



THE TIMES OF INDIA

www.toistudent.com
TODAY'S EDITION

➤ 7 ways to recharge and refresh
➤ How to give back to the society more meaningfully

PAGE 2


➤ Students share their travel diaries
➤ Relive your school experiences

PAGE 3


➤ India's injury concerns mount ahead of the 4th Test

PAGE 4

STUDENT EDITION

WEDNESDAY, JANUARY 13, 2021


WEB EDITION
CLICK HERE: PAGE 1 AND 2

BREAK OUT ECONOMY

WHAT: A rapidly-digitalising India has been ranked highly among the 'Break Out Economies' in the third edition of the Digital Evolution Scorecard developed by the Tufts University's Fletcher School, in partnership with the Mastercard. 'Break Out Economies' are defined as those economies that are digitalising very quickly, and yet have a lot of room to grow before matching those in the developed economies, such as those in Europe and in more-developed Asian countries like Singapore, South Korea and Hong Kong.

X-PLAINED

WHO ARE THE SUCCESSFUL BREAK OUT ECONOMIES: Successful 'Break Out Economies' are those economies that have sophisticated mobile internet access, affordability and quality to foster more widespread adoption. The governments of these economies have also taken steps to strengthen their institutional environments and have stringent digital regulations. Moreover, in these economies, generating investments in digital enterprises, fund-

ing digital R&D, training digital talent and leveraging digital applications to create jobs are given priority. Besides, steps have also been taken to reduce inequities in access to the digital tools across gender, class, etc.

THE RANKINGS

1 China, which leads the countries in the 'Break Out Economies' group is more-evolved digitally mainly due to its combination of rapidly-growing demand and innovation

2 Indonesia, and India, which ranks third and fourth respectively, in momentum, have displayed increasing digital-momentum, suggesting the potential to rapidly digitalise in the post-Covid world, the report stated

3 South Korea, Singapore and Hong Kong are the leading 'Stand Out Economies', the top-performing group, thanks to a high-degree of digital evolution and a strong momentum in continuing to advance their digital capabilities

4 Other consistently top performers, include Estonia, Taiwan, and the United Arab Emirates. These economies have displayed both adaptability and institutional-led support for innovation. Interestingly, the US also shows remarkable momentum for an economy of its size and complexity, scoring second in digital evolution, after Singapore

Photo: Getty Images

COVID DISTURBS TRADITIONS

In a first, budget to go paperless

The upcoming budget scheduled for February 1 will go paperless, as the finance ministry has decided not to print the budget documents, amid the pandemic. This is a historic move, as it will be for the first time that the budget papers will not be printed.

The decision has been taken, as the printing process would require several people to stay at the press for around a fortnight, amid the coronavirus fears



➤ The budget for the financial year 2021-22 may also see several conventions being broken, as according to sources, the traditional 'Halwa' ceremony may not take place this year, or a subdued function may be held with a limited gathering ➤ This ceremony, which normally starts around January 20, is attended by all the people involved in the budget-making, and marks the beginning of printing ➤ Once printing starts, the printing staffers stay inside the press till the presentation of the budget. Only a few high-ranked officials are allowed access and that too on the basis of a special identity card. The entire facility, the loading-unloading and the transportation are manned by the special security forces

This is not the first time that there would be a change in tradition in the presentation of the budget under the finance minister Nirmala Sitharaman. Last year, she did away with a colonial-era tradition of carrying the budget papers in a briefcase, and introduced the budget 'Bahi Khata' or a ledger, enclosed in a red cloth folder and tied with a string

Quote unquote



“Even as vaccines start protecting the most-vulnerable, we're not going to achieve any levels of population immunity or herd immunity in 2021. Even if it happens in a couple of pockets, in a few countries, it's not going to protect people across the world. It is critical that countries and their population maintain strict social-distancing and other outbreak control measures for the foreseeable future”
DR SOUMYA SWAMINATHAN, chief scientist, WHO

INDIA'S FY21 FISCAL DEFICIT SEEN AT OVER 7%, DOUBLE OF BUDGETED TARGET

Despite high-frequency indicators showing a turnaround, the revenue gap will continue to be high, forcing India to end the year with a higher than anticipated fiscal gap.

Photo: Getty Images



- According to sources, India's fiscal deficit for the year ending in March 2021 is likely to be over 7% of the gross domestic product (GDP), more than double of the 3.5% target that was set in the last budget
- The fiscal deficit could widen to as much as 8% of GDP, with the current expected economic contraction of 7.7% in 2020-21
- The government expects the tax revenue to decline by ₹ 4-5 lakh crore and a ₹ 1.2-1.5 lakh crore shortfall in divestment proceeds, officials said
- With the economy on the rebound, and crackdown on tax evaders, experts say the tax collection at best will increase by 70% from the current levels in the remaining months of the fiscal

VIEWPOINT

REMOVE 'UNHISTORICAL' REFERENCES FROM SCHOOL BOOKS: HOUSE PANEL

A Parliamentary panel has called in the education ministry over three critical issues flagged by various members of Parliament, including the need for a politically-sensitive 'reform', which includes the removal of 'unhistorical fact' and 'distortions' from the school textbooks.



