Realistically, it is difficult to stay completely away from performative culture in PHS's competitive atmosphere. However, it is possible to work towards your goals in a manner that still benefits your personal development. This starts by being intentional about your activities — yes, you can create a club or non-profit to benefit your college application, but think about how you can learn and evolve from the experience instead of starting it only for the sake of appearing successful. Focus on the impact of your work, such as helping the community or raising awareness about an issue. When it comes to classes, ask plenty of questions and take charge of your own learning; after all, you are the beneficiary of the knowledge you gain. So the next time you consider taking a difficult class or committing to an extracurricular, ask yourself: will this actually help you grow as a person, or is it just another way of trying to outperform everyone else?



When their only objective ... is to get into a good college, they lose [out on] education

CHEERS Stuff we like Stuff we don't JEERS

GREEN apples

CRUNCHY grapes

HOZIER

HEARTBREAK HIGH season two

PROM dress shopping



The color BURGUNDY

Caramel M&M'S

INCONSISTENT weather



Burger King SLANDER

AP CLASSROOM LOGIN

PARKING LOT littering



New BELL SCHEDULE

RED apples

"Karma" by JOJO SIWA

graphics: Charley Hu and Chloe Zhao

Bell schedule — hell schedule?

Tessa Silver and Chloe Zhao, OPINIONS SECTION CO-EDITORS

At the beginning of class, you may feel energized. But as it drags on, you begin to feel more and more restless. It feels like an eternity has gone by, even though you still have an hour left in the class. When the bell finally rings, you feel cheated — the time that you spent sitting bored at your desk could have been spent on something much more productive, but instead you're left with little energy to make it through the rest of the day.

This bleak situation is becoming a reality for PHS students. Last month, a new bell schedule for PHS's 2024–2025 school year was released by the PPS Board of Education. This new schedule features five letter days, each corresponding to a weekday, and separates science and P.E. classes to make assigning classes more flexible. Additionally, 90-minute block classes on "B2" and "B3" days were added on Tuesdays and Wednesdays, both without Tiger Time. 45 minutes of gym classes on B2 and B3 days are used for learning labs for freshmen, or a free period for upperclassmen and sophomores who are clear of disciplinary actions and have good attendance in their second semester.

As the school board pointed out, our current schedule has several major issues. First of all, letter days occur in an inconsistent, confusing pattern, which makes it harder for students to get settled into a comfortable rhythm. This lack of consistency in the letter day rotation makes some days occur more often than others, leaving some students with less frequent gym free periods. Second of all, the current schedule binds science and gym classes together for lab periods, which creates a lot of trouble when creating student schedules. As a result, there are also inconsistencies in class sizes, and this also prevents students from receiving the courses they requested.

However, even if the new schedule attempts to fix some of these problems, it also brings up new ones. For one, the two massive block days are a major point of concern. These block days were added for the purpose of maximizing student productivity and to consistently

give teachers more time for project-based learning, such as science labs. Nevertheless, longer block periods may have the opposite effect on student productivity. Attention spans vary depending on the student, but there is a general range for optimal focus. According to a Gitnux report from 2024, this span is 30 to 40 minutes for 13 to 15 year olds.

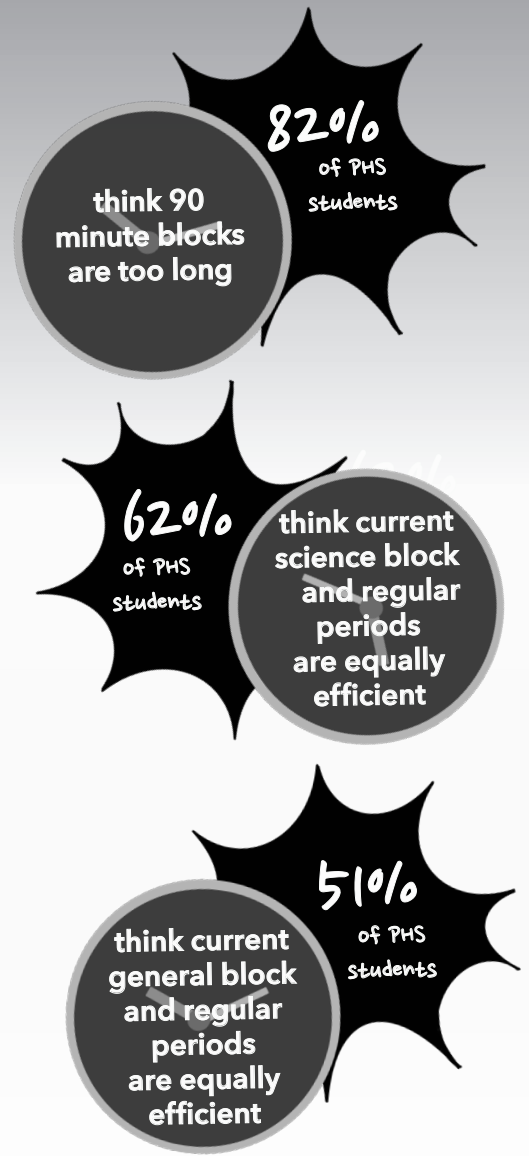
Meanwhile, teenagers who are 16 and older are reportedly able to concentrate for 32 to 50 minutes on average. Our current block periods, which last around 78 minutes, are already overstepping student attention spans. Having periods as long as 90 minutes would exacerbate this problem and leave many students even more drained, unfocused, and feeling trapped in their classes.

Additionally, these blocks come at the expense of having two days of Tiger Time. With the new schedule, there is only one hour allocated to Tiger Time on a single day (Tiger Thursdays). Compared to our current 48 minute-long Tiger Time periods across two days, students have fewer opportunities overall to make up work, complete assignments, and receive extra help from their teachers during office hours. Both clubs and sports will also have much less scheduling flexibility. Clubs will either have to lose chunks of their membership every other week when freshmen have Peer Group, or move their meeting times to lunch, which would decrease meeting length and possibly conflict with other clubs.

In the future, administrators should take the opinions of the general student body into deeper consideration. This is especially the case with projects that directly impact our everyday routines, such as creating a new bell schedule. Even though some members of the student council were consulted, they are by no means entirely representative of all PHS students. A student poll would have much better reflected the needs of the average student. The fact that the administration didn't take these opinions into consideration shows a disconnect between PHS's student body and administrators. Ultimately, we should learn from these divisions and work towards building a more connected and equitable community.



graphic: Chloe Zhao



Survey taken from 141 PHS students

Embracing the challenge of PHS's advanced classes

Aarna Dharmavarapu, CONTRIBUTING WRITER

In recent years, PHS has been reducing accessibility to harder courses through introducing stricter prerequisites. There has been much debate as to whether or not this shift widens academic gaps by restricting those without the means to keep up. What this discussion often misses is that these restrictions give students a transitional period between primary, secondary, and higher education. This slower approach allows them to fully develop the skills to thrive in more difficult courses. Making advanced classes harder to take is actually one of the better changes to our education system in recent years.

This debate largely began in 2015 with the passing of the Every Student Succeeds Act (ESSA), a plan to ensure that public schools across the United States provide all students with a quality education. Under ESSA, states are encouraged to develop more rigorous academic standards, such as more restrictive prerequisites for advanced classes. Another goal of ESSA is to reduce academic disparities for underprivileged students. ESSA ensures that even students at schools with less resources are being taught with rigorous

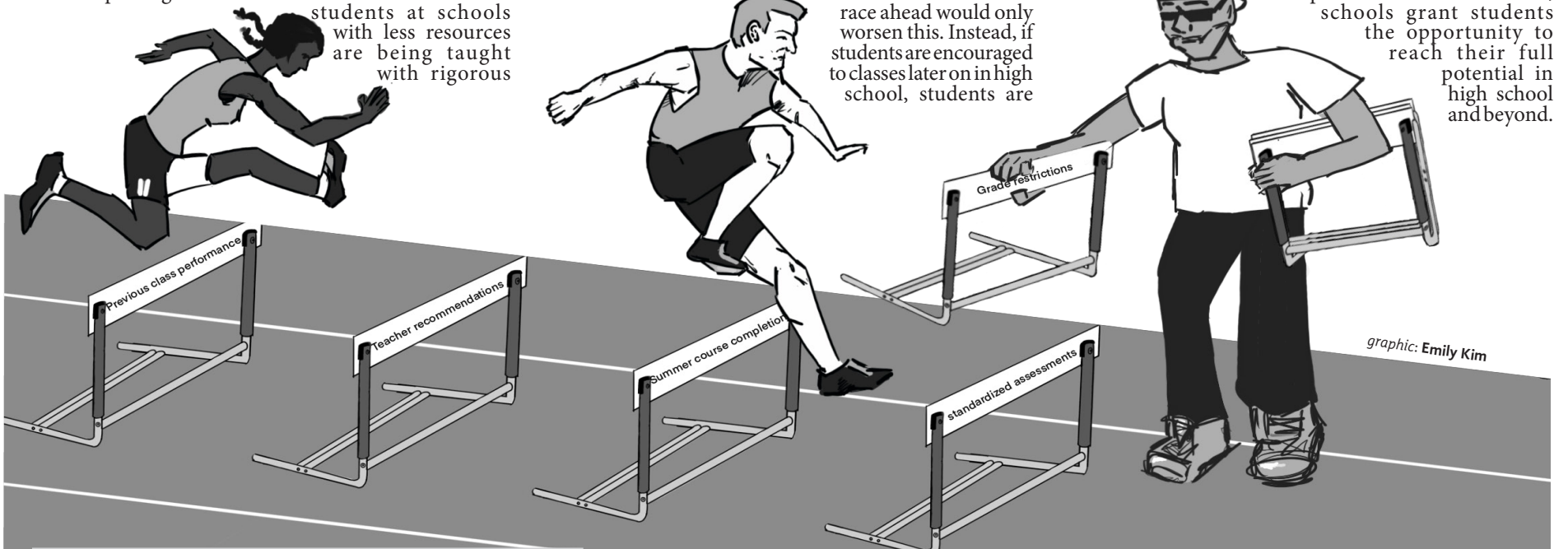
standards for the content of the material that is covered. ESSA provides states with lower performance rates additional targeted funding and technical assistance. This means that under ESSA, academic disparities based on demographic factors are addressed.

