

10Xpress

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10Xpress

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concept has the
potential to beat
Malaria

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China launches
satellite
constellation to **rival**
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Toni Morrison

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Editor's Note

Greetings!

Welcome to the second volume of *10Xpress*! We're so excited that the newspaper has become a tradition at 10X and thrilled to keep putting out quality issues. Over the past month, our beloved staff has been hard at work curating the best and most interesting articles from a variety of topics. This issue is sure to have you hooked!

What makes this edition particularly special is its balance between thought-provoking insights and entertaining reads. Whether you're learning about a scientific breakthrough, catching up on politics, or indulging in a book review, there's something here for everyone. We've also added new voices to our staff, so get ready to hear from new writers!

We invite you to engage with the articles by providing feedback at the form linked [here](#). After all, this newspaper is a platform by the students, for the students. Here's to another year of creativity, collaboration, and compelling journalism!

P.S. – Our design is getting a makeover soon, so prepare yourself for a revamped layout that's easier on the eyes.

Also, visit our new website!

<https://10Xpress.site>

Warmly,

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Trojan horse concept has the potential to beat Malaria

By Neil Daga (11)

Malaria is a disease that has existed for centuries; Chinese inscriptions on bones from over 3,500 years ago reference this horrifying illness. But what is malaria, and what can we do to counter this disease?

Malaria is caused by single-celled parasites of the genus *Plasmodium*. When a female *Anopheles* mosquito bites an individual infected with malaria, it becomes infective. Within a week, it can spread the disease by biting another person and injecting the parasites into their body.

The parasites reproduce at a staggering rate in the body. In doing so, they disrupt natural bodily processes, attack red blood cells, and hinder bodily functions. Symptoms of malaria can be either severe or mild. In mild cases, symptoms range from fever and chills to headaches. In severe cases, malaria can lead to fatigue, confusion, seizures, and difficulty breathing.

But how relevant is it today? In 2022, nearly half of the world's population was at risk of malaria. From 2021 to 2023, there were around 600,000 deaths annually due to malaria, most of which occurred in Africa.

Recently, a new idea has emerged—the concept of the Trojan Horse. The Trojan Horse was a tactic employed by the Greeks to gain entrance into Troy; they disguised the horse as a gift and hid men inside it, who later emerged at night and attacked Troy, effectively winning the war. But what could the horse be in the case of malaria?

Parasites require cholesterol—particularly because they can't make their own, so they are desperate to acquire it. Typically, drugs are effective against the parasites, but they are not lethal. Attaching the drugs to cholesterol shows significant results—around 3 to 25 times more efficiency in killing the parasites. The parasites ingest the cholesterol—the Trojan Horse in this scenario—along with the drugs, providing the optimal opportunity for the drugs to kill the parasite.

Though this research is in its initial phases, scientists from the Australian National University believe this could be a significant step toward treating malaria once and for all.

Breakthrough in delivering drugs to brain using parasites

By Siddharth Mitra (11)

Current drug delivery methods to the brain are often inefficient due to the blood-brain barrier, a protective network of cells that prevents harmful substances from entering the brain. For years, scientists have searched for ways to overcome this barrier. Now, Shahar Bracha and her team have made a breakthrough.

Bracha's curiosity was sparked by *Toxoplasma gondii* (*T. gondii*), a parasite known to alter mouse behaviour by crossing the blood-brain barrier and residing in neurons for a lifetime. She realized that *T. gondii* could hold the key to delivering drugs to the brain.

However, the parasite is dangerous, especially for those with weakened immune systems. It poses an immense health risk, being a leading cause of foodborne illness and potential brain damage. With these considerations in mind, the parasite must be modified to eliminate these harmful properties.

The team focused on modifying *T. gondii* to alter its protein production, enabling it to deliver drugs directly to brain cells. By targeting the parasite's dense granules, which secrete proteins without harming host cells, they found a way to safely use the parasite for drug delivery. However, the rhoptry, another organelle in *T. gondii* responsible for protein production, uses a harsh "kiss-and-spit" approach to injecting proteins into cells, causing many fused proteins to be destroyed.

While further research is needed to fully neutralize the parasite's harmful effects, this discovery represents a major advance in brain drug delivery, offering new hope for more effective treatments of neurological disorders.



Michel Talagrand wins Abel Prize

By Tanush Panigrahi (10)

Michel Pierre Talagrand, a French mathematician, has recently been awarded the 2024 Abel Prize for his groundbreaking work in probability theory and his efforts to understand and describe randomness. Talagrand's expertise lies primarily in functional analysis and probability theory, and he spent four decades at the French CNRS (Centre National de la Recherche Scientifique), advancing the field. His discoveries have applications across various disciplines.

Have you ever wondered how to calculate wind strength? It seems very random at first, but Talagrand developed methods to better understand what randomness is. Calculating randomness can be complex, involving numerous variables. Talagrand's approach was to translate probabilistic values into geometric problems—a concept that greatly impressed the chair of the Abel Prize committee. His work showed that there can be some level of predictability within seemingly random systems by developing mathematical tools and equations to describe such phenomena.

Talagrand received the Abel Prize for three key contributions in his research. First, his work on stochastic processes involves generating random values in a sequence. In these processes, the “supremum” is the largest value that can be expected from a group of values. A possible application of this could be predicting the highest wind speed during a hurricane next year using stochastic methods.

Second, he proposed the Theory of Concentration of Measure: a step beyond the stochastic process. Talagrand hypothesized that different random values balance each other out, making the outcomes more predictable overall.

Lastly, he completed the proof of Giorgio Parisi's Nobel Prize-winning work on spin glass. Using his expertise in probability, Talagrand established limits on how spin glass materials can behave, providing a deeper understanding of their properties.

For these remarkable contributions, the Abel Prize committee recognized and honoured Talagrand's work, awarding him the prestigious prize.

Math explains the movement of bacteria & traffic

By Bharat Ambati (11)

The flow of traffic on a congested highway and the movement of bacteria towards a food source might seem like two very distant concepts at first. However, recent research in statistical physics & mathematics has revealed that both phenomena can be modelled using similar mathematical principles. A new one-dimensional model developed by Alexandre Solon and Eric Bertin discusses the similarities between these two systems, showing how they both experience congestion (a traffic jam for example) under certain conditions.

The model treats cars and bacteria as particles that move along a single dimension; this is like vehicles on a one-lane road or bacteria following a single chemical gradient. In both cases, movement depends on several key parameters, such as the density of the particles, their speed, and the inertia of their motion. For traffic, inertia is represented by drivers' reaction times: the delay between noticing a change in speed and adjusting accordingly. In contrast, bacteria move with no inertia, responding instantly to environmental cues. Despite these differences, both systems show that when conditions reach a critical threshold they disrupt the flow.

The model draws on concepts from phase transitions in physics, like water turning into vapour when evaporated. In this context, a smooth flow of traffic can suddenly transition into a congested state when density or other conditions change. The research identifies factors that contribute to congestion, such as high density, frequent entries and exits, and delayed reactions, all of which increase the likelihood of slowdowns and stop-and-go patterns on the road.

For bacteria, while inertia is not a factor, dense clustering occurs due to nutrient gradients that drive them toward food sources. The research reveals that the formation of bacterial groups and traffic jams are not so different after all—they are both complex systems where individual entities/organisms interact in ways that can lead to large-scale patterns, behaviours, and motifs.

Smart swim goggles for Paris Olympics

By Ruhi Beri (11)

When athletes swim underwater, their view is often limited to the water's blue tint and the pool tiles if they're in a pool. However, with Smart Swim goggles, that may soon change.