Several members have pointed out the lacunae in textbooks in terms of history. They have highlighted on the need to include the role of great historic women heroes - from Gargi and Maitreyi to rulers like Rani of Jhansi, Rani Chennamma, Chand Bibi, Zalkari Bai, and so on, in the textbooks

ORGANIC CHALK STICKS OUT OF RICE FLOUR AND EUCALYPTUS

After seeing the harmful effects that regular gypsum chalks have on the staff and students in their school, two students from a government school in Hyderabad's Adilabad, have come up with an innovative organic replacement for gypsum chalks. P Harshit Verma

INNOVATION

and K Rudra, students of the Telangana State Model School (TSMS) in Bangari Guda, used rice flour and natural clay for the preparation of these chalks. Along with these two, they also mixed neem oil, lemon oil, camphor, and many other naturally-extracted substances. Further, to create a natural aroma in the classroom, they



added natural fragrances like rose water, extracts of Jasmine and sandal, and many other natural aromatic substances. "There are many schools, colleges and other educational institutions across India, which use chalks to write and teach. These chalks lead to many health issues like allergies, respiratory diseases, including asthma, and even eye infections. That is why we have come up with this idea to create organic chalks," said Rudra.

PM MODI NOW MOST-FOLLOWED ACTIVE POLITICIAN ON TWITTER AFTER SUSPENSION OF TRUMP'S ACCOUNT

PM Narendra Modi has become the most-followed active politician on Twitter, after the micro-blogging platform permanently suspended the account of the US President Donald Trump, following the recent siege on the Capitol Hill by hundreds of pro-Trump rioters.



NEWSMAKER

➤ PM Modi currently has 64.7 million followers, while Trump had 88.7 million followers, before his account was suspended. Former US President, Barack Obama, however, remains the most-followed politician on Twitter with 127.9 million followers.

NEWS IN CLUES

Which Indian state is home to the Earth's only saline soda lake?

- CLUE 1:** It has the country's largest road network.
- CLUE 2:** It is home to the world's largest planned city.
- CLUE 3:** It is home to five international airports.

ANSWER: MAHARASHTRA. The state's government has downgraded the security cover of several leaders, including former CM Devendra Fadnis, from Z-plus to Y-plus security with escort. Others whose security cover has been downgraded, include Fadnis' wife and daughter as also MNS chief Raj Thackeray.

DID YOU KNOW: With over 2.67 lakh-km of road length, the state, which is also home to a saline soda lake at Lonar, created by a meteor 52,000 years back, has India's largest road network. Navi Mumbai is the world's largest planned city

FACTOID

\$131 MN

The moolah minted by 'Wonder Woman 1984' in the US and Canada, leading the box office charts for the third straight weekend without much in the way of competition. Overseas, the film grabbed \$98.8 million, outperforming most-fellow pandemic-era releases.

➤ THE COMIC BOOK ADAPTATION WAS RELEASED SIMULTANEOUSLY ON HBO MAX, IN AN EFFORT TO BUOY STREAMING SERVICE SUBSCRIBERS. IT'S UNCLEAR HOW MANY HBO MAX USERS WATCHED THE MOVIE, THOUGH THE COMPANY TOUTED RECORD VIEWERSHIP

NOMADLAND BAGS FOUR NATIONAL SOCIETY OF FILM CRITICS AWARDS



Hollywood film 'Nomadland' has won four awards at this year's National Society of Film Critics awards, including the best picture, best cinematography, best director and best actress. The Chloe Zhao-directed film won the most-awards at the

ENTERTAINMENT

55th annual meeting for the organisation recently. Frances McDormand was named the best actress for her role in 'Nomadland', while Zhao received the best director award.

- Delroy Lindo won the best actor for his role in Spike Lee's 'Da 5 Bloods'
- The other awards went to 'Collective' for the best foreign-language film, 'Time' for the best non-fiction film
- 'Never Rarely Sometimes Always', directed by Eliza Hittman, won for the best screenplay
- The National Society of Film Critics comprise 60 film critics from across the US

FLOATING IGLOO TO PROTECT PENGUINS!



Sajjad Navidi, an Iranian architect, has come up with a design for floating igloos that could protect the endangered penguins and stop the melting of polar ice in Antarctica. It uses igloos, both under and above the water, with the upper structure providing penguins the space to breed and the lower half connected to a swinging pendulum. The idea is, as the pendulum is moved by the waves, it produces electricity to cool the ice to stop it from melting



How to GIVE meaningfully

Giving has been something of a silver lining to a dark year. If you are interested in helping even just a person or family during this crisis, here are some strategies that work well and fast.



1 Sponsor Childcare. Because of Covid-19 cases, many schools have decided to shut their doors and teach virtually. As a result, working parents are scrambling to figure out a childcare solution they can afford. Reach out to your Parent Teacher

Association or principal's office for guidance on the best ways to help. They may have a list of families looking for assistance. You can also go the social media route to help parents, raising money from others who see your posts and want your support.

2 If you can't support monetarily, try dialling your local library or nearby NGOs and asking about in-person support. Assist with basics like food and rent. To identify households to send groceries to, simply ask around.



3 Crowdfunding sites like Kickstarter and GoFundMe, traditionally go-to sites for raising money for one's documentary or invention, have increasingly become platforms for everyday people seeking and providing donations for next month's rent, food and other necessities.

4 Donate to organisations giving directly. For those in distress, the gift of money may only be temporary financial relief. But it's also a priceless reminder that we will do our best to get through this together.

- BLOOMBERG.

7 ways to recharge and refresh

Feeling overwhelmed this week? Try one of these speedy booster breaks to turn your day around. If you are busy for longer hours and struggling to get everything done, taking short but regular breaks through the day brings benefits - from less stress to improved mental health... Read on



Get outside

In a study published in the 'Journal of Workplace Behavioural Health', workers were asked to head outside for 10-minute "outdoor booster breaks" and focus on natural elements such as clouds, sounds of birds or the grass beneath their feet. At the end of the four-week study, they felt significantly less stressed than those who took indoor breaks.

Take a walk

Taking a short leisurely stroll could help you experience that eureka moment, according to researchers at Stanford University. They found that a short walk helped boost creativity in participants by an average of 60 per cent.