There were additional reasons for enacting these policies; taking advanced classes as underclassmen in high school often means a significant mental burden for students. Being introduced to the pace and depth of college-level coursework in the first years of high school would overwhelm any student. This burden can not only affect students' academic performance but also damage their overall well-being, potentially leading to heightened stress, anxiety, and even burnout. In a 2018 study conducted on a group of over two thousand students in Advanced Placement or International Baccalaureate classes, researchers Suldo et al. found that even with ESSA, 71 percent of the students experienced burnout, an alarmingly high proportion. Allowing students to continue to race ahead would only worsen this. Instead, if students are encouraged to classes later on in high school, students are

given time to develop skills like time management and study techniques that can be used in higher level academics. This way, when students sign up for advanced classes, they are better equipped both mentally and academically, reducing the risk of burnout and other mental health issues.

Low grades are also a stressor for students that jump into advanced classes without being fully prepared. "Easier" classes provide a glimpse into the subject, leaving students with the opportunity to explore various interests without compromising their GPA.

The shift toward lower accessibility of advanced courses is a positive step towards creating a more equitable educational environment for all students. By developing a more demanding outline of criteria for enrollment, administrators ensure that students are well-equipped with the skills needed to thrive in such demanding classes, which in turn decreases the chance that they will struggle later on. In advocating for policies like the ESSA, schools grant students the opportunity to reach their full potential in high school and beyond.



graphic: Emily Kim

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“I want to kill myself”

Editorial

During vent sessions, these phrases are often echoed through the halls of PHS:

“I want to kill myself.”

“I want to shoot myself.”

“I’m going to throw myself off a cliff.”

In this day and age, students set ambitious goals, especially as they prepare to reach major milestones such as sitting down for standardized exams and beginning the college application process. When they discover that they have too much on their plate, many resort to complaining as a means to destress.

Too often, the complaints of students have become desensitized to genuine mental health concerns, which creates a situation in which those listening to the rants are subjected to unpleasant and uncomfortable conversations.

The problem with the casualty of these phrases is the lack of recognition that some students are genuinely struggling with suicidal thoughts on a daily basis. Humor can be an outlet for stress, but reducing situations as serious as self-harm and suicide to a simple one-liner is destructive and disrespectful. Saying phrases such

as “I want to kill myself” can be insensitive to students with mental health concerns. While they may seem like throwaway phrases to some, they could have serious consequences for others.

With the normalization of suicide jokes comes an inevitable side effect: their misinterpretation. Students at PHS have become too comfortable with turning suicide into a centerpiece for humor, and this has made it too easy for people to misread their friend’s joke as a simple comment made in passing, when it may be a serious cry for help.

Alternatively, it can be misinterpreted as a cry for help when it isn’t. A Journal JAMA study from January 2024 found that globally, 20 percent of teenagers have suicidal thoughts every day, and that suicide continues to be one of the leading causes of death in adolescents today. Evidently, suicide and mental health are serious concerns in our age group, and when a person who struggles with these concerns speaks about it in an unserious and light-hearted way, their friend could misinterpret it as

a warning sign for a suicide attempt.

Suicide jokes also force the student on the receiving end of the statement into an uncomfortable position. Even though PHS has trained guidance counselors and school psychologists to identify and assist with these situations, the student still has to assume the responsibility of discerning whether or not their friend really needs help.

For students who are in a good mental state, being more mindful of those struggling around them would not only help make the school environment a safer place, but it would also make the student environment feel more accommodating. For students who may be struggling with mental health or having suicidal thoughts, it may be best to talk to a professional — both those inside or outside of school — or even call the Youth Helpline, the National Suicide Prevention Lifeline, or the Mobile Response and Stabilization Response all located on the back of PHS school ID’s.

Complaining about school and life is inevitable and understandable, but there are less harmful ways to do so. No matter how challenging our academic or social lives become, suicide should never be joked about.

“Students at PHS have become too comfortable with turning suicide into the centerpiece of humor.”

“Suicide should never be joked about.”

Current media diversity — how can we do better?

Joy Chen, CONTRIBUTING WRITER

In 2023, the internet was flooded with videos of Black children’s joy while watching Halle Bailey, a Black actress, play Ariel in Disney’s live-action remake of “The Little Mermaid.” The choice to cast a Black actress as Ariel was a result of Disney’s efforts to increase representation in their movies.

However, despite these wholesome videos, changing the Little Mermaid’s race and other similar choices by entertainment companies are far from enough to promote diversity. True representation comes from characters who fully resonate with people’s culture and origins, not just their appearance, and who give children the opportunity to celebrate themselves inside and out.

Along with the call for more racial inclusivity in media, there is a growing demand for mainstream media to be more diverse in its content. Large entertainment studios like Disney often prioritize rebooting and remaking existing stories with casts featuring actors of color, rather than creating new characters and stories. Many of these remakes featuring actors of color are received far less positively than the originals. In the case of remakes such as “The Little Mermaid” and “Lord of the Rings,” much of the public’s negative response focused on the “inaccuracy” of an actor’s racial background in relation to their character.

However, recent backlash over casting in a TV show adaptation of “Percy Jackson and the Olympians” revealed deeper prejudice, particularly when it came to the roles of Grover and Annabeth, both of whom were white in the novels. There was significant public outcry when a Black actress was cast as Annabeth, a character known for her intelligence, strength, and beauty; however, there was little to no backlash when an Indian actor was cast as Grover, a silly and nerdy character for the same adaptation. The difference in these reactions to casting choices that on the surface seem very similar is due to pre-established norms of what types of roles actors of

color play; it’s easier for audiences to accept actors of color in undignified roles like Grover than admirable roles like Annabeth.

Moreover, in the western film industry, darker-skinned actors are consistently the victims of negative stereotypes, being cast as criminals, villains, or individuals of lower social status, while lighter-skinned characters are often portrayed in more positive and desirable roles, such as heroes, love interests, or successful executives.

These prejudices aren’t confined to just the film industry; PHS’s theater productions have also played into stereotypes in the past. Specifically, PHS Spectacle Theatre’s production of “Anything Goes” in 2019 featured Chinese characters, the only non-white characters in the show, who were based on outdated stereotypes and the subject of many racist jokes. In addition to the fact that “Anything Goes,” and the majority of PHS productions, are centered around white characters, the production showed that even administrators and the director saw no issue with the racist caricatures that appeared in the show.

These instances are part of a larger problem of prejudice in casting and how people of color are portrayed in the media. To counteract this issue, actors should be given roles regardless of the status or personality of the character, so that audiences see that actors of color and white actors are equally well suited for all types of roles, from villains to heroes.

While a color-blind approach to casting is helpful for promoting inclusivity

The Tower

Princeton High School
151 Moore Street, Princeton, New Jersey

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The Tower serves as a medium of information for the community through reporting and/or analyzing the inner workings of Princeton High School, the school district, and cultural and athletic events that affect the student body, providing a source of general news for parents, teachers, and peers; voicing various opinions from an informed group of writers; and maintaining quality in accurate content and appealing aesthetics, as well as upholding professionalism and journalistic integrity.

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The Editorial Board of the Tower consists of a select group of 14 Tower 2024 staff members. The views of board members are accurately reflected in the editorial, which is co-written each month by the Board with primary authorship changing monthly.