Smart Swim is a smart goggle developed by FORM, a swim-tech company aiming to streamline the swimming experience with its innovative features. Developed in collaboration with Scott Dickens, a Canadian former Olympic swimmer, the Smart Swim goggles have become popular among Olympians and Paralympians preparing for the 2024 Paris Olympics.

The goggles are equipped with sensors that detect valuable data for swimmers, including heart rate, pace, stroke rate, stroke count, distance per stroke, split times, time, distance, and calories burned. They use an augmented reality display to present these metrics in real time on the lenses. Additionally, swimmers can review data post-swim using the FORM SWIM app, which offers a premium subscription for additional features—one of which is a built-in compass that helps swimmers maintain a straight course in open water despite currents.

Five years after the release of Smart Swim 1 in 2019, Smart Swim 2 is now available for purchase, boasting several improvements. These include a built-in heart rate monitor (previously sold separately for Smart Swim 1), proprietary eye seals, a more compact tech pack, and additional features.

These innovative goggles, incorporating augmented reality, machine learning, and various sensors, are priced at \$179 for Smart Swim 1 and \$249 for Smart Swim 2. This makes them 9 to 12.5 times more expensive than Speedo goggles in the U.S. Despite the high cost, athletes are finding them worth the investment, with the BBC reporting that the entire Great Britain swimming Olympic and Paralympic teams use Smart Swim goggles.

China launches satellite rivaling SpaceX's Starlink

By Yi Zou (10)

On August 6, China launched what it hopes will be the first in a constellation of 14,000 satellites to provide internet coverage from space. Eighteen satellites were released into low Earth orbit as the initial members of the Chinese government-backed Qianfan (Space Sail) constellation. Praised heavily in Chinese domestic media, the constellation is presented as China's alternative to SpaceX's renowned Starlink network.

The constellation is expected to expand to more than 600 satellites by the end of 2025, aiming for 14,000 satellites by 2030, according to China Central Television broadcasters. If growth proceeds as planned, China will establish a satellite system capable of supporting global internet coverage. However, the motives behind this endeavour are more complex than they appear.

Satellite constellations play a critical role in controlling information, data flow, and navigation, as well as in military communication. China views SpaceX as a potential threat to its national security and believes that establishing its satellite constellation can effectively place it on par with the United States in terms of space dominance and information control.

Moreover, China is known for its strict control and censorship of domestic online information. SpaceX's global internet coverage poses a threat to this control by potentially bypassing Chinese censorship. If China succeeds in establishing its satellite constellation, it would not only maintain control over domestic information but could also extend its influence globally if other countries adopt Chinese broadband constellations, achieving information superiority on a larger scale.

What will be the outcomes of China's satellite constellation? Does this mark the beginning of a new space race? Only time will tell.



The reason why Elon sued OpenAI

By Yi Zou (10)

Whenever we talk about technological innovations in recent years, two symbolic figures naturally stand out: OpenAI, which created ChatGPT, and Elon Musk, the CEO of Tesla. But recent events pulled the two together and hit headlines early this March. In a recent lawsuit, Elon Musk accuses OpenAI of abandoning its original mission for human benefit and deviating toward profit, sparking a heated debate on the current state of technology and artificial intelligence.

It may not be well known, but Elon Musk co-founded OpenAI until he resigned from the company in 2018. In the lawsuit, Musk said that Altman, CEO of OpenAI, and Greg Brockman, one of the co-founders, initially approached him to make an open-source, non-profit company but has now become profit-oriented. Musk said OpenAI's three founders originally agreed to work on artificial general intelligence (AGI) in a way that would "benefit humanity" rather than earn the company profits. Musk also mentioned the sharing of profits between Microsoft and OpenAI and how both companies focused more on profits than human benefit ever since the release of GPT-4 in 2023.

OpenAI retaliated shortly after Musk's allegations. In a podcast by Lex Fridman, Altman claimed that Musk left the company because he wanted complete control over it and thought it would fail. The company also denied the contracts Musk mentioned in his lawsuit. The case remains in progress, and the final results remain to be seen.

This lawsuit drew attention to many questions that are scarcely asked even after the release of GPT-4. Is it really ethical to make artificial intelligence profit-oriented? How much profit is too much? Should AI be freely accessible, or is it reasonable for its developers to charge costs? One cannot give an absolute response to these questions because both sides have reasoning that is hard to argue against. Ultimately, the answer will depend on the exact situation of the developers, consumers, and the product, and opinions on the matter can vary.

AI to help detect tuberculosis, based on cough sounds

By Riya Kaulwar (10)

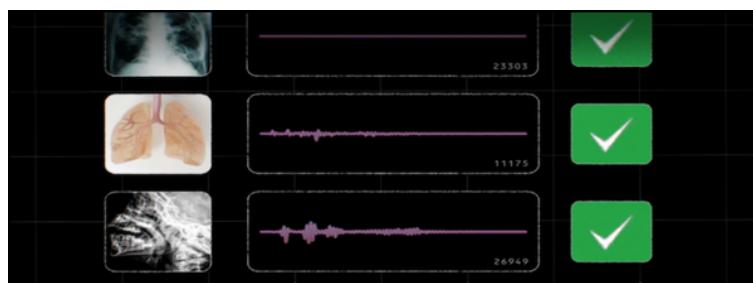
Tuberculosis (TB) is a major global health threat and one of the world's deadliest diseases, with around 10.6 million new cases and 1.6 million deaths reported in 2022. While it primarily affects the lungs, TB can lead to severe complications, including lung damage and an increased risk of developing lung cancer. The disease is prevalent in many low- and middle-income countries but affects people worldwide.

To address this challenge, a new AI technology, the "Health Acoustic Representations" (HeAR) model developed by Google, is being explored to enhance the early detection of TB by analysing cough sounds. The HeAR model is trained on approximately 300 million audio samples, including 100 million cough sounds. As a bioacoustic model, it is specifically designed to analyse and interpret sounds from the human body, such as coughs, to detect potential health issues. This AI model listens to these sounds and detects patterns that may indicate early signs of TB, much like a doctor might listen to your breathing during a check-up, but with the added power of data and machine learning.

Here's how it works: When a person coughs, the sound carries crucial information about the health of their lungs. The HeAR model is designed to pick up on subtle acoustic patterns in these coughs that could signal TB or other respiratory conditions. In areas where advanced medical testing is not easily accessible, this technology could enable healthcare workers to screen for TB using basic technology, making detection more widespread and affordable.

However, like all technologies, HeAR isn't without its challenges. The accuracy of AI models depends on the quality and diversity of the data they're trained on. If the cough samples don't represent a wide range of people, the model might not perform as well in different populations. Additionally, relying solely on AI for TB detection could overlook other important clinical signs, so it's best used in conjunction with traditional diagnostic methods.

As researchers and startups like Salcit Technologies in India continue to develop this technology, HeAR holds promise for revolutionising TB detection and treatment, potentially saving countless lives.



India's new EV scheme sparks foreign investment interest

By Suchita Agarwalla (11)



India recently announced an electric vehicle (EV) scheme aimed at attracting global manufacturers, including industry leaders like Tesla, to establish manufacturing hubs in the country. The government plans to offer tax reductions and incentives to companies making significant investments, positioning India as a leading destination for EV manufacturing.

Under this new strategy, companies that invest over \$500 million in manufacturing facilities within three years will receive tax cuts on imports of select EV components. Companies can exceed this investment threshold to support India's journey towards self-reliance and to encourage the production of breakthrough technologies. However, to qualify for these benefits, manufacturers must meet several requirements within three years. This includes establishing production plants, achieving a minimum of 50% domestic value addition within five years, and maintaining a 25% localization level by the third year. Additionally, to ensure commitment to these investment promises, companies must submit a bank guarantee.