Make time for prayer

Spending lots of time online puts you at the risk of Repetitive Strain Injury (RSI): Pain, tingling and stiffness felt in muscles, nerves and tendons. Try the following prayer stretch once or twice a day as a preventive measure. First, place your palms together at chest height in a prayer position. Keeping your palms connected, slowly lower your hands until your arms reach a 90-degree position. Hold for 10 seconds. Tip your hands to the left; tip your hands to the right; move your hands outward.



Give green a chance

In addition to improving air quality, interacting with potted plants can do wonders for your well-being. A study in the 'Journal of Physiological Anthropology' found that subjects who re-potted a houseplant felt stress-free. Experts say that smelling/touching plants can produce similar effects.

Nap happy

Between the hours of 1pm and 3pm, we experience a small dip in core body temperature (a signal to the brain to release



melatonin, the sleep hormone). Taking a 10-minute nap around this time period is ideal to work around this natural dip. Research has found that a short power nap can help boost productivity, mood, alertness and even improve memory recall.

Kawaii to go

Kawaii is a Japanese word that roughly translates to "cuteness". Researchers from the University of Hiroshima found that viewing kawaii images - specifically cute kittens or puppies - had an amazing effect on workers. They not only felt happier, they also performed tasks better.



Meditate

Research shows that mindfulness meditation can lower stress levels, improve our ability to cope with pressure and boost concentration, memory and creativity. To start, use a guided meditation app to help transport you from tense to zen in seconds.



QUIZ TIME (MIXED BAG)

Q.1) The Vijayanagara king who employed skilled archers of the Turkish clan and raised the fighting capacity of his bowmen was....
A. Bukka I B. Devaraya I
C. Krishnadevaraya D. Ramaraya

Q.2) The Venetian traveller who travelled with his wife and reached Vijayanagar around 1420 was...
A. Athanasius Nikitin
B. Nicolo de Conti
C. Ibn Batuta D. Ferishta

Q.3) The Uprising of 1857 was described as the first Indian war of Independence by...
A. SN Sen B. RC Mazumdar
C. BG Tilak D. VD Savarkar

Q.4) The 23rd Jain teacher, Parsva, the immediate predecessor of Mahavira enjoined on his disciples four great vows. To these Mahavira adds which of the followings as the fifth vow?
A. Abstinence from stealing B. Non-injury
C. Brahmacharya or continence D. Non-attachment

ANSWERS

1. B) Devaraya I 2. B) Nicolo de Conti 3. D) VD Savarkar
4. C) Brahmacharya or continence

*The Sun goes down
And the Moon comes up
The cycle continues...
But the fire in your eyes never goes down.
How do I know?
It stares at me so.
And in my heart
I feel it all rising
The air unbreathable, overrun
with smoke
The temperature unbearable
An overdose of heat.*

*Tell me why your determination is so.
You want to be great.
You want to be Me.
Tell me why do you show such ignorance.
Indifference to your childhood - for you only get one.
You want to earn,
But first you have to learn.*

*This is the problem with you, now.
I see that you can't be fixed.
My creation is undeniably flawed.
I wish I could keep you somewhere close to me,
So you don't create any trouble for me.
Oh! You want to be free, I see.*

*I have checked after you for years now.
But the fire in your eyes has sealed your fate.
Why in the world would you provoke
Mother Nature
Please, I beg of you.*

THE FIRE IN YOUR EYES

ANANT VEER SINGH, class VII, DPS
Sushant Lok, Gurgaon



*Do not take me lightly,
For I am your God.*

*I see that you've made her eternally sick,
Unable to fight back.
Earlier she was all powerful
But your ego and greed...
It made her crack.
Her trees are dying ever so quickly
And her reservoirs are done for good.*

*Now I am going to punish you with a
remedy of my own.
It will make you get a cold and cough
And make you stay home
I hope you are prepared for the shock
The following years are cursed for you,
Except for the Ones who find peace in themselves.
And once you learn your lesson,
I shall free you of this curse.*

*Uh-oh.
In all this mayhem, your God has
forgotten how to stop it
You'll have to come up with a cure of
your own.
I am ever so sorry.
But for now,
My curse shall make you say your last
prayers.*

*It seems that the fire in your eyes has led
you astray,
And you cannot find your way back,
That's the price you pay for making her
crack...*

Awesome NYT Bestsellers to read

AMNESTY

by Aravind Adiga

The "driving force" of this "thriller-like" novel by the Booker Prize-winning Indian Australian author of 'The White Tiger' is an unsolved murder about which its undocumented protagonist has information. Praising its "humanity," Times reviewer declared it "a significant book."



GOLDEN GATES:

The Housing Crisis and a Reckoning....

by Conor Dougherty

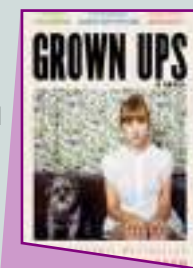
Although this "masterly primer on the fight for new construction" in California's Bay Area can feel "a little local," Times reviewer noted, the economics reporter, convincingly argues that these "battles" are "done well."



GROWN UPS

by Emma Jane Unsworth

This "truly funny" comedic novel about a female web-obsessed millennial - Times reviewer Kelly Conaboy wrote - is "less of an escape than it is a set of 'Clockwork Orange' metal eye clamps, forcing you to examine," via "hand-wringing over exclamation points and emoji choices."

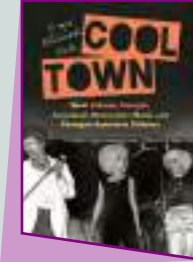


COOL TOWN:

How Athens, Georgia, Launched Alternative Music and Changed American Culture

by Grace Elizabeth Hale

A professor who once played in a band and ran an underground club in Athens, Hale analyses why this sleepy college town spawned the likes of the B-52's and R.E.M., and became "the model for the small bohemia that together formed '80s indie culture."