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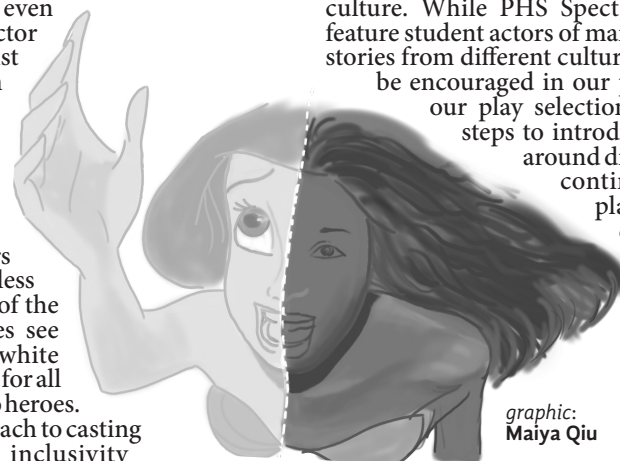
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“True representation comes from characters who fully resonate with people’s culture and origins.”



graphic:
Maiya Qiu

and representation, it’s even more important to create new, authentic roles for actors from underrepresented cultures. This approach ensures that actors of color have opportunities to portray characters whose experiences resonate with their own identities, rather than being confined to roles originally written for white actors. For example, the movie “Black Panther” features a cast of talented African-American actors and depicts many African cultural traditions. From the language and music to the costumes and set design, this film brought African culture to the forefront and gave young African and African-American children role models to look up to. This movie demonstrated true progress towards diversity by creating an original story that represents African and African-American culture, rather than pasting African-American actors into a white roles. New stories allow actors to portray their identities through their roles and provide viewers with accurate and comprehensive representation — not just racially, but also culturally.

At PHS, play productions and drama classes should all have opportunities for students to showcase their culture. While PHS Spectacle Theatre’s productions feature student actors of many different ethnicities, new stories from different cultural backgrounds should also

be encouraged in our productions. By expanding our play selections, PHS can take concrete steps to introduce performances centered

around different cultures, rather than continuing to mainly produce plays and musicals that are

centered around originally white characters. To

truly bring diversity into theater performances at PHS and media worldwide, there needs to be more roles with cultural representation and more authentic and contrasting narratives.



THE VANGARDEN

Lie Lacking

Chloe Zhao, OPINIONS CO-EDITOR

Under this heavenly glow
filtered through the lilac trees,
you're flush-colored like a portrait
of a classic beauty.

Must you have so much power to your name
and berate the work of nature?
Why put all gardens to shame,
simply with your stature?

Here I lie, lacking
in your presence,
and I'm struggling to save face.

So I'll whisper to the trees
that hold these purple blossoms
and hope you hear the bees
echo my buzzing admiration
that grows every lilac season.

Unfurled

Aritra Ray, MULTIMEDIA EDITOR

Buried I was under a
frosted crown,
Yet here I was —
A tiny fist, unseen, un-
bound.
In the world around me,
a muted scene,
Countless shades of gray,
As verdant hues lay low
Ice crystals cling with a
fragile hold,
Soon to fade, a chapter
complete.

For it is time for a new
dawn to emerge,
A beacon of hope,
Silent at first,
Bursting soon after.
As the sun shines,
It is my time to rise.

To rise to new heights,
And face the unknown.
The world that was once a
canvas painted gray,
Now seems to me,
Like a vibrant tapestry
shining against the sky.

You see, I am the flower.
A symbol of rebirth, wild
and free.

What was the winter's
grip,
Is now a faint memory.
For it is replaced by a
bloom,
A new world that will
unfurl,
Brighter with each day
passing.
And everlasting for ages
to come.

Three flower destinations to add to your to-do list

Syra Bhatt, VANGUARD CO-EDITOR and Aarna Dharmavarapu, CONTRIBUTING WRITER



Photo: Zoe Nuland

Morven Museum & Garden is a National Historic Landmark filled with vibrant flowers, classic architecture, and an abundance of greenery that is a perfect start to the spring season. Renovated in 1999, the grounds are covered with numerous historic features, including an 18th-century horse chestnut walk and a colonial revival garden. We love the front yard, which features a row of 13 catalpa trees representing each of the original 13 states. The acres of orchards at Morven are decorated with crabapple trees, and the house features multiple flower beds of annis and commodore. Open Sunday through Wednesday from 10:00 a.m. to 4:00 p.m., this garden is a must-visit with your family and friends!

Among all the scenic landmarks in Princeton, the Prospect Garden at Princeton University is our personal favorite. Located right next to the Frist Campus Center and the Art Museum, the gardens are close to the heart of the campus. When the flowers bloom in the spring, the walkways of the garden are decorated with vibrant flowers and lush greenery; it's the perfect place for a serene spring stroll. Over eight thousand flowers are planted in the garden every year in May. Walking around, you may see red and blush painted geranium flowers, pom-pom-like floss flowers called ageratum, and over a dozen other alluring flower species.



Photo: Zoe Nuland



Photo: Daniel Guo

Terhune Orchards is known for its farm and grounds, which are decorated with numerous species of flowers, plants, and herbs. Although their greenhouses grow various types of flowers available for purchase, we advise you to pick your own bunch by taking a saunter through their outdoor selection. Here, visitors can craft their own bouquets, a fan-favorite being the bright pink, white, and deep magenta peonies that line the pathways and pop against the dark leafy bushes from which they grow. We also loved walking through the rows of zinnias and dahlias, whose vibrant colors made them hard to miss upon entering the orchard. Even if flower picking isn't your thing, Terhune is worth stopping by for the welcoming ambience and gorgeous photo opportunities. It's open on the weekdays from 9 a.m. to 6 p.m. and on the weekends from 9a.m. to 5p.m..



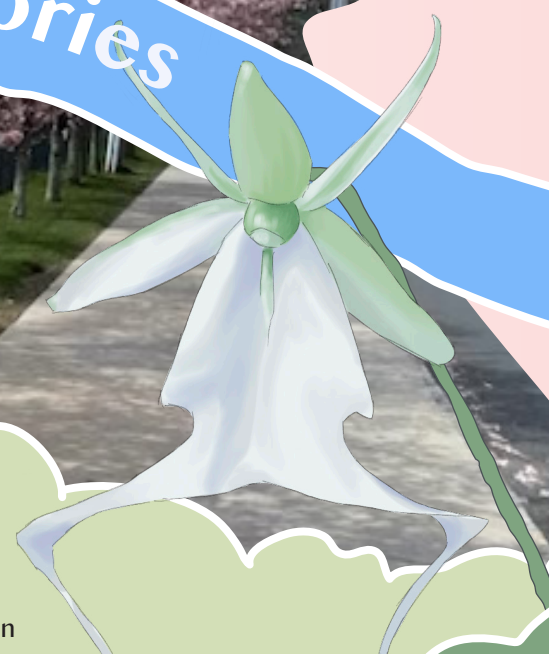
Endangered flowers and their stories

Asya Morozov, SPORTS CO-EDITOR
Joanna Hou, CONTRIBUTING WRITER



Despite its name and enticing smell, the chocolate cosmos is not a dessert. Originating in Mexico, the chocolate cosmos' unusual smell comes from the vanillin it produces, the same compound present in cocoa. This flower is rather particular about its environment and requires temperatures above 50 degrees Fahrenheit, at least six hours of direct sunlight per day, and slightly acidic soil to thrive. Because of overharvesting and loss of its natural habitat, the chocolate cosmos is considered endangered in Mexico and was thought to be extinct in the wild for decades until a self-pollinating chocolate cosmos was propagated in New Zealand around 1990. Despite its scarcity in nature, the chocolate cosmos is relatively easy to cultivate within controlled habitats, given proper care and growing conditions.

With its white petals and the way it seems to float in midair, the ghost orchid lives up to its name. This flower is found in Cuba, the West Indies, and Florida, but its population is dwindling as climate change and human damage alter its habitats. According to NatureServe, the current conservation status of the ghost orchid is "critically imperiled," meaning it is at a very high risk of becoming extinct. The ghost orchid has also been overexploited for its unique appearance; unlike most flowers, it has no leaves. The ghost orchid is also an epiphyte, meaning its roots hang onto tree branches or trunks instead of growing from the soil. Only ten percent of ghost orchids bloom for a few weeks in summer and even fewer are pollinated. Conservation efforts are being made to protect the ghost orchid from extinction, which is more and more likely as climate change, habitat loss, and human harvesting of the flower continues.



The Southeast Asian Rafflesia is another flower at risk for extinction; however, it is very different from the others. Rafflesia, also known as the corpse flower, is no delicate plant, but rather a massive parasite that emits a putrid stench to attract flies, its primary pollinators. There are currently 42 identified species of rafflesia, 60 percent of which are considered endangered. As a rainforest plant, rafflesia is most threatened by habitat loss due to lumber cutting and poaching, as its buds are taken for medicinal purpose. Since rafflesia plants cannot be grown in captivity, their conservation is a challenge. In 2023 a team of researchers in the science journal Plants, People, Planet advised that the only way to save the rafflesia is through habitat conservation. If we do not intervene, it will soon be too late for these flowers and other rainforest species.

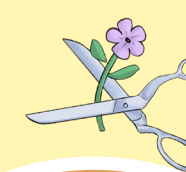


Flowers are symbols of love and death. Crowns represent power and status. What about crowns made out of flowers? These crowns made out of foliage and flowers represent a multitude of virtues and are part of traditions and celebrations around the world. In ancient Rome and ancient Greece, gods and goddesses wore flowers and plants symbolizing respect and honor. In many European countries, May Day is a festival celebrated on May 1 to mark the beginning of summer. The celebration originated from the Roman festival of honoring Flora, the goddess of flowers, spring, and vegetation, and during their celebrations children often pick out flowers to create crowns. In Ukraine specifically there is a kind of flower crown known as a "vinok," a traditional headpiece for young girls and unmarried women, and in Mexico, many sport flower crowns during Dia De Los Muertos.