While the program aims to attract international stakeholders, local automobile manufacturers, such as Mahindra and Tata Motors, have expressed concerns about increased competition from overseas luxury EV producers. As a result, India is determined to maintain independent policy decisions despite demands from companies like Tesla for price reductions.

Initiatives like these from the Government of India are crucial steps toward making the nation a hub not only for electric vehicle (EV) technology but also for advanced technology across various fields. It is a strategic move towards sustainable economic growth and improved transportation.

Kamala Harris plans to solve America's housing crisis

By Avani Radheshyam (11)

As the intensity of presidential polls increases by the minute, significant American issues, primarily related to the economy, are coming into focus. The American people are questioning whether the next president will address these problems effectively.

A consensus across the political spectrum highlights that rent is prohibitively expensive, and buying a home has become nearly impossible. There have been rumours that Kamala Harris plans to address one of the largest economic issues in the U.S.: housing affordability. Her proposal builds on the plan originally announced by Joe Biden but includes several additional measures. Her guidelines for implementation are as follows:

- \$25,000 in down payment support
- \$10,000 tax credit for first-time home buyers in the U.S.
- Tax incentives for builders who sell homes to first-time buyers
- Repurposing federal land for affordable housing
- A ban on algorithm-driven price-setting tools used by landlords
- A \$40 billion innovation fund to stimulate innovative housing construction

While these solutions seem sensible in theory and could potentially alleviate the housing crisis, their practical implementation might prove challenging. For instance, providing down payment assistance could increase demand and subsequently drive up housing prices even further.

Economists like Lanhee Chan express concerns about the effectiveness of rent caps, particularly with a 5% cap on rent increases. As rent prices have been stabilizing recently, this measure might not achieve its intended impact. Additionally, the country faces a shortfall of 3 million homes to meet the proposal's goals, indicating that significant effort is required to balance the housing supply.

Despite criticisms, Harris' proposal is unique in its direct approach to addressing housing supply issues. It tackles many of the housing-related problems Americans face and is widely regarded as a step in the right direction for the nation.

Bangladesh Protests: Blessing in disguise for Indian textiles

By Suchita Agarwalla (11)

Bangladesh, a global leader in textiles, is currently facing significant disruptions due to ongoing political protests. The reinstatement of the 1971 war quota rule has ignited widespread unrest, resulting in approximately 300 deaths and major political turmoil. Additionally, the government's decision to cut internet and telecommunications has worsened the situation, causing substantial disruptions in the textile industry, which is crucial to both its economy and its trade relationship with India.

Indian textile companies, which have invested billions in Bangladesh, are experiencing the effects of this unrest. With factories shutting down due to labour strikes, Indian investors are struggling with uncertainties and potential losses. While they were initially attracted to Bangladesh's low production costs and skilled workforce, they are now reconsidering their investments.

However, this crisis might turn out to be an unexpected opportunity for Indian textile manufacturers. Approximately 25% of manufacturing units in Bangladesh are owned by Indian companies. As the situation progresses, these companies might shift their production back to India, potentially providing a significant boost to the Indian economy. If 10–11% of Bangladesh's export orders are redirected to India, experts estimate that India could see an additional \$300–400 million in business every month. Indian textile hubs like Tiruppur are well-prepared to handle these increased orders.

In conclusion, although the political upheaval in Bangladesh presents challenges for investors, it also offers Indian textile companies a chance to capitalize on the situation, increase domestic production, and expand their global market share.



Vladimir Putin Wins Russian Elections by 87 per cent

By Syshasri Raghavan (10)

The Russian elections have recently ended, with Vladimir Putin winning by 87%—a number that is almost impossible to achieve in politics. His overwhelming victory raises serious questions about the credibility and fairness of the electoral process in Russia and displays the totalitarian strength of communist countries such as this one.

Aside from Putin, there are three notable candidates in the election in terms of vote share. However, their percentages pale in comparison to Putin's overwhelming lead. These candidates are Nikolai Kharitonov, who received 4.7% of the votes; Vladislav Davankov, who obtained 3.6% of the votes; and Leonid Slutsky, who received 2.5% of the votes.

The Shpilkin method, a statistical technique used to gauge voting manipulation, found that more than half of the votes—about twenty-two million ballots—for Putin were fraudulent. This method uses the turnout rate to infer the vote distribution for politicians running in the elections. In theory, a fair vote should not show significant changes in share. According to Putin and his fellow politicians and supporters, “The high turnout and the vote in favour of Putin demonstrate that the country is united.” However, from an outside perspective, it highlights the corruption, manipulation, and authoritarian control of the Russian government.

For 122,474,213 people to support one person is almost impossible and highly unlikely. In Putin’s case, with the country already having a history of communism and corruption, it suggests manipulation of the votes.

The circumstances surrounding this election reveal the lack of transparency in Russia’s government and political systems. Addressing these concerns is essential to promote a fair and equitable democracy. Elections are crucial to government and politics, and if they are marred by fraud, they create an unjust and corrupt government and society.

Moscow Crocus Concert hall shooting

By Sanvi Kurade (10)

On the night of March 23, four masked men, allegedly members of the ISIS-K (Islamic State of Khorasan) terrorist group, opened fire with machine guns in the Moscow Crocus concert hall before setting the building on fire with a flammable liquid.

The attack resulted in over 137 deaths and more than 100 injuries. Emergency services evacuated over 100 people from the basement of the concert hall. The day after the attack, grieving Russian citizens gathered at the Crocus concert hall to pay their respects to the victims.

In the aftermath, the Russian government has quickly accused Ukraine of allowing the terrorists to enter Russia via the Russia-Ukraine border. Ukrainian President Volodymyr Zelensky has denied these accusations and instead accused Vladimir Putin of attempting to shift the blame onto Ukraine. This has fueled speculation that Putin might be trying to justify military actions against Ukraine by alleging it was responsible for the Moscow attack.

The National Security Council spokeswoman, Adrienne Watson, stated, “ISIS bears sole responsibility for this attack. There was no Ukrainian involvement whatsoever.”

Russian authorities have arrested 11 people, all reportedly citizens of Tajikistan. On the morning of March 25, the court announced that the suspects would be held in custody until May 22. The suspects appeared in court with severe injuries, and one seemed barely conscious during the hearing.

Two of the suspects have reportedly confessed to their involvement in the attack. Rumours suggest that they could face life imprisonment. The official court statements are expected to be released on the morning of May 22.

The attack has significantly impacted Russia and raised concerns about how prepared other nations are to combat terrorist threats. In response, the French government has elevated the terrorist threat level to the highest category, prompting Europe to increase its preparedness for dealing with terrorism.

Hamus political chief Ismail Haniyeh's assasination in Iran

By Sanvi Kurade (10)

Despite placing Ismail Haniyeh in a military-run guesthouse in Tehran under tight security, Iran failed to prevent his assassination.

Haniyeh has been a prominent figure within Hamas since its founding in 1987, previously serving as Prime Minister of the Palestinian Authority and Hamas chief in the Gaza Strip. In 2017, he was appointed to lead the Hamas Political Bureau. His assassination on July 31, 2024, marked the highest-ranking political figure killed since the onset of the Israel-Hamas conflict.

Haniyeh was in Tehran for the inauguration of Iran's new president, Masoud Pezeshkian, on July 28, 2024, along with other international leaders. Three days later, he and his bodyguard were killed. While there is strong speculation that Israel planned the assassination, Israel has neither confirmed nor denied responsibility. The incident has exposed significant security breaches within Iran, suggesting a deep penetration of Israeli intelligence. Over two dozen individuals, including senior intelligence and military officers as well as guesthouse staff, have been arrested in connection with the investigation.

Haniyeh's funeral was held at Tehran University on August 1, 2024. Following his death, Yahya Sinwar was appointed as the new political leader of Hamas. In response, Iran's Supreme Leader, Ali Khamenei, ordered a direct attack on Israel, further escalating the Hamas-Israel conflict. Hamas is also likely to face repercussions for the October 7 massacre.