THE ONLY GOOD INDIANS

by Stephen Graham Jones

Times reviewer Danielle Trussoni called this "panoramic view" of the struggles and triumphs of four Native American young men, haunted by the spirit of an elk they killed on an expedition and by the burdens of tradition, a "gritty and gorgeous" horror novel.



STUDENT MAKES THE SCHOOL PROUD



Pradymn Chauhan, a grade XI (Science) student, who by virtue of his position is the Head Boy of Podar World School, Sherkhi, Vadodara. He is popular among his schoolmates for his sporting skills. Excellent athlete, he not only helps school mates in resolving their problems but also motivates them to be a part of school activities, always leading them to success.

In the 8th Annual Virtual Leaad Award 2020, Pradyumn Chauhan was one of the 10 finalists winning the Leaad Award for Confidence Category out of 450 participants across the country. This platform with its rigorous training procedures coupled with his inherent latent abilities enabled him to be one of the shortlisted 30 finalists. His Leaad journey entitled, 'Rise of a Phoenix' and the Action Research on the topic "Smashing Patriarchy and Conservative Mindsets" has finally made him



the proud recipient of the Leaad Award 2020-21. He received a Certificate, a Trophy, and a cash prize. He strongly feels that the great moral support of his family and the guiding support of his Principal, Preeta Pillai has led him on the path of success. Chairman Raghav Podar and his team congratulated him for his exemplary successful venture. It is worth mentioning that LEAAD Award is a unique leadership development program; it emphasizes practical exposure over classroom learn-

Educator gets Most Impactful School Leader Award 2020

Mr Raghav Podar, Chairman, Podar Education, received the award of Most Impactful School Leader Award 2020 by Indian Principals Network foundation recently. After being honoured Podar said, "I am humbled upon receiving the award, but the credit goes to my team that works dedicatedly with passion day in, day out to better the lives of our students. I am just receiving the award on behalf of them, as a captain is as good as his team." He added, "We as a team have been very adaptable and nimble to the incoming challenges so that we can inculcate and build 21st-century skills in ourselves and our students. We have changed the focus from content mastery to competence mastery."

It may be mentioned that Raghav Podar is shouldering a 93-year-old legacy of Podar Education and continuing with the values of Mahatma Gandhi who was the first president of the Podar Trust. He feels that any worthy award serves not only as recognition,

but more importantly a responsibility to keep the burning hunger for excellence alive, no matter how turbulent the headwinds might seem.

Podar said, "Adversity has the ability of eliciting talents that lay dormant inherently during prosperous times. There is no better time than a crisis that forces us to grow and wakes us up from the slumber of rudimentary practices. Our team has not only taken care of our students but also their parents, we have conducted successful Yoga, Zumba, Dance classes online for the families of our students to keep them fit and healthy & fit. I believe we should defenestrate the narrative that 2020 is a write-off, and recognize it's the year of unearthing new potential inside us."

Raghav Podar who has also been awarded as Glory of India Award by Deputy PM of Thailand in year 2016 is now looking forward to making 2021 a year of even greater growth for his students, Parents & his team.



IN HONOUR OF GURU NANAK JI

Guru Nanak is regarded by the Sikhs and many others as a Messenger of God. Guru Nanak-the founder of Sikhism was born 29 November 1469 at Nankana Sahib, near Lahore in the Punjab, India (now in Pakistan). His seven important teachings are:



- 1. THERE IS ONE GOD:** He believed there is only one God 'Ek Om Kar'
- 2. WOMEN ARE EQUAL TO MEN:** According to him in the eyes of Supreme God, all are his children.
- 3. SEWA:** One who performs selfless service, without thought of

reward shall attain his lord. The sea of Langar was also symbolized by Guru Ji.

4. SIMPLICITY IS BEAUTIFUL: He always focused on simple living doing kirtan and jap.

5. ALL UNDER GOD'S WILL: He emphasized the will of God which we cannot understand.

6. TRAVEL: Guru Nanak Ji was believed to be the second most

traveled person in the world. He traveled on foot and spread the message of peace, truth, and love.

7. FIVE EVILS: According to him the five evils which are ruining our life are Lust, Anger, Greed, Attachment, and Ego.

We should always follow his teaching and path for a good life.

MANVIK HARWANI, Class III, St Kabir, Navrangpura

Udgamites booked in Indian Book of Records



Heeva Shah and Palash Axay Shah, studying in Class I-B and VI-A respectively at Udgam School for Children are honoured with the Indian Humanitarian Award for their continued dedication and humanitarian work with their drawings to create awareness on this COVID-19 Pandemic. Both students are also participants of the maximum number of drawing competitions on COVID-19.

Their work was witnessed and adjudicated by Dr. GVNRSSS Vara Prasad, Advocate, Supreme Court of India, at Hyderabad, Telangana, India.

The school proudly acknowledges and appreciates such talents of students.

City kid to view Republic Day parade from PM's box

Prachi Jindal, a student of Delhi Public School, (Bopal) has been selected to witness the Republic day parade at Delhi from the Prime Minister's box. Every year, fifty meritorious students from all across the country are invited to view the parade.

It may be mentioned that Prachi had scored 99.8% in her class X exam conducted by the Central Board of Secondary Education. She will reach the national capital by January 25 and will be there till January 27.

Keeping in mind ongoing pandemic, all invited children have to get their rapid Antigen Test or RT PCR Covid -19 test report, 72 hours before the departure.