DIY Flower Crown

Vanessa He, CONTRIBUTING WRITER

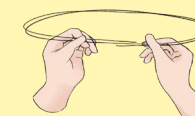
1) Cut flower stems so they each measure one and a half inches.



6) Finished! You can wear it once finished or store it in the fridge.



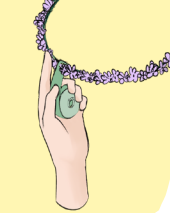
2) Measure the circumference of your head, then cut wire twice the length of it. Create two loops of wire that wrap around your head nicely.



Supplies

- Floral wire, twine, or string (preferably floral wire for sturdiness)
- Floral tape or masking tape
- Scissors
- Measuring tape
- Large or small flowers (preferably fresh flowers that can hold out of water)

5) Cover any excess wire with floral tape.



4) Continue placing the flowers on the wire as desired.



3) Attach the flowers by wrapping floral tape around the stems and the wire tightly.



Graphics: Katherine Chen

ARTS & ENTERTAINMENT

Impactful environmental activism through visual art

Yunsheng Xu and Rebecca Zhang,
CONTRIBUTING WRITERS

Around 63,000 B.C., Neanderthals began exploring the technique of wall art. The shapes of bison and other animals were painted onto the stone walls in the Cave of Altamira, Spain; these paintings are often regarded as some of the most famous Paleolithic art pieces in existence. One purpose of these depictions was to bring a sense of understanding and appreciation to nature and the environment.

Several cultures in Asia similarly embraced nature through art. China's Shan Shui paintings, mainly depicting mountains, were drawn against a wall of fabrics. They eventually became a means for educated men to seek consolation from nature and to escape the chaos of the world. India regarded plants and trees as sacred beings to be protected. Along the walls of buildings, tribal Gond paintings depicted the Indians' respect for flora and fauna, which ruled the Earth before humans.

Street art and murals were introduced in the 1900s. Murals could not only express the complexity of a vast range of themes in a simple way, but they could also be used to speak out regarding the current environmental crisis. Although wall art throughout the centuries has vastly changed in meaning and expression, it has gravitated to environmental art since the 1960s. Differing from depictions of nature, environmental art's purpose is to raise awareness of climate change and appeal to an audience unfamiliar with the crisis that the Earth is facing.

Environmental damage often feels abstract, meaning most individuals feel detached from its consequences. However, artists bridge this gap by creating powerful pieces



Two murals painted with vibrant colors and a floral theme are displayed side-by-side in the art room.

to evoke emotions in viewers, sparking introspection and forming a deep sense of connection to the Earth.

Artists directly pose uncomfortable questions to viewers by creating pieces that showcase the beauty of nature, juxtaposed with the negative impact of human activities. They challenge the viewers to confront the consequences of environmental damage and consider the long-term effects of their choices.

For example, an anonymous graffiti artist and environmental activist in the United Kingdom, known as Banksy, uses his talents to advocate for the environment. He paints graffiti on ruins and areas filled with trash which contrasts with the environmental images and messages in his art, to criticize the consequences of disregarding the environment.

One of Banksy's murals depicts a boy holding a can of paint. The message "I remember when all this was trees," seemingly painted by the boy, is pasted onto the wall beside him. The message, referring to the surroundings of the mural, is extremely powerful because it contrasts with the decrepit and run-down buildings.

Examples of environmental artwork can also be found right here in Princeton. One example is the Nature's Nation: American Art and Environment exhibit, from 2019, at the Princeton University Art Museum. Featuring more than 120 paintings, sculptures, drawings, photographs, and

videos, the exhibit expresses an ecocritical view of American art from the past three centuries. It displays the development of the country, including how industrial development has destroyed the land and its natural environment.

The exhibit begins with an idyllic walkthrough of the pristine landscape before the arrival of humans, then turns to much darker works displaying the destruction of the environment. For example, one work titled "Crucified Land," by Alexandre Hogue, showcases the eroded terrain that was sacrificed for agricultural practices. Another work by Edward Burtynsky, "Oil Spill #10," simultaneously presents the majestic biosphere, as well as its degradation caused by the extraction of oil from the earth.

In addition, environmental art can also be found inside Princeton High School. More specifically, the most prominent spaces coated in environmental murals are the science halls. In the 170s, 180s, 270s, and 280s hallways, paintings of animals and one huge tree flourish on the wall as a clear representation of student's appreciation for wildlife. Furthermore, students recently hung up a life-size diagram of different animals, including a whale, in the 280s hallway. Not only does this art brighten up PHS's look, but it also provides other students with a quick refresher on their knowledge of environmental diversity, which is accessible to them by simply glancing up at the wall.

Each year, the PHS murals embody the students' freedom of expression. Not only do these murals allow every art student to make an eternal mark on PHS, but they also showcase how the environment is highly appreciated.



Besa Liese '25, Alberta Liu '24, and Vicky Deleon Palacios '24 paint a mural near a staircase in the art room.



In the 170s hallway, an art mural features space, technology, tree, and animal paintings on its walls.

Finding harmony in PHS a cappella groups

Aleena Zhang and Maiya Qiu,
CONTRIBUTING WRITERS



LEFT TO RIGHT: Cat's Meow members Heidi Engelbert '24, Avery Madison '24, Vivian Clayton '24, Avery McDowell '24, Simryn Patel '26, Jenna Stucky '25, Raima Srivastava '25, Maya Halcomb '25, and Sofia DiGioacchino '26 pose for a photo.

A cappella singing is often considered a fully different genre of music, as it blends voices together without an instrumental accompaniment. Through the fusion of different voices, a cappella groups create a unique performance sound and different dimension of music.

Being in a cappella group means participants get to be in a chamber performance setting but still have a more flexible time commitment. In addition, unlike choir, many groups arrange and adjust their own vocal parts to fit the singers' needs.

At PHS, there are four student-led a cappella groups: Cat's Meow, Cloud Nine, Testostertones, and Around 8. They provide completely different experiences and communities, though they sometimes perform together at events like Friday Night Lights at the Princeton Public Library.

Founded in 1983, Cat's Meow is PHS's first a cappella group; it is a choir affiliated, all-female-identifying, and all-upper-voice a cappella group. They perform at all

PHS choir concerts, and even go on tour with the choir every other year. The group explores many different genres of music, such as jazz, pop and R&B. Through their rehearsals and performances, the group has forged close bonds while creating musical experiences together.

"You bond very intensely with everyone in the group because it's so small ... we learn to trust each other on stage," said Cat's Meow director Vivian Clayton '24.

Cloud Nine is PHS's second female-identifying a cappella group, though they are non-choir affiliated. Regardless, they are still allowed to perform both in and outside of school.

"We performed at Hispanic Heritage Month and we sang 'Gracias a la Vida' ... we sometimes do Cornerhouse affiliated [performances]," said Julia Wang '25, a member of Cloud Nine.

The third a cappella group is the Testostertones, the only PHS all-male group. Rehearsing a few times each week, the members of the a cappella group have grown

into a tight-knit community.

"Tones culture is at an all time high right now ... we have a wide range of guys and I think that that only builds [on] the connection that we have with each other," said Testostertones director Theo Balavoine '24.

Finally, Around 8 is PHS's only all gender inclusive a cappella group — a fact that distinguishes it from the rest. However, similarly to the other a cappella groups, being part of this ensemble forges friendships among its members, and opportunities to perform together.

"It's a nice chance to meet people that have different interests from you, but you all can come and sing [together]," said Noa Zacks '25, a member of Around 8.

Auditions for these groups are generally held in late May and early June, and are open to all students for non-choir affiliated groups, like Testostertones and Cloud Nine. General audition materials include preparation of a short verse or chorus and sight reading in front of the current a cappella group.



LEFT TO RIGHT: Testostertones members Worth Rowley '26, Owen Brown '25, Anton Zelov '24, Patrick Kennah '24, Theo Balavoine '24, Reed Sacks '25, Henry Doran '24, Jaiden Jain-Edwards '25 (behind Brady Collier '25), Brady Collier '25, and Edward Cao '24 sing as an ensemble in the choir room.

Springing into sweetness: two seasonal recipes to try out

Raspberry white chocolate pound cake

Chris Cheong, CONTRIBUTING WRITER

Freshly baked cake is a delight to the senses, whether it's during the heart of winter or a scorching summer day. Drawing inspiration from Instagram and using some of my favorite ingredients, I developed a real winner: a raspberry white chocolate pound cake that's simply divine. This raspberry white chocolate pound cake is decadent, with the perfectly tart flavor, and is a fantastic way to jump into the blossoming spring season. The beauty of this recipe is how customizable it is. Don't have raspberries on hand? Try strawberries, blueberries, or even just chocolate! The possibilities are endless.