Impact of Phogat's Olympic disqualification on Haryana

By Syshasri Raghavan (10)

The disqualification of Vinesh Phogat, one of India's most celebrated wrestlers, has sent ripples through the politics of Haryana. Phogat, known for her achievements in the wrestling arena, is also a significant figure in Haryana. Her disqualification from the Olympic Games in 2024 due to failing to meet selection criteria—being 100 grams overweight to compete—has sparked a debate that goes beyond sports, influencing the state's political occurrences.

Haryana has a rich wrestling history. The state views Phogat as more than just an athlete—she is also a symbol of pride and woman empowerment. Her family has had wrestling champions throughout generations and has played a crucial role in challenging gender stereotypes in a country where female athletes often face significant challenges. Her disqualification has been perceived by many as an offence not just to her but to the state's identity.

The political implications of this event are significant. Haryana's ruling party, the Bharatiya Janata Party (BJP), which has long associated itself with promoting sports and women's empowerment, is now under scrutiny. Critics argue that the party, which had once hailed Phogat as a role model, has failed to support its athletes, particularly regarding the selection processes and providing fair opportunities. This has given the opposition parties an issue to rally, accusing the BJP of neglecting the state's sports culture and its athletes.

Furthermore, Phogat's disqualification has ignited discussions about the broader issue of women's rights and representation in Haryana. Her supporters argue that this incident reflects the challenges that female athletes continue to face, even at the highest levels, where politics and favouritism often overshadow talent.

As the 2024 state elections continue, Vinesh Phogat's disqualification is likely to remain an issue. It displays the connection between sports and politics in Haryana and highlights the importance of fair governance in all sectors, especially in a state where sports play such a vital role in society.

Why do identical twins (same DNA) turn out so different?

By Shresta Morisetty (9)

Identical twins have the same genetic code, right? So, why are they so different, even in traits with a significant genetic component? For example, why may one twin suffer heart disease at fifty-five while the other is running marathons in perfect health? The answer lies within epigenetics.

Epigenetics is the study of changes that modify gene transcription. Gene transcription is part of protein synthesis, where genes in the DNA are transcribed into RNA and then translated into proteins by structures called ribosomes. Epigenetic factors work above the genome—a complete set of DNA—and can either support or hamper the transcription of certain genes. Gene transcription ultimately influences the types of proteins synthesised or created, determining the function and structure of different cells.

Epigenetic changes are part of normal human development. They create each of the approximately 200 cell types in your body. Our environment influences these modifications. Factors such as our diet, chemical exposure, and medication can impact the type of genes that are transcribed and the ones that aren't. Surprisingly, even social interactions and experiences can affect epigenetic changes. This is evident in a study where rodents that didn't receive maternal care had a lower expression of the GR gene, which regulates stress responses. Less expression of the GR gene causes the rats to exhibit stressed behaviour more often, even in adulthood.

We now know what factors influence epigenetic changes, but how is epigenetics important? Epigenetics can be involved in many diseases with a genetic component, such as cancer. In cancer cells, epigenetic changes that shouldn't be happening are, which is why researchers are looking into the promising field of epigenetic therapy, where cancer and many more conditions can be treated by preventing these harmful epigenetic modifications from occurring.

Dog interactions boost stress relief and focus

By Nivedita Saboo (11)

Multiple studies have suggested that Animal-assisted therapies, such as canine therapies, show differences concerning reduced anxiety, relieved stress, and growth in feelings of trust. Further, they have exhibited remarkable changes in hormone levels and general mood; the studies conducted this before and after interacting with a service animal. Although this is the case, this approach doesn't differentiate between the types of interactions, like grooming, feeding, or playing with an animal, limiting our understanding of how specific interactions impact a person's health and well-being.

To comprehend how animal-assisted therapy, such as canine therapy, affects the specific mood of an individual, the Konkuk University of South Korea, recruited a small sample of thirty adult participants to perform eight different activities with a well-trained dog. These activities included playing with hand-held toys, giving treats, and taking pictures. Participants wore electroencephalography (EEG) electrodes to record electrical activity from the brain as they interacted with the dog, and they recorded their subjective emotional state immediately following each activity.

The regularity of alpha-band oscillations in the brain increased while participants played with and walked the dog, reflecting a state of relaxed wakefulness. When carrying out activities such as massaging or playing with the dog, relative beta-band oscillation strength increased, a boost typically linked to heightened concentration. Participants also reported feeling significantly less fatigued, depressed, and stressed after all dog-related activities.

The one flaw with this study was that even though most of the participants did not have pets of their own, their fondness for animals encouraged them to participate in this study, pointing towards biased results.

Nonetheless, the study concluded that the unique relationships between specific activities and their physiological effects could serve as a reference for programming targeted animal-assisted interventions in the future.

Hearing loss due to headphones

By Avantika Singh (9)

In today's tech-driven world, earpieces and headphones have become widely used for work, relaxation, or silencing surroundings. However, a recent study highlights an alarming trend: prolonged exposure to loud sounds through headphones is a leading cause of noise-induced hearing loss (NIHL). The World Health Organization (WHO) warns that 1.1 billion teens and young adults are at risk of hearing damage from high volumes, especially through headphones.

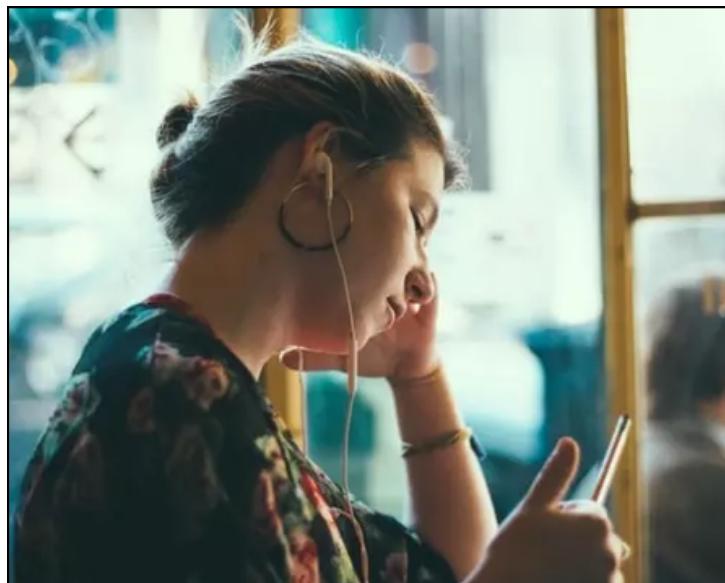
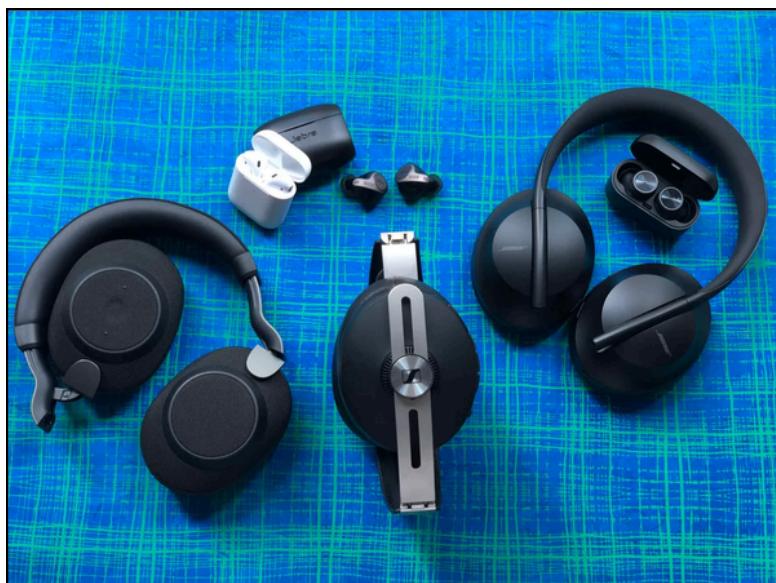
Research shows that sounds over 85 decibels can harm hearing, with many personal audio devices capable of exceeding 100 decibels. This issue is particularly serious among young people, who are frequent headphone users. A study by the National Institute on Deafness and Other Communication Disorders (NIDCD) found that nearly 20% of teenagers report some hearing loss, a problem that has significantly increased over the past decade.