Painters' Gallery



Manushi Shah, Class XII, Delhi Public School, Bopal



Mantra Vadhadiya, Class I, SGVP International School



Amber Kanodia, Student, Essar International School, Surat



Jiya Mehta, Class X, Zebur School For Children



Jaival Trivedi, Class IV, Zydus School Of Excellence



Sipra Patel, Class V, Sheth CN English Medium School

SCHOOL LIFE IS THE BEST!!

The best days of our life are those spent at school. During this pandemic, I am missing those wonderful moments of school.

Whenever I sit for my online classes with my uniform, it reminds me of entering the school premises.

Whenever I sit to study, it reminds me of how we all talked in the class when the teacher taught us something.

Whenever I sit to have my lunch, it reminds me of those amazing moments in the canteen area.

I feel that school life is the best as we take uncountable amazing moments of school with us ahead in the journey of life. The pranks, fun, gala time, and mischief are only possible in



school life. In this situation, we are getting to know the importance of school. I am really missing all my friends, the teachers and all those exciting periods. In class VII, we did not even get to see our new teachers physically.

Those P.E. grounds, the computer labs, our classrooms, our school corridors. These things are the best part of my school and I am missing them a lot. I hope that this pandemic gets over very soon and our school life gets back to normal.

SHANAY SHAH, Class VII, Udgam School



AMAZING TRIP TO NASA

I never knew how interesting space could be...until I visited NASA (National Aeronautics and Space Administration) in Orlando, U.S.A. When we reached there, the security was very tight. We were asked to throw away all liquid products. First, we took a bus tour of the premises. Here we found that- believe it or not - NASA is home to hundreds of alligators! We saw everything from the place where rockets are made to the van which carried astronauts to the launch pad. We even saw the launch pad itself. Launchpad is the spot that has been the beginning of many world-changing programmes. May it be the first man to reach space, or the first person to step on the moon - all of them have started their journey from the Kennedy



Space Centre, i.e. NASA. After the thrilling bus tour, we went for a ride. It was a simulator ride in which we would experience the lift-off of an actual space

shuttle. At the end of the ride, the ceiling of the 'space shuttle' opened up to reveal a very good imitation of space. While exiting the ride, we saw the model of the Atlantis, which was a space shuttle. I also bought a toy of the same from the NASA gift shop. There were shows of the failed moon landings and finally the successful one, which was Apollo 11.

Apart from these, there were two I-max 3-D shows, one of which depicted how astronauts live in space. After exploring all these spots, we were left with some extra time. We utilized it to see some interesting rocket models in the Rocket Garden. Above that, I also played in the rocket-shaped play area. I will definitely visit NASA once the pandemic

ends - and maybe as an astronaut in the future! Will you visit it?

HIYA VASAVADA, Class VII, Udgam School For Children



THRILLING JAWAI TRIP

Travelling is my passion as it makes my mind fresh and happy. Going to different places with my family and friends adds charm to my life. Last year, I spent a lifetime memorable Christmas vacation at Jawai with my family. Jawai forest is situated around Jawai Sagar Dam catchment area. It is a well-known leopard century. We went there by Volvo bus. We booked one of the best resort located amidst the Jawai Sagar forest. After taking high tea at the resort, we went for an open gypsy safari in search of a leopard. It was a thrilling experience in an open safari on the flat mountain of the leopard's home. We saw two leopards on the mountain. They were very near to us, they were almost just ahead of our gypsy and then went to their cave. We had a beau-



tiful candlelight dinner on the mountain hilltop. The same night, we did a campfire in our resort. The next day, early morning, we again went for an open safari. We found one mother leopard with a baby leopard just beside our resort. I wish to share my learnings in a nutshell, "If we will not

harm animals, they will also not harm us". We enjoyed it a lot. The trip was full of thrill and happiness and we made lifetime memories.

NITYA SHAH, Class VII, St Kabir School Navrangpura



UNPRECEDENTED INJURY CRISIS

Injuries are part and parcel of the game but as things stand at the moment, it seems like the Indian cricket team will have more players on the treatment bed than on the field. After Ravindra Jadeja and Hanuma Vihari became the latest Indian players to have been ruled out from the Brisbane Test, it seems there is an injury cloud over Jasprit Bumrah ahead of the fourth and final Test starting January 15

BUMRAH'S ABSENCE COULD HURT INDIA'S CHANCES

■ India pace spearhead Jasprit Bumrah has suffered from abdominal strain ahead of the fourth and final Test against Australia that begins at The Gabba in Brisbane. Bumrah was seen holding his stomach during the third Test, which ended in a draw at the Sydney Cricket Ground (SCG), and had undergone scans. While speculation is rife that he won't play the final Test, a BCCI official told IANS that there has been no confirmation on his availability. "There is no confirmation on it yet," said the official when asked about Bumrah's availability.

■ The right-arm pacer has three days to recover and the Indian team will do its best to ensure his availability for the final Test as his absence following the pullout of Umesh Yadav (injured in second Test), Mohammed Shami (injured in first Test) and Ishant Sharma (who didn't travel at all to Australia), will mean that the visitors will be forced to field a very inexperienced pace attack at The Gabba. Mohammed Siraj (two Tests), Navdeep Saini (one Test) have both made their debut in the ongoing series while Shardul Thakur on the bench has played just one Test in his career. Left-arm fast bowler T Natarajan is yet to play a Test. Kartik Tyagi is also there but as a net bowler. He is yet to play any form of international cricket and has played just two first-class matches.

■ Bumrah has been the most overworked pace bowler in both camps, having bowled 117.4 overs in the Test series. Overall, on the Australia tour, he has bowled 169.1 overs (including 22 in the warm-up fixture and 29.3 in ODIs). This follows 60 overs he bowled in the Indian Premier League (IPL) before coming to Australia. The right-arm pace bowler had suffered a lower back injury late last year. He did not play an international after August, 2019 and made his international return only in January 2020.