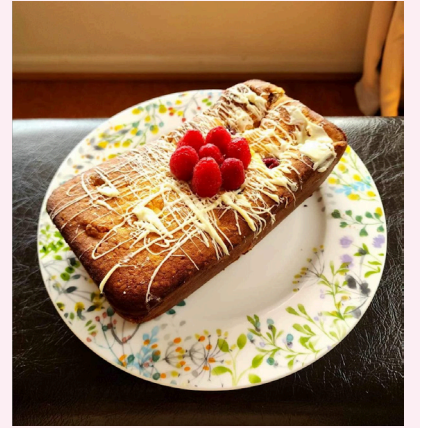
Prep time: 15 minutes Bake time: 90 minutes
Total: 105 minutes

Ingredients:

160g all-purpose flour
¾ teaspoon kosher salt
226g unsalted butter at room temperature
300g granulated sugar
3 eggs
1 teaspoon vanilla extract
60 mL yogurt at room temperature
85g white chocolate chips
140g raspberries



photos: Chris Cheong



Instructions:

1. Preheat your oven to 350F/175C. Grease and line a 9x5 inch loaf pan.
2. Toss raspberries in one tablespoon of flour. This will help them not sink!
3. Whisk together your flour and salt in a small bowl.
4. With an electric mixer or by hand, beat the butter until smooth, about one minute.
5. Pour in your sugar and cream the butter and sugar together, whisking until it becomes light and airy.
6. Add in your vanilla extract and continue whisking.
7. Add the eggs one at a time, beating well and scraping the bowl after each addition.
8. Add in one third of the flour mixture, and using a rubber spatula, fold the flour in. Then, add half of the yogurt. Repeat with another third of the dry ingredients and the other half of the yogurt. Mix in the last third of the dry ingredients.
9. Fold in your white chocolate chips and raspberries gently so the raspberries don't break apart.
10. Pour the batter into your prepared loaf pan, making sure the surface is even.
11. Bake for 80–90 minutes. The cake is ready when you insert a toothpick and it comes out with just a few crumbs.
12. Melt extra white chocolate and drizzle over the cooled loaf! You can also decorate it with fresh raspberries and more melted white chocolate.

Almond croissant blondies

Chris Cheong, CONTRIBUTING WRITER

What do you do with leftover croissants? You make almond croissants. What if you don't have croissants? You make these almond croissant blondies! Inspired by one of my favorite pastries, these blondies are dense and fudgy and have the most decadent frangipane topping. Top it off with flaked almonds and powdered sugar, and you have a dessert that resembles one of the best pastries ever created!

Ingredients:

FRANGIPANE
60g unsalted butter, softened
65g granulated sugar
1 egg
¼ teaspoon vanilla extract
¼ teaspoon almond extract
65g almond flour
Pinch of kosher or sea salt

BLONDIES
170g brown butter
250g brown sugar
1 egg and 1 egg yolk
1 tablespoon vanilla extract
1 tablespoon almond extract
Pinch of kosher salt
¼ teaspoon baking powder
150g all-purpose flour
25g almond flour
¼ cup sliced almonds
Powdered sugar for dusting

Total Time: 1 hour Prep Time: 20 minutes
Cook Time: 40 minutes



photos: Chris Cheong

Instructions:

1. Preheat the oven at 350F.
2. Make the frangipane. Add the softened butter and sugar together in a medium bowl. Cream until it's pale in color.
3. Add the egg, vanilla extract and almond extract and mix. Add the almond flour and salt and stir.
4. Make the blondie batter. In a large, separate bowl, add the brown sugar and melted butter until they're fully combined. Whisk in the egg and egg yolk, vanilla extract, and salt.
5. In another bowl, whisk together flour, almond flour, and baking powder.
6. Fold in dry ingredients into the wet.
7. Line an 8 by 8 tin with parchment paper. Spread the blondie batter onto the bottom of the pan. Spread the frangipane in an even layer on top and sprinkle the sliced almonds on top.
8. Bake for 40 minutes until the edges are brown and caramelized and the top is slightly browned.
9. Let cool, then top with powdered sugar.

Ishaan Banerjee '24 prepares to turn a passion for jazz into a career

Ruhee Hegde, CONTRIBUTING WRITER

Musicality is instructive, requiring hours and hours of preparation and meticulousness in a single performance day. For Ishaan Banerjee '24, jazz comes from the heart, and is a genre that evokes emotion. Committed to New York University this fall, Banerjee is set on becoming a professional in jazz music and producing records for future audiences.

How and when did you begin playing the saxophone?

I started playing the saxophone when I was five years old [and was taught] by one of my neighbor's instructors. At first, I didn't really appreciate the tactileness of the keys on the instrument. However I soon began to cherish the distinct musicality of the tones. Overall, it was really fun getting to play at my elementary school and being in a band full of ... musicians.

PHS has been lucky to offer many opportunities, locally and abroad, to aspiring artists to showcase their talent. How would you describe your own development as a musician throughout high school?

Yes, I ... agree [there are] unique talents in the PHS Arts Department, and I think that has a lot to do with their attentive manner [with] each and every student. My teachers, like Mr. Bongiovi, look at the big picture and notice how the minute changes of a pitch in one instrument can sway the whole crowd ... So I would say my development as a musician has a lot to do with listening.

Jazz has been a consistent genre in your performances, do you believe the saxophone can encompass other genres apart from bossa nova/jazz?

I've had focuses within jazz performances, but I would say it has the potential to be versatile in classical and mariachi music. Also, for blues in the 1920s ... in Studio Band and the Philadelphia Jazz Orchestra, the saxophone has had to be adjusted in tone to accommodate for the softer registers in classical.

You recently performed at National Jazz Fest this winter, along with multiple on-stage performances with Studio Band and Studio Vocals. What are some of your strategies to tackle a live performance?

I think the most important tactic is to only focus on one person in the audience that you can resonate with. Associating yourself with a whole crowd can be intimidating. I [also] tend to play one last scale to make sure my instrument is not off-key, and then I get on stage and perform.

Do you aspire to focus on music as a career?

I would hope to become a musician in the future and produce albums within jazz music, and I believe NYU has the best programs to prepare me for endeavors requiring signing record labels and associating with big names.

If you get one opportunity to collaborate with a jazz musician etc., who would it be and why?

Dead or alive, I would have to say Charlie Parker (1920-1955), [as he is] in my opinion one of the best tenor saxophone players of all time. Several of his variants with altered chords are a key to his harmony with singers, and when I've performed in cafes near Philadelphia, we often utilize his somber melodies [in] songs.

What are some memorable moments that you have shared with the Studio Band while on tour, or with the Philadelphia Jazz Orchestra in Italy?

I would say recording our music [at] Abbey Road with the whole Studio Band was very significant and [I] had my solo included in two of the songs. In addition, I would have to say the memories we had renting out a yacht in Italy were really enjoyable too. It was our final tour with the seniors after they graduated, so it meant a lot to have the Philadelphia Jazz Orchestra back [where it belonged] after school ended.



photo: Emily Kim

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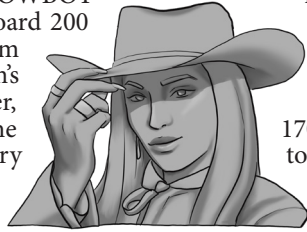
PHS TALKS
Long-form interviews

Forgotten voices in country music

Chen Jiang, CONTRIBUTING WRITER

Upon hearing the words “country music,” one may think of the American South and West, cowboys, ballads with the strumming of a guitar or banjo, and a white man sadly singing about trucks, beer, girls, and heartbreak.

However, Beyoncé’s new album, “COWBOY CARTER,” turns that idea on its head, highlighting the cultural melting pot that is country music. With the recent release almost immediately hitting No. 1 on Billboard’s top Country Albums, the Houston-born singer made history as the first Black woman to have led the Top Country Albums list since its inception in 1964. “COWBOY CARTER” also takes the lead on the Billboard 200 chart, making this Beyoncé’s eighth album to top the all-genre list. Many of the album’s songs blend a multitude of genres together, from rock and pop to R&B, although the main underlying influence is from country music, highlighting Beyoncé’s experience as a Black woman growing up in Texas. She grew up in a time where many Black

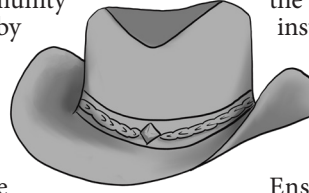


graphics: Angela Wu

Americans were systematically excluded from country music, contributing to the oppression the community faced in the 1900s. This experience is shared by musicians such as celebrated figure Charley Pride, the first Black Grammy-nominated singer Mickey Guyton, and contemporary artist Kane Brown, all of whom have left their mark on country music despite the challenges they’ve faced. The music strongly adheres to the idea of repossessing of the origins of country music

— restoring its representation and culture that was whitewashed and appropriated, erasing Black contributions.

The unrecognized origins of country music can be traced back all the way to the 1700s. Many modern country instruments seen today, such as the banjo, came from traditional West African instruments made from gourds, strings, wood, and other materials. When enslaved Africans were forced from



their homelands on a grueling voyage across the Atlantic to a foreign land, they took their instruments with them. For over two hundred years, enslaved Africans working on plantations created their own music in the form of hymns, spirituals, and field songs as a way to communicate with each other.