Dr. Emily Carson, an audiologist at the National Hearing Institute, explains that our ears aren't designed to handle continuous loud sounds. High-volume audio, especially through headphones, can damage the delicate hair cells in the inner ear, leading to temporary or permanent hearing loss. These hair cells don't regenerate once damaged.

To prevent hearing loss from headphone use, experts recommend:

- Lowering the Volume: Keep sound levels below 60% of the maximum volume.
- Limiting Listening Time: Follow the 60/60 rule—listen at 60% volume for no more than 60 minutes at a time.
- Using Noise-Cancelling Headphones: These reduce the need to increase volume in noisy environments.
- Taking Listening Breaks: Give your ears time to recover by taking regular breaks from loud sounds.

As the use of personal audio devices grows, it is crucial to raise awareness of the risks of hearing loss. Teachers, parents, and healthcare providers must work together to educate and empower young people to protect their hearing for the future.



Paris 2024: Where sports meet spectacle

By Tisha Sehrawat (10)

"When you are five goals ahead and 7,000 French people boo, I don't think there are many other feelings that are better than that." — Kristian Sæverås (NOR) after Norway beat France 27–22 in men's handball.

The upcoming Paris 2024 Olympics have undoubtedly been the source of every human emotion, from rejoicing and success to defeat and an overall sense of national pride. To athletes who have spent years in their respective disciplines, each victory and hurdle overcome serves to cement the legacy. But apart from the competitive streak and rivalry portrayed, this Olympic season portrays another very vital dynamic: social media—a platform that has arguably connected fans and athletes across the globe.

In today's digital world, athletes have used Instagram, TikTok, and Twitter efficiently to create a personal touch with their fans. The Generation Z athletes, in particular, have been impressive in giving the fans a view into how they train, what are the pre-event rituals they follow, and what post-event celebrations they do. These social media platforms don't just engage fans but give a voice to athletes to control their personal narratives and, through that, shape global perceptions.

Social media has transformed the Olympic experience into instantaneous updates that proved to be a social event in themselves. No longer is any fan a mere bystander in the excitement over the competitions; they participate in viral challenges to live-streamed reactions. In this way, digital engagement establishes a dynamic environment for the games that makes every victory, defeat, and big moment part of an expansive cultural discourse.

The Paris 2024 Olympics reflect that this is an event much bigger than the athletic ability of the participating nations; it reflects an honouring of community and globalization—now amplified by the power of social media. Sports and digital culture are affecting the new ways in which we approach and celebrate international competition.



D23 announcements: The future of Disney

By Venkat Muralidhar (11)

The D23 Fan event, held from August 9th to 11th in California, was a huge success and was twice as large as in previous years. There were exciting new movies and sequels announced, such as "The Incredibles," "Toy Story," and the beloved "Frozen." There was something for everyone, including fans of Pixar and Star Wars, two of Disney's iconic franchises. The show kicked off with the official trailer for "Moana 2." Disney has plans to make Moana the new flagship Disney Princess; after "Moana 2," there will be a live-action remake set to release in 2026. The "Snow White" teaser trailer gave a first look at Rachel Zegler and Gal Gadot as Snow White and the Evil Queen, respectively.

After a long time of anticipation, Brad Bird, the writer and director of "The Incredibles" series, announced that "Incredibles 3" is in production. As for the beloved Toy Story series—arguably the best animated series of the decade—fans got to see a small teaser for "Toy Story 5," which is about toys stopping kids from becoming addicted to technology. "This time around, it's toy meets tech," said Andrew Stanton at D23. "Toy Story 5" is set to release in 2026.

The "Frozen" franchise hasn't "Let It Go" after all, as it is back with "Frozen 3," which will release in 2027. Then we have "The Lion King: Mufasa," with its new trailer released on December 20th, where Mufasa comes to rule the Pride Lands. Years after "The Return of the Jedi," based on its plot synopsis, a new "Star Wars" film is premiering on December 3rd. The movie "Avatar: Fire and Ash," which began its journey 15 years ago, is returning with its third sequel on December 19th, 2025. Fridays are the most relaxing day of the week—until they get freaky. After 21 years and 1,144 Fridays later, "Freakier Friday," or "Freaky Friday 2," is set to release in 2025.

With many more surprises, the D23 event concluded with a lot of exciting announcements that fans eagerly await over the next 2-3 years.

The pre-wedding of the century

By Venkat Muralidhar (11)

The three-day pre-wedding festivities, worth ₹1260 crore, featured personalities from across the globe and unprecedented combinations. The floral arrangements were the focal point of the extravagant décor. It felt like Diwali in Jamnagar. The wealthiest families in India, Mukesh and Nita Ambani lavished extravagantly on Anant Ambani and Radhika Merchant's pre-wedding celebration in Jamnagar. Stars including Rihanna, Bill Gates, Katrina Kaif, Deepika Padukone, Shah Rukh Khan, Salman Khan, Amir Khan, Kareena Kapoor, and many more attended this three-day festival/celebration. Who brought enough bags for a hundred days?

This took place from March 1st to March 3rd. One of the top 5-star hotel chains in India was given the catering contract. The first day of the pre-wedding, dubbed "An Evening in Everland," was March 1. The attendees dressed elegantly. Manish Malhotra, the head fashion designer, and Jeff Leatham, who collaborated with reality TV star Kim Kardashian and her family, were in charge. 'Jungle fever' was the dress code for the Ambanis' 'A Walk on the Wildside' event on March 2, which featured decor influenced by Indian art, held outside in Jamnagar's Vantara Animal Rescue Center, owned by the Ambanis. For the 'Maha Aarti' on March 3, the Indian-inspired décor included plenty of white floral strings and lighting.

The 3 most surprising and best moments were 1st that Rihanna's Comeback performance, she hadn't performed live since 2016, The world paid attention when she performed 19 songs on March 1st, and the way she pronounced The bride and groom's name as 'Raducky' and 'Anant' Ambani was worth a meme. Next was When Diljit Dosanjh performed live for the crowd in the early hours of March 3rd, Before singing the hit number Proper Patola, he hyped up Kareena when she and Saif Ali Khan joined him, saying, "Hogi Rihanna, hogi Beyoncé, sadi ta ae he hai, Kareena. While everyone knew Shah Rukh Khan, Salman Khan and Aamir Khan were attending the party, what no one expected was to see a video of the trio trying to dance to Naacho Naacho, from RRR. Ram Charan also joined them on stage later on to do Naatu Naatu. If this was a trailer, how would the wedding be?

The Chase for the Largest Film Award

By Tisha Sehrawat (10)

The 96th Academy Awards, more commonly known as the Oscars, held a variety of cultural and artistic displays that showcase the creative skill of filmmaking over the same year, along with its technical merit, on March 10th. The highest acclaimed awards that the Academy grants to its nominees include the Best Picture, Best Director, and Best Actor/Actress awards, also named the Big Three awards.