WITH VIHARI & JADEJA OUT, MIDDLE ORDER IS SHAKY

■ India's lower middle-order could be the weak link with both Hanuma Vihari and Ravindra Jadeja being unlikely starters for the fourth and final Test. They could draft in Wriddhiman Saha as regular wicketkeeper and play Rishabh Pant as the specialist batsman. Mayank Agarwal also suffered a blow in training that has put his participation in doubt too.

■ There are also concerns over R Ashwin's fitness as he woke up with a back tweak on Monday and then suffered a hit on his ribs by a short delivery from speedster Pat Cummins. While Vihari's hamstring issue was noticeable, not many knew that even Ashwin had back issues on Monday morning. It was later revealed by his wife Prithi on social media. "The man went to bed last night with a terrible back tweak and in unbelievable pain. He could not stand up straight when he woke up this morning. Could not bend down to tie his shoe laces. I am amazed at what @ashwinravi99 pulled off today," she tweeted after the win.

■ All these absentees make the Indian line-up uncertain and shaky. Thankfully for India, the top-order looks established. There is no doubt that Shubman Gill and Rohit Sharma would continue to open the innings after they put on 70 and 71 for the first wicket in the third Test. Cheteshwar Pujara and Ajinkya Rahane will play at No. 3 and No. 4.

A LOOK AT INDIA'S INJURY LIST

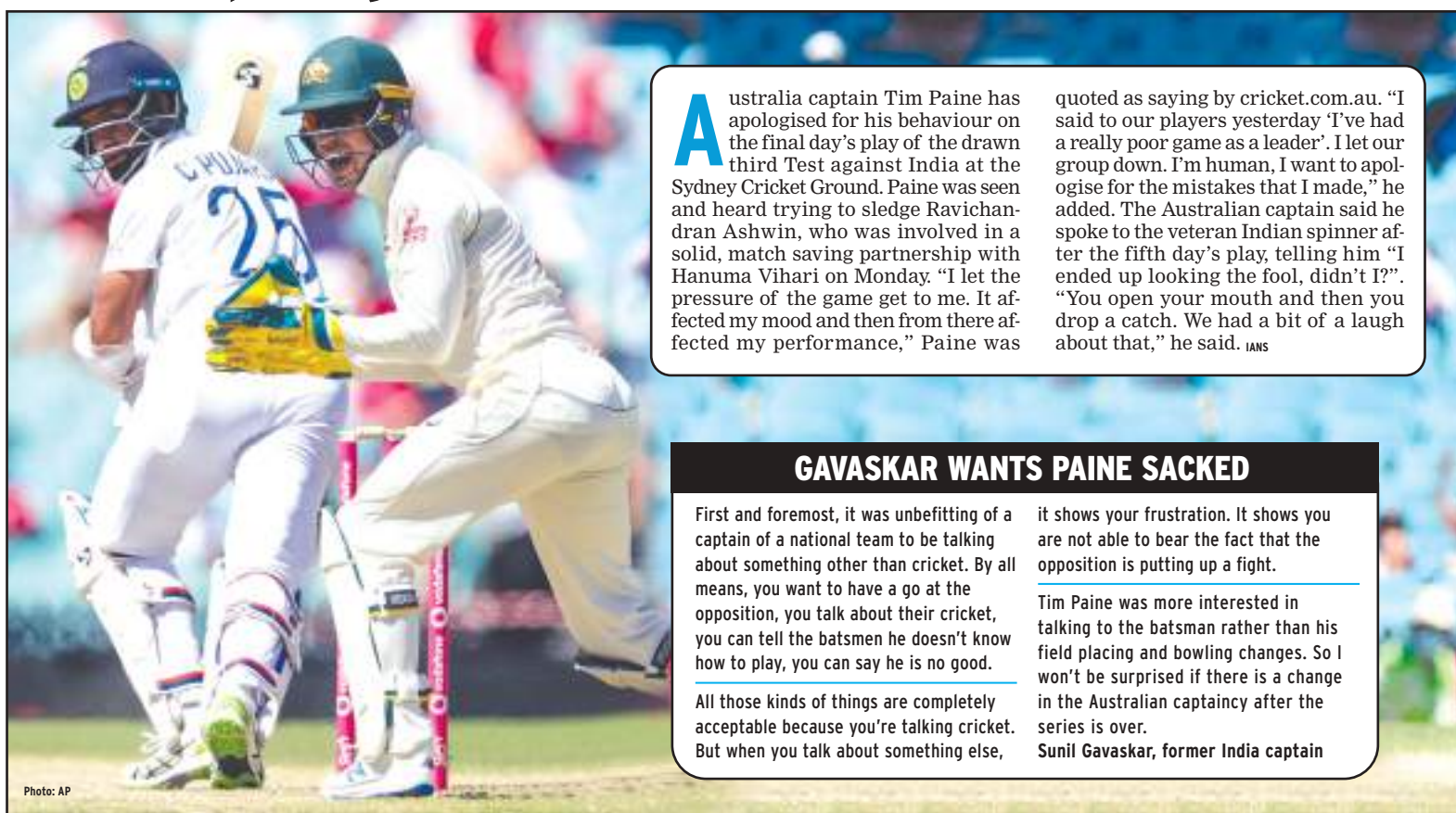
1. **ISHANT SHARMA** (couldn't get fit before the series)
2. **MOHAMMED SHAMI** (fractured his arm)
3. **UMESH YADAV** (calf injury)
4. **KL RAHUL** (wrist injury)
5. **RAVINDRA JADEJA** (dislocation and fracture on his left thumb)
6. **HANUMA VIHARI** (hamstring injury)