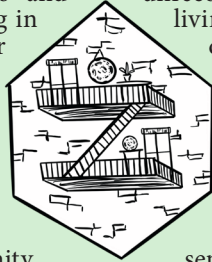
Enslaved Africans brought these musical traditions to the United States, where they evolved and shaped the distinctive voice of country music. Their soulful melodies have become integral to the genre’s sound. Through her album, Beyoncé gives power to the voices of these enslaved Africans, allowing them to be heard and recognized. Not only does she honor their contributions, but she also amplifies the sound of these underrepresented artists who have helped to shape the genre. “COWBOY CARTER” is a tribute to African-American heritage, identity, and history, making it an album that pushes for inclusivity and diversity.

“Between Two Moons” by Aisha Abdel Gawad

Jane Hu, STAFF WRITER

Imagine you are looking forward to your future, when suddenly everything goes wrong and all of your plans are ruined. “Between Two Moons,” written by Aisha Abdel Gawad, includes twin sisters and soon-to-be graduates, Amira and Lina, living in Brooklyn, the former being the main narrator of the story. However, their lives change suddenly when their brother, Sami, is released from prison. In addition to tensions at home, Amira and Lina also experience a lot of unease in their community. During the month of Ramadan, their Muslim neighborhood experiences raids and several acts of violence, tearing apart the community.

One of the most prominent details that makes this book a great read is the dynamics between the two sisters.



Lina is considered the more beautiful sister; she dreams of becoming a model and is often frequenting bars and nightclubs; however, Amira wishes to be hidden and unrecognized, with hopes of attending college and living a steady life. Despite the twins’ significant differences and occasional arguments, the two just seem to click. However, with the increasing hate towards the Muslim community, and the return of Sami, things are not the way they used to be. Ever since Sami was let out of prison, he has felt like a stranger to Amira, an intruder. No one knew why he was imprisoned in the first place, and Amira feels a sense of unfamiliarity whenever she is around him.

Gawad excels at developing characters that readers can relate to. The challenges that the twins face help

spread awareness for the real-life issues that the Muslim community experiences, especially in big cities. Even though our lives are different, I found that I was still able to relate to Amira. As someone who also wants to go to a good college and live a stable life, away from the drama and commotion, I often felt that Amira was me but with a different racial background. Being able to relate to a character was ultimately what made me enjoy reading this book.

Overall, “Between Two Moons” was a very heartwarming and touching story to read. If you enjoyed reading this book, be sure to check out similar books such as “If I Survive You” by Jonathan Escoffery and “In the Time of Our History” by Susanne Pari. Both discuss the modern challenges and issues faced by immigrant families living in the United States.

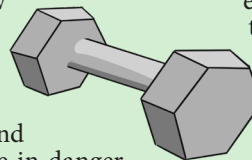
“Rhythmic Exercise” by Mohamed Makhzangi

Gabby Kaputa, STAFF WRITER

Mohamed Makhzangi is an Arab writer and doctor known in the literary world for his novels and short stories. His experiences in these two fields of study allow him to blend both scientific research and storytelling into his writing style. In 2006, Makhzangi published his first novel, called “Memories of a Meltdown,” which focused on his time as a doctor in Ukraine. After the novel’s popularity, Makhzangi moved on to write for Al-Arabi, a culture magazine revolving around important aspects of the Arab world. He continued writing for these magazines for 12 years, while also writing many short stories, his most popular being “Rhythmic Exercise.”

“Rhythmic Exercise” is about a family living through a war in the Middle East. While the family is safe and content in their apartment, they eventually fall into depression due to their confinement and develop a sense of guilt due to the fact that they are safe while others are dying in the war; after a few months they

also become overweight due to their lack of movement, which incentivizes the daughter — who remains unnamed throughout the story — to propose using at-home workouts in order to stay fit and attain a sense of happiness; they soon find themselves incorporating these workouts as a routine in their everyday lives. The physical exercises allow the family to cope through the war and momentarily ignore the fact that they live in a warzone, which allows them to regain some semblance of normalcy. This works for the time being, and the family finds themselves more at peace as they forget about the real world outside and narrow their viewpoint to their exercises and life inside; However, their peace is interrupted when a stray bullet flies through their window, which brings them back to reality and makes them to realize that they are in danger.



I really enjoyed reading this short story as it was structured in a way that I had never read before. While the story begins with the war at its peak and the family having to go into quarantine, the way the story was told had me forgetting that detail as I was swept up into the family’s small world perspective, which allowed me to feel their emotions changing throughout the story. This made the ending where the bullet flies through the window all the more shocking because it brought me as a reader back to the central yet forgotten plot point of the story — the war — and allowed me to feel the same emotions the family was feeling, as they realized that they are still in imminent risk in this active warzone.

Overall, I really enjoyed this piece and thought it was very shocking. It caught me off guard at times, making it a story worth revisiting two or three times to fully appreciate the writing.

graphics: Avantika Palayekar



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LEFT: Tabitha Soren, *Emailed Kiss Goodnight*, 2016. Collection of the artist. © Tabitha Soren RIGHT: Joanna Piotrowska, *A Most Gentle Touch*, 2019. Collection of Alice Russotti. © Joanna Piotrowska

SPORTS

Golf and its impact on the environment

Dester Selby-Salazar, SPORTS CO-EDITOR
Kaelan Patel, STAFF WRITER

Recently, golf has been increasingly scrutinized by environmentalists to become more environmentally conscious. In recent years, increased environmental awareness and action has revealed how many leisure activities have a negative impact on the natural environment. In particular, maintaining golf fields requires extensive amounts of resources, which environmentalists argue is damaging the environment.

The biggest issue when maintaining golf fields is the amount of fertilizers and water that is used. According to TWL Irrigation, in 2020, an 18-hole course could use up to 2.08 billion gallons of water each day, just to maintain the green, pristine nature of golf fields. Charlotte Valvanis '26, a co-leader of the Students for Animal Advocacy and Environmental Action club, believes that too many resources are being wasted on maintaining golf courses.

"Right now, [the water and fertilizer usage] is too much, and needs to be pulled back," said Valvanis. "If there's some way to still maintain the golf course while cutting back on water usage, [it would] prevent continued environmental consequences."

One compromise Valvanis proposes is to establish golf courses where the natural landscape is shaped in a way that permits for golf to be played. This would exclude the need to tear down forests or flatten land in order to make the fields accessible for golf.

"There's some different types [of golf courses] specifically in Scotland ... the field is laid out with the shoreline, and tends to be near the beaches and cliffs," said Valvanis. "The course goes with the natural landscape. It can be somewhat better for the environment [because] you're just following along with what's already there."

Brooks Cahill-Sanidas '24, a player on the boys golf team at the Princeton Golf Club, understands the consequences of the high maintenance of golf fields and wants to preserve wild habitats. Cahill-Sanidas also believes that golf should be more entwined into the Princeton community, as he believes that golf offers a unique experience to young players to grow and develop as they play the sport.

"I think you can put [golf courses] on the same level as a



graphic: Johanna Chen

playground," said Cahill-Sanidas. "There's a lot of opportunities for young kids to go [to the golf courses] and play golf."

Yasna Shariarian '27 is a player for the girls golf team at the Princeton Golf Club, and also sees both sides of the argument. Shariarian recognizes that golf has an issue with resource usage, and offers a compromise to the problem.

"The golf course does not need to be as big as they are right now, they can be made much smaller," said Shariarian. "Most of the land on a golf course is not used because only the greens and fairways are used the most."

The fact is that the fields are made large so that any given plot of land has the potential for a golf ball to land on it. All the while, the grass which isn't used still has to be meticulously maintained in case a golf ball lands on it, which wastes large amounts of water. The space which isn't being used is space that could be inhabited by wildlife, a critical issue in the eyes of Valvanis.

"By cutting down [wildlife's] last remaining habitat, they're forced to go into town and areas where they shouldn't be," said Valvanis. "In general, that's not something

that is safe for us and is not safe for them. It creates more roadkill and is devastating for our environment."

For Valvanis, one way in which the animals can be protected in the short run is by installing wildlife crossings. According to the Federal Highway Administration, one to two million collisions happen involving animals crossing highways and roads every year. Golf courses and other construction projects tend to displace wildlife, giving these animals no choice but to cross highways and roads in order to find other forests. These bridges, which cross over highways and other densely organized motorways, allow for animals to safely cross over, which can potentially save both animal and human lives.

Still, this is just a temporary fix for Valvanis; more permanent solutions mean allowing animals to peacefully live in areas near the golf courses. For her, there's a lot of ways to make golf courses welcoming to all types of animals.

"If you're going to create more golf courses, you also have to make changes inside the golf course to ensure that animals don't have to wander outside of the land in the first place," said Valvanis. "So more trees, more plants that can create pollination with certain flower groups [to make golf courses environmentally friendly]."

Looking ahead, Valvanis hopes that the future of golf will be an environmentally conscious future, where wildlife and sport will be able to coexist. She hopes that in the future, golfers will want to make a positive impact on the environment and practice

sustainability in their sport. For those looking to make an impact on the environment, Valvanis has some words of advice.

"I would say to educate yourself on the impact of golfing and know what you're doing to the environment," said Valvanis. "Inform yourself so you know what changes to make."

By cutting down [wildlife's] last remaining habitat, they're forced to go into town and areas where they shouldn't be.