Christopher Nolan's atomic thriller 'Oppenheimer' emerged as the undisputed champion of the evening, sweeping an impressive seven Oscars to its name from a total of 13 nominations. The film's cast and filmmakers completely dominated the award ceremony, securing 7 out of its 13 total nominations. In a remarkable first for the film, Christopher Nolan, Cillian Murphy, and Robert Downey Jr. took home the entire list of the Big Three awards. The film's lead, Cillian Murphy, continued his winning streak after his success at the 2024 Golden Globes, BAFTAs and Screen Actors Guild Awards, by grabbing the Best Actor award. This historic achievement of a single film winning every major award has only been accomplished 3 times in the entire history of the Oscars.

The dark comedy "Poor Things" emerged as a formidable contender, earning 11 nominations and walking away with four wins. Her triumphs included a stellar performance from Emma Stone, who proved her versatility and talent as a leading lady. She won the honorary title of Best Actress, one of the Big Three awards. On a night of surprises, Martin Scorsese's crime novel "Killers of the Flower Moon" received a massive buzz with ten nominations but unfortunately failed to win.

Jimmy Kimmel, hosting the event for an impressive fourth time, kept the offline and online audience in stitches with his witty remarks. Wrestling star John Cena added a touch of unpredictability to the evening's proceedings with an impromptu act of nudity, reminding the audience that anything can happen on Hollywood's biggest stage and adding to the memorable moments of the night.

How To Improve Your Mindset

By Dia Rautela (9)

A mindset refers to a set of beliefs, attitudes, and experiences that shape how we perceive the world and respond to challenges. Our mindset, constructed by these beliefs and experiences, plays a significant role in our problem-solving skills, interactions with others, and ability to acquire new understandings. The complex structure of our mindset is powerful enough to alter the course of our lives, making it vital to cultivate the proper mental framework.

There are two types of mindsets: fixed and growth. A fixed mindset limits intellectual capabilities by fostering the belief that skills and abilities are static and unchangeable, whereas a growth mindset embraces challenges and views failures as opportunities for learning and development.

The roots of success lie in our mindset, as it profoundly impacts the course of our lives. Research suggests that nurturing a growth mindset enhances academic performance and increases the likelihood of achieving significant academic milestones. For instance, a 2018 meta-analysis by Li and Bates found that a growth mindset could improve academic performance by approximately 0.36 GPA points.

How can you change your mindset?

- Keep Challenging Yourself: Engaging in new activities and learning about unfamiliar topics keeps your brain active, promoting a healthy mindset and overall well-being.
- Positive Self-Talk: Mistakes are a natural part of life, and it is important not to be too hard on yourself. Daily affirmations like "I can do this" help develop perseverance and determination.
- Acknowledge Life's Negative Aspects: Life is a rollercoaster with its ups and downs. Remind yourself, "When the going gets tough, the tough get going," to build resilience.
- Self-Reflection: View every experience in your life as an opportunity for reflection, learning, and growth.

A growth mindset can lead to academic excellence, enhanced job performance, increased resilience, and better mental health. A positive mindset brings forth good results and helps achieve one's goals and dreams.

Building self-discipline

By Veda Sharma (10)

Discipline is the ability to make yourself do something repeatedly, regardless of how you feel, until it becomes a habit. It is about staying committed to your goals, even when motivation fades. While it may seem elusive, self-discipline is a skill that can be developed with the right mindset. It is the cornerstone of success, helping us stay focused, resist distractions, and act on what is most important to us. It requires commitment and practice—starting small, establishing routines, and maintaining a long-term focus.

Unearth Your "Why"

The foundation of self-discipline starts with understanding your goals and motivations. Ask yourself: What is your goal? What drives you? Why do you want to achieve this?

The Power of Progress

Self-discipline is built through consistency. Start small. Choose one habit to develop and one goal to pursue. Each step builds momentum, bringing you closer to what once seemed impossible.

Routine as a Ritual

Routine is essential for self-discipline. Set a schedule—decide when and where you will work on your goals each day—and stick to it.

Hold Yourself Accountable

Use journals, apps, or checklists to track your progress. Knowing that someone else is aware of your goals can boost your discipline.

Focus on the Long Term

Keep the bigger picture in mind to sustain discipline:

- Think ahead: Consider how today's actions affect your future.
- Stay committed: Remind yourself of the long-term benefits of your efforts.

By understanding your motivations, starting small, establishing supportive routines, and focusing on long-term goals, you can cultivate the self-discipline needed for success. Remember, self-discipline isn't about perfection; it's about steady progress. Stay persistent, and your disciplined actions will lead you to the life you desire.

Mumbai wins the Ranji Trophy after 8 years

By Neil Daga (11)

The Ranji Trophy, a prestigious Indian cricket tournament first held in 1934 and organized by the Board of Control for Cricket in India (BCCI), saw a notable victory in 2024 as the Mumbai team claimed the title after an 8-year drought.

Mumbai's last triumph in the Ranji Trophy was in the 2015-16 season, where they narrowly defeated Saurashtra. However, their fortunes declined in the subsequent years. They reached the finals the following year but lost to Gujarat and could not return to the finals until the 2021-2022 season, where they fell to Madhya Pradesh.

The 2024 tournament began on January 5th and concluded on March 14th. It featured a format with 4 groups, each consisting of 8 teams labelled "Elites." Teams within each elite group played against each other in a round-robin format, totalling 7 matches. The top two teams from each group advanced to the quarter-finals. Mumbai, placed in Elite B, performed consistently throughout the tournament.

Mumbai's campaign was marked by a methodical approach, winning 5 out of their 7 group-stage matches. Their losses were to Uttar Pradesh and a draw with Chhattisgarh. Their performance in Elite B secured their place in the quarter-finals. There, Mumbai faced Baroda from Elite D. Despite a drawn match, Mumbai advanced due to their higher score in the first innings.

In the semi-finals, Mumbai took on Tamil Nadu, the leader of Elite C. With a formidable bowling lineup, Mumbai dismissed Tamil Nadu's batting force and secured a spot in the finals against Vidarbha.

In the final match, Mumbai set the tone with a first-innings score of 224 in 64.3 overs, while Vidarbha managed 105 in 45.3 overs. In their second innings, Mumbai scored 418 runs in 130.2 overs, outlasting Vidarbha, who scored 368 in 134.3 overs.

After eight years of struggle, Mumbai secured their 42nd Ranji Trophy, reinforcing their reputation as a cornerstone of Indian cricket.



Camavinga's Knee Injury Forces Exit from Super Cup

By Krishiv Thummalapalli (11)

Eduardo Camavinga, a 21-year-old midfielder for Real Madrid, recently suffered a knee injury during a training session for the European Super Cup on August 13 at the Warsaw National Stadium. The injury occurred when Camavinga's studs got caught in the ground, causing him to collide with his teammate Aurelien Tchouameni.

Medical examinations revealed that Camavinga had sprained the internal collateral ligament in his left knee. This type of injury, common among athletes, usually results from sudden twists or impacts. Fortunately, there are no signs of serious or permanent damage—such as fractures. Camavinga will need to undergo rehabilitation, including physical therapy. According to the club's official statement, his recovery is expected to take six to eight weeks, meaning he will miss the European Super Cup and the start of the league season. If everything goes well, he could return by the end of September.

In response to Camavinga's injury, Real Madrid has adjusted its formation from 4-3-3 to 4-2-3-1. This change aims to provide additional attacking support while maintaining a solid defence. Midfielders like Toni Kroos and Luka Modrić will need to assume more responsibility in both defence and offence to fill the gap left by Camavinga. The team will need to adopt a more aggressive playing style to maintain control of the ball, which could also present opportunities for other players to showcase their skills.