India's already inexperienced attack will further be depleted if Bumrah is ruled out



I have never seen this kind of injury list, ever.
@Mickeyarthurc1 alluded to the effects of lockdown and @ashwinravi99 pointed it out too. He has a bad back, Bumrah is unlikely to play, Agarwal hurt...if India hadn't taken such a large contingent, wouldn't have had 11 left.
HARSHA BHOGLE, commentator

Paine apologises for SCG conduct, Ashwin barbs



Australia captain Tim Paine has apologised for his behaviour on the final day's play of the drawn third Test against India at the Sydney Cricket Ground. Paine was seen and heard trying to sledge Ravichandran Ashwin, who was involved in a solid, match saving partnership with Hanuma Vihari on Monday. "I let the pressure of the game get to me. It affected my mood and then from there affected my performance," Paine was

quoted as saying by cricket.com.au. "I said to our players yesterday 'I've had a really poor game as a leader'. I let our group down. I'm human, I want to apologise for the mistakes that I made," he added. The Australian captain said he spoke to the veteran Indian spinner after the fifth day's play, telling him "I ended up looking the fool, didn't I?". "You open your mouth and then you drop a catch. We had a bit of a laugh about that," he said. IANS

GAVASKAR WANTS PAINE SACKED

First and foremost, it was unbefitting of a captain of a national team to be talking about something other than cricket. By all means, you want to have a go at the opposition, you talk about their cricket, you can tell the batsmen he doesn't know how to play, you can say he is no good.

All those kinds of things are completely acceptable because you're talking cricket. But when you talk about something else,

it shows your frustration. It shows you are not able to bear the fact that the opposition is putting up a fight.

Tim Paine was more interested in talking to the batsman rather than his field placing and bowling changes. So I won't be surprised if there is a change in the Australian captaincy after the series is over.

Sunil Gavaskar, former India captain

Team has blossomed under Rahane: Vengsarkar



Rahane showed great character to inspire India to a remarkable bounce back win against Australia in Melbourne to level the series at 1-1 and then secured a hardfought draw in Sydney. "The team has really blossomed under the leadership of Ajinkya Rahane. India were bundled out for 36 and lost the match (in the first Test in Adelaide) but the way Rahane led the team after the Adelaide defeat is amazing. Ajinkya showed tremendous character. Players are more at ease under Rahane. He has given the freedom to his players. Freedom is the top most thing that Rahane has injected into the team. Not just Ashwin and Jadeja, the youngsters Siraj, Saini, and Gill also impressed in the series. Ajinkya has done a fantastic job in Virat's absence," Vengsarkar, who played 116 Tests and 129 ODIs for India from 1976 to 1992 said.

QUIZ TIME!



Q1: Who won the first NBA All-Star Most Valuable Player award, named after Kobe Bryant?

- a) Anthony Davis ☐ b) LeBron James ☐
c) Kawhi Leonard ☐ d) Kevin Durant ☐

Q2: Which tennis player became the youngest Brazilian ever to win an ATP title after defeating Casper Ruud?

- a) Marcos Daniel ☐ b) Gustavo Kuerten ☐
c) Marcelo Melo ☐ d) Thiago Seyboth Wild ☐

Q3: Name the player who has won the most Player-of-the-Match award in Test cricket.

- a) Jacques Kallis ☐ b) Muttiah Muralitharan ☐
c) Wasim Akram ☐ d) Shane Warne ☐

Q4: Who won the 2016 NBA Sixth Man of the Year award?

- a) Eric Gordon ☐ b) Lou Williams ☐
c) Jamal Crawford ☐ d) Montrezl Harrell ☐

Q5: Who won the NBA Most Improved Player 2018 award?

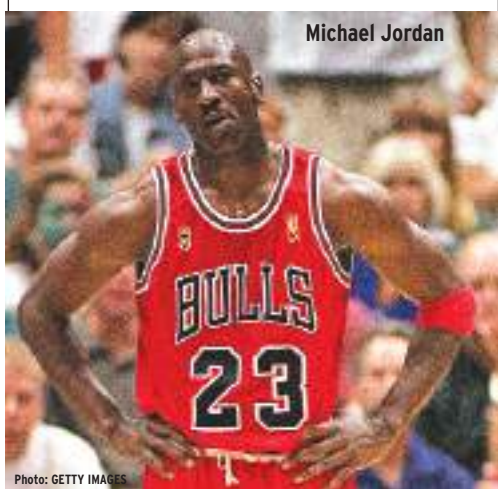
- a) Brandon Ingram ☐ b) Victor Oladipo ☐
c) Giannis Antetokounmpo ☐ d) CJ McCollum ☐

Q6: Which of these cricketers has played the most number of Test matches?

- a) Jacques Kallis ☐ b) Steve Waugh ☐
c) Ricky Ponting ☐ d) Sachin Tendulkar ☐

Q7: Michael Jordan won NBA Rookie of the Year Award in 1985. Which teams was he playing for at that time?

- a) Chicago Bulls ☐ b) Washington Wizards ☐
c) Charlotte Hornets ☐ d) New York Knicks ☐



Michael Jordan

Q8: Which footballer has won the most European Golden Shoe awards?

- a) Lionel Messi ☐ b) Cristiano Ronaldo ☐
c) Luis Suarez ☐ d) Robert Lewandowski ☐

Q9: Who has been an umpire for the most matches in One Day Internationals?

- a) Rudi Koertzen ☐ b) Aleem Dar ☐
c) Billy Bowden ☐ d) Steve Bucknor ☐

Q10: Who added his name to with his ATP title run at the Generali Open?

- a) Casper Ruud ☐ b) Ugo Humbert ☐
c) Miomir Kecmanovic ☐ d) Yannick Hanfmann ☐

Q11: The most hat-tricks in a La Liga career is 36. Which players has achieved this feat?