Triathlon club becomes influential at PHS

Asya Morozov, SPORTS CO-EDITOR
Gabriel Andrade and Thomsen Lord,
CONTRIBUTING WRITERS

The triathlon is one of the most painful and physically demanding sports competitions the world has to offer. It consists of swimming, biking, and running, which challenges an athlete's endurance and versatility. Any triathlete needs strong cardiovascular fitness as well as mental strength in order to succeed.

For instance, the longest triathlon event, the full Ironman, consists of 2.4 miles of swimming in the open sea, 112 miles of biking, and a 26.2 mile run equivalent to a full marathon. This triathlon was proposed in 1977 by U.S. Navy Commander John Collins, who wanted to figure out who the fittest athletes were: swimmers, bikers, or runners. That year, only 15 athletes competed in the race. Nowadays, long distance running has become more popular. More than a million people in the United States participate in triathlons yearly. And since its debut as an Olympic sport in the 2000 Sydney Summer Games, triathlon's popularity is only climbing.

At PHS, the spirit of athletics is important in day to day life, with the triathlon club, futsal club, javelin club, and track and field being some of the more popular athletic clubs. The triathlon club drawn a whole variety of students at PHS, students like Evan Kang '25, for whom the journey into triathlons was somewhat accidental, but ultimately was a huge success.

"My dad was doing triathlons for two to three years and he



Sabine Ristad '25 crosses the finish line.

actually signed me up for the triathlon first," said Kang. "Then I realized there was a triathlon club at the school and I thought it would be pretty nice to join because I have a couple friends who were already in the club."

Shawn Elwood '24 is the club leader, and attributes his journey into triathlons to his upbringing, where he witnessed the sport through his parents' involvement.

"My parents were both involved, and I grew up watching races," Elwood said. "I'm also involved in other endurance sports, which helped me get involved."

The club's objectives are clear: to grow the sport of triathlon, especially among young athletes, and to create a competitive high school tri team in New Jersey.

"We are trying to grow the sport of triathlon, especially for younger athletes, as well as create a competitive NJ-based HS tri team," Elwood explains.

Creating an inclusive environment is supreme for the club.

"Anyone is welcome to join, and we are happy to give tips and insight for any newcomers on how to navigate the sport," Elwood says.

As Kang reflects on his triumphs and on the road ahead, there's one feeling that stays with me – gratitude.

"I felt very grateful that I tried the triathlon in the first place," Kang shares, remembering the euphoria of winning the state championship. Looking ahead, Kang is determined to continue his journey, fueled by the lessons learned and the camaraderie shared in the Princeton High School Triathlon Club.

Elwood knows that starting a new challenge such as a triathlon can be daunting for anyone, so for newcomers contemplating joining the club, Elwood has some words of advice.

"Even if you start with a relay [doing one leg of the race,] that is still an accomplishment."

PREX

PRINCETON RECORD EXCHANGE

Formula 1: engineering the future

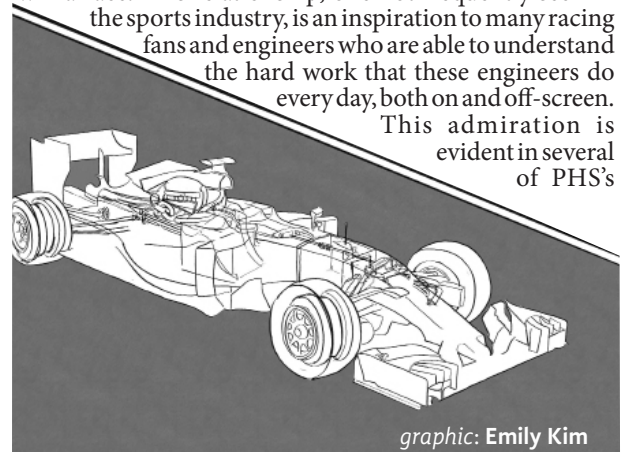
Asya Morozov, SPORTS CO-EDITOR

The world of motorsports reaches far — audiences from all over the world tune in to popular competitions like IndyCars, MotoGP, NASCAR, Esports racing, and the Formula championships. The Formula championships in particular are incredibly popular, with the top Formula competition, Formula 1 (F1), garnering one to two million viewers per race. Although F1 world championship winners like Max Verstappen, Lewis Hamilton, and Fernando Alonso and their impressively fast cars are the emblems of the competition, the sport could not exist without its extremely advanced engineering and mechanic teams. Their ability to both completely rework existing car models and make quick, performance-optimizing changes during race weekends is a big part of what keeps racing relevant and interesting every year.

As some of the fastest vehicles on the planet, F1 cars are constructed in a unique way, with low floors, lightweight carbon fiber chassis, aerodynamic front wings, and Drag Reduction Systems. According to the Engineering Institute of Technology, these elements work together to minimize cars' drag and increase their downforce, allowing them to go as fast as possible in straight-line sectors and remain close to the ground in corners to avoid spinning out and damaging the car or crashing and endangering the driver.

However, as the basic elements of every F1 car are the same, specific aspects of their construction are what decide the car's endurance, speed, and overtaking ability. Handling a complicated combination of sports, science, and statistics, F1 engineers and drivers must work together to understand their team's car and figure out what to change to give the driver the few tenths of a second they need to win a race. This relationship, one not frequently seen in the sports industry, is an inspiration to many racing fans and engineers who are able to understand the hard work that these engineers do every day, both on and off-screen.

This admiration is evident in several of PHS's



graphic: Emily Kim

motorsports and engineering clubs, who, though they partake in different activities, unite in their respect for how innovation in the field has both helped revolutionize many sports and allowed technology to progress at unimaginable speeds. Ben Gitai '25, co-leader of the Sim Racing and Motorsports Club and long-time car and racing fan, believes that many of the events he watches are able to stay relevant and exciting because of advances in engineering.

"Engineering is one of ... the most important parts of motorsports. I think the best place to see this is in the [World Endurance Championship], which events like the 24 hours of Le Mans and others are a part of. The new cars in the Le Mans Prototype 2 class are a great example of this, as they just keep getting faster and more reliable each year," Gitai said.

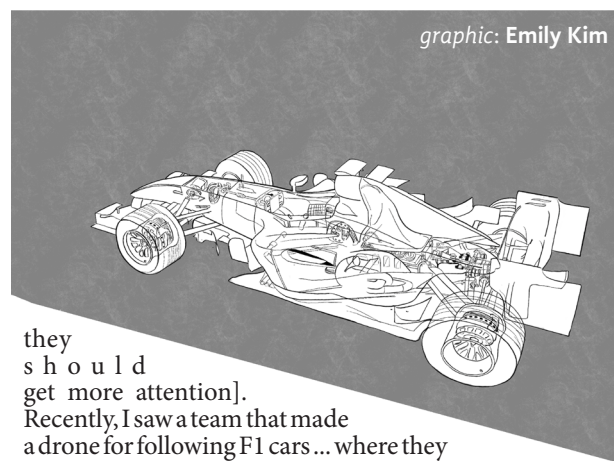
The Aston Martin F1 team is another example of this, as they, before the Japanese Grand Prix, made several changes to their cars' sidepods and floor. These adjustments made their car more competitive, and driver Fernando Alonso noted that the changes had improved the car's performance — his qualifying time went from 1.5 seconds slower than the top teams in 2023 to just 0.4 seconds slower in 2024.

Such engineering victories throughout the field of motorsports and sports in general have not only impressed racing fans like Gitai, but also PHS's own engineering clubs. One club with a particular focus on sports engineering is the Princeton Soccer Robotics Club. Leaders Jieruei Chang '24 and Shrey Khetan '24 spend their time building autonomous robots, with their club's current main project being a team of small robots that can be programmed to play soccer against other robots. Khetan himself has a strong interest in sports, and although he plans to pursue robotics rather than sports engineering, he still appreciates the growth the field has seen recently and looks forward to its future.

"I see technology, and especially artificial intelligence, playing a major role in the future, and not only [in] sports, like soccer, but almost every sport, because [it] can [help] capture moments, faster than the human eye," Khetan said.

Khetan has also been paying attention to Formula 1, and observes that some advancements in the field beyond just racecar engineering are overlooked, describing innovations in F1 camerawork, another important technical aspect for fans worldwide who tune in to live coverage every grand prix weekend.

"When there's more groundbreaking discoveries in STEM and teams making really interesting devices, [I think



graphic: Emily Kim

they should get more attention].

Recently, I saw a team that made a drone for following F1 cars ... where they could just go, and their acceleration was as fast as an F1 car ... they'll add a new aspect for F1 fans where you can actually see the car from a bird's eye view," Khetan said.

Chang agrees with Khetan, but also believes that even lesser-known inventions like the car-tracking drone are frequently prioritized over other innovations due to their flashiness, leading to an image of engineering as solely an exciting and active profession rather than one that is mostly based on necessity and effort.

For example, according to Weil College Advising, robotics, aerospace, and software engineering, three fields that frequently work on big, acclaimed projects like space rovers or planes, are the most desirable engineering majors. Meanwhile, there is a lack of field service engineers and manufacturing engineers, who have to do much more physical work but are just as necessary to their fields.