While Camavinga's injury is a significant challenge for both the player and the club, Real Madrid's new strategies have shown promise, as evidenced by their 2-0 victory against Atalanta. As Camavinga focuses on his recovery and aims to return stronger, the club continues to develop strategies to ensure continued success.



A Book Review: The Bluest Eye

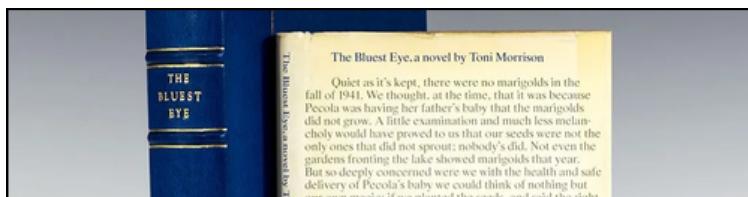
By Saachee Moholkar (12)

Passion amalgamated with pain is said to be an author's most potent tool. Toni Morrison embodies this through her vivid and candid commentary, especially in her debut novel, *The Bluest Eye*. This powerful narrative follows the life of a young African American girl, Pecola Breedlove, as told by Claudia MacTeer. Much of the novel is driven by memory, deeply rooted in Morrison's own experiences and the people she encountered growing up.

Pecola Breedlove is a young girl who yearns for blue eyes and a pale complexion, believing these traits would make her beautiful and, by extension, worthy of love and respect. Her harrowing desire to change her appearance confronts the impacts of societal beauty standards on Black communities in the 1940s. Pecola's innocent wish for blue eyes masks a deeper, more tragic internalized racism and self-loathing that is ingrained in society. Her obsession with this ideal consumes her, eroding her sense of self and leading to her heartbreakingly tragic mental collapse as the story progresses.

Morrison does not shy away from portraying Pecola's abusive and turbulent childhood, nor the community's cold indifference to her desperate desire for blue eyes. Yet, amidst the darkness, Morrison also illustrates moments of resilience, particularly through the supportive bond between the MacTeer family and Pecola. This novel holds the essence of Morrison's writing at the start of every page and portrays the painful realities of so many African Americans even to this day. Morrison's exploration of how self-worth is disregarded by racial prejudice remains extremely relevant in our world. But, the novel shows the interwoven love of a family like the MacTeers, a page we all must take from this book.

The Bluest Eye was, for me, a challenging read—not just because of its intense themes of hatred and violence, but even more so because of the emotional vulnerability it exposes.



TV Review: A Deep Dive Into "Young Sheldon"

By Tia Padival (10)

Everyone has different personality traits. Some of us have a great sense of humour, others excel in social skills, while some have exceptionally high IQs, like the protagonist of *Young Sheldon*. This show revolves around Sheldon Cooper, a child prodigy who graduated from high school at the age of 14 and navigates life with his seemingly orthodox family. Each family member has a distinct personality and story, and the show beautifully captures both the struggles and heartfelt moments that families face.

Montana Jordan and Raegan Revord, who play Georgie and Missy, are responsible for much of the warmth and humour in the show. *Young Sheldon* delves into the issues they face, such as feeling overshadowed by their brilliant brother, and focuses on their growth from being in Sheldon's shadow to finding their paths to success. The series does a great job of portraying various perspectives—Sheldon is focused on facts, while his mother, Mary, prioritizes faith. Despite their vastly different worldviews, the show finds a way to create harmony between them, highlighting the value of both approaches.

Like many other TV series, *Young Sheldon* started strong. The stories were fresh, offering meaningful messages that resonated with the audience. However, after the fifth season, it felt as though the writers were running out of ideas and grasping at straws. For example, they dedicated several episodes to Sheldon's petty disputes with the college president—moments that didn't add much to the plot or provide significant humour. To regain the interest of the audience, the show introduced dramatic plot twists, such as adding a baby to the family, which sparked controversy.

Despite these challenges in the storyline, I still find myself tuning in every week to watch the latest episodes. If you enjoy witty humour and engaging stories, I highly recommend giving *Young Sheldon* a try.



Book Review: To Kill A Mockingbird

By Saachee Moholkar (12)

It's a sin to kill a mockingbird.

How did a novel published in an era where racism and hate were so prevalent manage to become one of the most impactful pieces of literature?

The classic 'To Kill A Mockingbird', released in 1960 by Harper Lee, offers readers a glimpse into the stories about prejudice and ethics in rural Alabama. It is narrated by Jean Louise, a young girl whose father is an attorney to a black man accused of rape. Harper Lee uses Jean as a vessel to narrate the life of children who are raised in a community of hatred and hostility. Jean describes it in a way that is pure yet believable and is made to be the antithesis of what societal norms women need to follow. Jean's juvenile nature shines through her curiosity and the principles instilled in her from a young age, including a steadfast refusal to discriminate based on race. This is exemplified in her relationship with her black housemaid, whom Jean loves and respects equally.

Jean's rebellious nature has been brought forward by her father, Atticus Finch, a man the epitome of moral yet harsh. Atticus' want for his children to see beyond race is seen through his jarring dialogues that move the readers.

He often underwrites minorities because of his openness to his community, more specifically black people, who have been castrated by the people in his town. He wishes to defend innocents who have been humiliated through hatred—the mockingbirds.

This novel is written so that nothing is left to be desired, yet you yearn to know more about why and how society and norms of rural South America were. It's a wonderful read that portrays history with emotion and lessons that are bound to be unforgettable.



The Hunger Games: A Must Read

By Tia Padival (10)

The Hunger Games by Suzanne Collins is a dystopian novel that tells the story of a sixteen-year-old girl named Katniss Everdeen. Every district of the country of Panem must send two children to fight to the death in a televised show until one is left standing. When her sister is selected, Katniss volunteers to take her place and is forced to use her strength and intelligence to win the games.

What I like most about this novel is the fact that it portrays a society that reflects our own. In the story, the government takes complete control over the country by inspiring fear and submission within its citizens, using public whippings and death penalties for even petty offences, like stealing a loaf of bread. Surveillance systems are installed to intimidate citizens, and the government forces everyone to stay in poverty to ensure that their focus remains on survival instead of rebellion. All of these factors reflect current society and show how governments use fear to maintain power.



I find Katniss to be a strong-willed character whose determination and intelligence make her stand out in a sea of manipulative people. The other tribute from Katniss's district is Peeta, a soft and lovable person who values empathy and hope. The balance between the two characters offers a different perspective on the games, as each has a distinct set of strengths and weaknesses that they use to survive.

Personally, I find slow-paced books difficult to pick up. The Hunger Games has a fast pace, with jaw-dropping twists at the end of each chapter. Fans of Squid Game or 1984 would love this novel since they are quite similar plot-wise. Overall, The Hunger Games is the perfect read for anyone interested in entertainment and reflections on the state of our society.

78th Independence Day With a Talent Show and a Food Co

10X celebrated India's 78th Independence Day with a vibrant talent show and food stalls, capturing our diversity and creativity.

Hosted by Bharat Ambati and Venkat Muralidhar, the talent show featured a wide array of performances, such as dance, singing, and other unique performances that showcased the many talents of the students. Each individual brought their unique flair to the stage. In the end, the winners were Maadhav Gupta and Rishi Penmetsa of grade eleven, who received a prestigious Indian flag.

Adding to the festivities were the food stalls, each one offering unique foods. Each stall was a hit with the crowd, and was not only about enjoying delicious food, but was also a part of the larger purpose of the event. All of the funds raised from the food sales and the small participation fee for the talent show were dedicated to supporting a local old age home, displaying our school's commitment to taking care of its elders.

This combination of celebration, talent, and charity made the Independence Day event particularly special this year. The activities highlighted the incredible skills and creativity within the school. Most importantly, the event served as a reminder of the values that Independence Day stands for freedom, unity, and the importance of giving back.



Our First Annual Day & Innovation Day!

This week, 10X celebrated the creative expression of students with our first Annual Day, marking a huge milestone for our school! Along with our display of the arts, we merged the performances with an Innovation Day, an exhibition of our STEAM tasks, ideas, and projects. Our artistic and creative abilities shone through once again with our innovative ideas, and the music, dance, and drama performances.

Preparation for this highly-anticipated event began weeks before the Annual Day, with professionals from the Furtados School of Music coming to our school to teach and prepare us for our performances. Their guidance and aid in our practice are what truly made our performances special and successful.

We started the event with the Invocation Song, leading to the fusion Invocation Dance. Next, we proceeded with a solo performance, western dance, the 10X song, the drama, spoken word poetry, and finally, the orchestra. These performances were a huge success, showcasing our diverse talents and abilities. With a large number of the events being original compositions, we truly demonstrated our innovative capabilities once again.

This day was not only an Annual Day but also, our Innovation Day, where we showcased an aspect of 10X that truly makes us unique: our STEAM projects. A wide range of innovations were exhibited, including our LE designs, ChoiceX, CardioPro, crumple zones, artificial hearts, firefighting drones, and some of our exponential technologies like VR. As General Ray and Dr. Rao addressed each of our ideas and solutions, we also gained valuable feedback which we use to continuously improve and reiterate our ideas.

Overall, our Annual Day celebration, combined with an Innovation exhibition, proved to be a large success. 10X stands for creativity and innovation, that is certainly what was showcased here. There are sure to be future endeavours, even better than this one, in the years to come.

The introduction of the 10X Clubs of 24-25

By Sanvi Kurade (10)

10x Starts this year off with the introduction of Student-led Clubs to showcase and develop interests, hobbies, and passions. In total, we have an estimated count of 7 new emerging clubs and one with an interested paid model. These clubs are run to help develop leadership and collaboration between peers and explore new ideas along the path.

Clubs	About the Club	Organizer(s)	Contact Info.
Debate Club	Sharpen your wit and confidence by engaging in thrilling debates. Join us for dynamic workshops, compete in high-stakes competitions, and learn from top-tier speakers who know how to win an argument!	Aarush Kommunuri (11) (President)	Aarush.kommunuri@10xinternationalschool.com
Coding Club	Turn your tech dreams into reality! Solve real-world challenges, participate in epic hackathons, and empower others by teaching programming skills. If you love coding, this is where innovation begins.	Pranav Morisetty (12) (Co-president) Pratosh Tiwari (12) (Co-president)	pranav.morisetty@10xinternationalsschool.com pratosh.tiwari@10xinternationalsschool.com
Filmmaking Club	Embark on a cosmic journey! Discover the mysteries of the universe, attend captivating stargazing events, and unravel the wonders of space with fellow enthusiasts.	Maadhav Gupta (11) (Co-president)	maadhav.gupta@10xinternationalsschool.com
Journal Club	Passionate about research? Share your insights and opinions in lively discussions! Analyze and critique thought-provoking research papers, uncover new perspectives, and ignite intellectual conversations.	Siddharth Mitra (11) (President)	siddharth.mitra@10xinternationalsschool.com

Student Achievements: March to August

Ms. Aparna Chandrashekaran

Dr Savita's Podcast interview - <https://open.spotify.com/episode/3n4cPkG2feeMs2Gew4nKQV?si=01cd32e8279f410b>

Nakshath Venkatesh of Grade 11 has been accepted to the "Business of Sports" Pre-collegiate Summer programme at Columbia University.

Advaith – Debating:

- Dual winner of the International Championship for Young Debaters (ICYD) India selections, becoming one of India's best U16 British Parliamentary (BP) teams.
- Did the PES DT(PES University Bangalore British Parliamentary). Finished 19th in the open category and 4th best novice speaker.

NYAS Acceptance for the Fall Cohort 2024

Grade 9: Shresta Morisetty

Grade 10: Advaith Datta Reddy Palam

Grade 11: Venkat Raghav Muralidhar, Aarush Kommunri, Siddharth Mitra, Ruhi Beri

Gold in Kumite Open Knockout Tournaments: Veda Sharma

Yi Zou was awarded the the School Finalist (Age group till 12th grade) at the India Debate Open 2024 (British Parliamentary Debate format)

Ruhi Beri's project Period Bear was selected as one of the six winning innovations at the EY STEM App Challenge. The app, designed to ease menstrual challenges for women with lower incomes, offers both educational information and subsidized period products.

Jai Rishik from Grade 12 recently attended the Summer Program at UC Berkeley's Haas School of Business. He was nominated in 3 out of 4 categories and has made us incredibly proud by winning the Golden Bear Award in the "Always Student" category.

Pranav, Pratosh and Saachee were interviewed about their research for a podcast.
<https://open.spotify.com/episode/1gCJcdyNQb3aLyPabRUoIL?si=2ec081a03d994305>

Jai Rishik has been selected for the Cartier: Corporate Internship Project, developed and taught by student mentors from Harvard University.

Nakshath, our equestrian prodigy has been chosen for the Junior National Equestrian Championship to be held in December.

Riya, Syhasri, Tisha, and Prakul won the New York Academy of Sciences, Spring 2024 cohort in the wearables category for their innovative approach to design or employ a wearable technology, or network of wearables.

Avani completed a research paper and an internship at IISC

World Economics Cup Competition (WEC): Rohan has secured a Bronze Award and a Certificate of Excellence. His team got the 8th place in the entire Asia Pacific region.

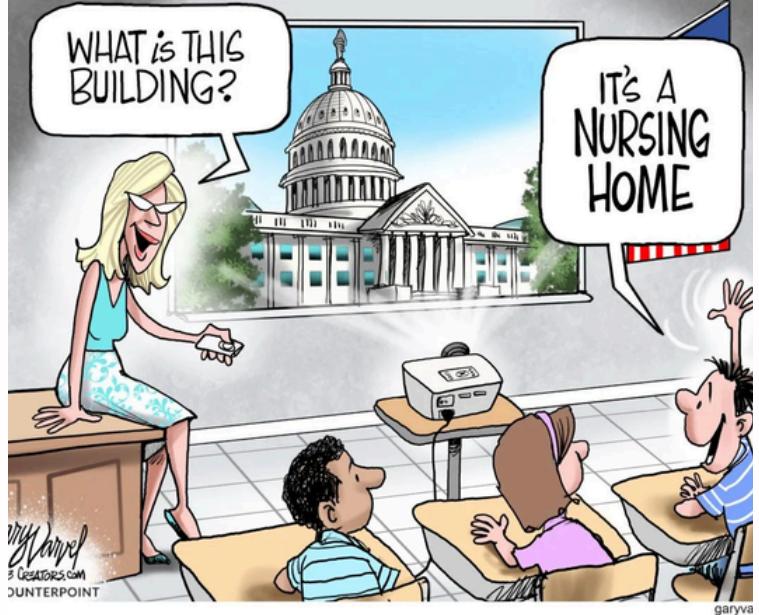
Pranav and Pratosh are working on a project that is an AI-powered platform that improves classroom learning outcomes.

Jai Rishik, Aryan Hegde, Pranav Morisetty, Nakshath Venkatesh, Saachee secured a Bronze Award and a Certificate of Excellence at the World Economics Cup Competition (WEC).

Pratosh Tiwari, was only one of the two high school students chosen for the 25 cohort summer research internship at the Param Hansa Center for Computational Oncology, Indian Institute of Science (IISc), Bangalore.

Aryan Hedge and Riya Kaulwar performed exceptionally, emerging as the top participants among all fellows from top schools across India who were selected to participate in the Civic Impact Fellowship for the Office of the MLA of Sikandra Rao constituency in UP.

Cartoons



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