"There's a lot of engineering that doesn't sound very glamorous, very flashy, but [is] necessary," said Chang. "They've got every company in the world trying to make an electric car, or [they've] got virtual reality ... but what about everything else that's going on?"

Although engineering produces beautiful results, it takes months of trial-and-error just to put out a finished product. As the field becomes more prominent across the world, its origins may be overshadowed by its success, just as F1 race-winning engineering marvels overshadow the long hours of failure that brought them about. According to Chang, this real human effort is a part of engineering that cannot easily be replicated and deserves its own acknowledgement.

"It's a real thing that you're building. It's a real tangible thing. And that's ... what separates engineering from more theoretical fields, or even computer science," Chang said.

"F1 engineers and drivers must work together to understand their team's car and figure out what to change."

PHS TAKES: Should New Jersey ban sports betting?

Asya Morozov, Katie Qin, and Dester Selby-Salazar, SPORTS CO-EDITORS

In New Jersey, sports betting has been legal at casinos and racetracks since 2018. With MLB player Shohei Ohtani's and NHL player Shane Pinto's recent involvements in betting scandals, the question for many is whether sports betting should continue to be promoted so strongly. At PHS, many students are interested in these betting scandals, and it's common to hear conversations about these issues in the halls.



photo: Asya Morozov



photo: Katie Qin



photo: Dester Selby-Salazar

"I believe sports betting can be a great way to enhance the sports watching experience, but only with laws that restrict constant, irresponsible gambling in some capacity."

- Tyler Fiorentino '27

"I think sports betting is stupid because I don't see sports as a valuable way to invest money. It's like gambling...which is unhealthy, and I don't condone it."

- Ash Nieman '26

"I think sports betting should not be banned ... I know a lot of kids under 21 still do sports betting, and obviously it's very addictive [because] it's gambling, but I think that it should be legal if you are over the age of 21."

- Charlie Ross '24

Athletes of the Month

Alex Winters '24

Katie Qin, SPORTS CO-EDITOR

It's unbearably hot, and, from where Alex Winters '24 is standing, the batter looks like a blur. The sound of the bat hitting the ball echoes through the stadium. Ignoring the sun's glare, Winters' eyes search for the ball. He sprints to catch it. In the next few seconds, as his teammates look on with bated breath, the baseball lands comfortably in Winters' mitt. The opposing team has been struck out.

Winters has been playing baseball since he was only six years old. As a child, his boundless energy was directed into a passion and love for sports.

Baseball has been a huge influence on him ever since, and he's joined recreational leagues and summer camps throughout his career. During his sophomore year, Winters fell in love with the feeling of standing under stadium lights as he and the rest of the PHS team were called on at the Trenton Thunder Ballpark. He was also voted in to play in the 2022 Carpenter Cup, representing Mercer County. There, he competed against teams from Pennsylvania, Delaware, and New Jersey.

Winters' success in past years has continued into the new baseball season. In the PHS baseball team's first game this year, Winters scored a run and a triple, which is when the batter runs to third base after hitting the ball, an impressive feat even for high-level players. His teammate, Jai Justice '25, commends him for contributing to the team with his expertise and guidance.

"He's a great hitter, is very fast, and has leadership skills," said Jai. "He's constantly hustling around the bases and anywhere on the field."

Winters also shows his leadership skills as he starts this season as the team's newly elected captain. His strong connections with his teammates helps them build on each other's strengths and weaknesses, making Winters an invaluable part of the varsity team.

"[My role is] really important this year, especially as a leader on the team. Whether that be on or off the field ... that's something I really aspire to be," Winters said.

photo: Eddie Chen



Winters doesn't just impress his teammates, however. He also caught the attention of the baseball coach, Dominic Capuano, showing both skill and dedication to the sport. Capuano also notes that Winters has grown significantly throughout his time with the PHS team as he refines his fundamental skills and embodies a competitive mindset, becoming more and more adaptable with every season.

"[He is better at] understanding stealing bases, understanding pitch counts, understanding what pitchers are going to do, [and] understanding where [he needs to hit] the ball. [His] desire to improve has really shown," Capuano said.

But an athlete's career is never an easy path, and Winters was no exception. Suffering an injury to his batting arm, he was unable to play for part of his first year on the team. Still, Winters remained optimistic and never gave up on baseball despite this challenge.

"I broke my arm during baseball [in my sophomore year]," said Winters. "I don't know if I thought about quitting, but it was really a low point. But in the end, it's just the game I love."

He worked hard on his recovery and was quickly able to return to baseball and progress even further. This year, he has chosen to focus on improving his batting.

"Last year, I had some trouble pulling the ball," said Winters. "I'm a lefty, so [pulling is] hitting the right field ... at the end of last year, I picked it up a lot."

Being left-handed in sports where most players are right-handed requires extra effort as it comes with a slightly different skill set. With newly improved control over his swing, Winters is able to redirect the ball, making it easier for his teammates to score more points when he's at bat.

Winters has received offers to play Division III college baseball, but wants to prioritize his education and his interest in statistics. He hopes to apply the skills he learned in baseball to this field.

"[It's] really interesting to implement [statistics] into sports," said Winters. "I did a research project with the [Princeton] University football team. We analyzed the data [to find] strengths and weaknesses of their opponents."

But right now, Winters is focused on the baseball season. Since it's his last year at PHS, Winters is looking forward to making an even bigger impact on the season and the team as a whole.

"This is the first year where I'm able to be a real leader, and I'm really happy that this is the group I get to lead ... We have a great combination of skill, talent, and heart as well, and I think we can do some real damage this year," Winters said.

Jocelyn Lee '24

Claire Yang, STAFF WRITER

Deep breaths. Firm stance. Tight grip. As attackers rush towards her, Joci Lee '24 stands her ground, rallying the team to move as one. Despite the opposing team's relentless attack, Lee steps up as captain and, using her grit and perseverance, leads the lacrosse team to victory.

Lee has always been a very athletic and competitive person. At a young age, she was trying out different sports, and eventually stuck with lacrosse in fifth grade. At first Lee played for fun, and then eventually began to compete more.

"Lacrosse was just the [sport] that I liked the most," said Lee. "All my friends did lacrosse, so it was really fun for me. It was more of a fun [activity] than a sport until high school, and then I got really competitive."

After playing club lacrosse throughout middle school, Lee joined the PHS Varsity Lacrosse team her freshman year as a defender. Despite this achievement, Lee was frustrated after being left out of the starting lineup. However, Assistant Varsity Coach Charles Gallagher of the girls lacrosse team recognized Lee's skill, leadership and responsibility early on, and now rates her as one of the most important players on the team.

"She's a really solid player for us [and] leads our defensive unit. We have four to five girls on defense and she really takes great command," said Gallagher. "As a group, [her] understanding of the game brings a lot of experience, [a lot of] really good, savvy lacrosse play to our program."

Little details like predicting how the other team will score the ball, what formations they'll use, and knowing how to counter them can drastically change the outcome of the match. As the team's captain, organizing and encouraging fellow players is one thing, but teaching them to adapt to these details is a whole other challenge that comes with the role, as not everyone may be as experienced, but Lee takes care of everyone by ensuring they're prepared to achieve a winning game.

"Morale can get low if the other team is scoring a lot on us," said Lee. "So a lot of times I try to raise people's ... optimism and cheer them up."

Lee, acting as captain and defender, is a pillar of reliability for the team. Her teammate Samantha Henderson '24 admires her communication skills and understanding of the game.

"She knows a lot about the sport and knows what feedback to give players [and] ... leads the defensive unit by example," said Henderson. "She [also] communicates well and teaches others to do so too. She is a very strong defender and is very knowledgeable about what a good defense looks like."

With years of lacrosse under her belt and experience as a captain for the second year in a row, Lee's stats are impressive. Last year, Lee achieved 41 forced turnovers, the highest on the team. In addition, Lee was given the Unsung Hero award at a lacrosse conference. Most defensive players don't get their names in the papers as much as midfielders or attackers; Lee's reliability and skill earned her the award. Looking beyond her impressive statistics, Lee is equally successful because of her personality and character.

"I was always impressed with her dedication for the sport. She has always been kind and a supportive teammate. She is a great player and captain because she works really hard," Henderson said.

Being both a model lacrosse player and encouraging mentor has often brought Lee and the team success, such as their win over West Windsor Plainsboro North High School during the beginning of the season. Both Lee and the team look forward to continuing their successful run with an amazing team lineup.

"I am feeling really great about our season and our team ... our defense had amazing [forced] turnovers that became great transitions and beautiful goals. Everyone worked together so well as a unit," Henderson said.

While leading the team into a new exciting season, Lee looks forward to playing Division III lacrosse for Rochester Institute of Technology after graduation. Throughout the hardships and triumphs, Lee's high school lacrosse experience has not only left her with cherished memories and friendships but has also equipped her with important lessons that will benefit her in college and beyond.

"[Lacrosse has] helped me to be more confident because on the field you're forced to be loud and physical. It's helped me [learn] leadership and how to be more outspoken," said Lee. "Keep trying and working really hard because you'll be able to build your way up."

photo: Charley Hu



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