- a) Lionel Messi ☐ b) Cristiano Ronaldo ☐
c) Luis Suarez ☐ d) Robert Lewandowski ☐

Q12: Who won the 2017 NBA Defensive Players of the Year award?

- a) Rudy Gobert ☐ b) Kawhi Leonard ☐
c) Giannis Antetokounmpo ☐ d) Draymond Green ☐

ANSWERS: 1 c) Kawhi Leonard
2 d) Thiago Seyboth Wild 3 a) Jacques Kallis
4 c) Jamal Crawford 5 b) Victor Oladipo
6 d) Sachin Tendulkar 7 a) Chicago Bulls
8 a) Lionel Messi 9 b) Aleem Dar
10 c) Miomir Kecmanovic 11 a) Lionel Messi
12 d) Draymond Green



THE TIMES OF INDIA

www.toistudent.com
TODAY'S EDITION

► **DIY: Hands-on-physics experiments**
► **Expert's tips: How to prepare for your Boards**
PAGE 2



► **Did you know you could wear clothes that heal?**
► **8 ways to overcome shyness**
PAGE 3



► **India vs Oz, 3rd Test: Vihari, R Ashwin pull off an epic draw**
PAGE 4


STUDENT EDITION

TUESDAY, JANUARY 12, 2021


WEB EDITION
[CLICK HERE: PAGE 1 AND 2](#)

10 ways coronavirus has changed

THE WORLD ECONOMY

The economic shocks like the coronavirus pandemic of 2020 come once in few generations, bringing about permanent and far-reaching changes. Here is an overview of some of the transformations...

LEVIATHAN

Big government (government that is excessively interventionist) staged a comeback, as authorities had to track where people went and who they met, and to pay their wages when employers couldn't manage it. These interventions, however, incurred budget deficits of \$11 trillion in 2020.

EVEN EASIER MONEY

The Central banks were plunged back into printing money. Interest rates hit record lows. History shows that the pandemics depress inter-

est rates for a long time. According to economists, the interest rates dipped 1.5% points than they otherwise would have been.

DEBTS AND ZOMBIES

Governments worldwide offered credit as a lifeline, and businesses grabbed it. One result was a surge in the corporate debt levels. The Bank for International Settlements calculates that non-financial companies borrowed a net \$3.36 trillion in the first half of 2020.



THE GREAT DIVIDES

The World Bank warns that the pandemic is spawning a new generation of poverty and debt turmoil.

K-SHAPED

As economies locked down, the upshot has been labelled a 'K-shaped recovery.' The virus has widened the income or wealth gaps across fault lines of class, race and gender.

RISE OF THE ROBOTS

Covid-19 triggered new concerns about the physical contact in the industries where social distancing is tough, like retail, hospitality or warehousing. This led to the rise of the robots. Companies replaced the humans with robots.



YOU'RE ON MUTE

Work-from-home has mostly passed the technology test. It's a boon for companies like the videoconferencing platform. However, it's a worry for businesses catering to the old infrastructure of office life— from commercial real estate to food and transportation.



NOT GOING ANYWHERE?

Global tourism fell 72% in 2020 through October. McKinsey reckons that a quarter of business trips could disappear forever as meetings move online.



A DIFFERENT GLOBALISATION

When Chinese factories shut down early in the pandemic, it sent shock waves through the supply chains everywhere and made businesses and governments reconsider their reliance on China.



GOING GREEN

When 2020 saw planes grounded and people staying home, even oil majors like BP felt a real threat from the world, getting serious about climate— Governments from California to the UK announced plans to ban the sale of new gasoline and diesel cars by 2035



You share your **BIRTHDAY** with

SWAMI VIVEKANANDA

JANUARY 12



- A true luminary, Swami Vivekananda was credited with enlightening the western world about Hinduism
- He pushed for national integration in colonial India
- In 1984, the government of India declared his birthday as the **NATIONAL YOUTH DAY**
- The main objective is to promote rational thinking among the youth, believed to be the future of the country

PM Narendra Modi will address the valedictory function of the second National Youth Parliament Festival via video conferencing today. The festival's objective is to hear the voice of the youth aged between 18 and 25 years, the future of India

VIEWPOINT

WHY NOT BHARAT RATNA FOR DHYAN CHAND, ASKS FORMER HOCKEY CAPTAIN GOVINDA



Hockey wizard Dhyan Chand was a "great man, great human being and a great player" and it is a surprise that he has not yet been conferred with the Bharat Ratna, India's highest civilian honour, says former India hockey captain BP Govinda. "Being a hockey wizard and someone who is well known around the world, why not? People have compared Dhyan Chand to what Pele was to football. Why shouldn't he get it?" he questioned.

- There has been a steady demand from various quarters on conferring Dhyan Chand the highest civilian award since a long time. Born on August 29, 1905, Dhyan Chand was arguably the face of sports in pre-Independent India, and for many years after 1947 as well. He led the Indian team to back-to-back gold medals at the 1928, 1932, and 1936 Olympics
- In 1956, the government conferred on him the Padma Bhushan— he was never presented the Arjuna award though— and released a postage stamp in his memory on December 3, 1980, a year after he died

Cricketer Sachin Tendulkar is the only sportsperson to have been conferred with the Bharat Ratna, till date



APPLE TO LAUNCH SMALLER, FASTER CHARGERS: REPORT

Representational pic



Mobile giant Apple is reportedly planning to bring smaller and lighter versions of its USB-C wall chargers. Navitas Semiconductor is expected to obtain orders for gallium nitride or GaN chargers for the same.

- GaN chargers use gallium nitride technology, and are more heat-efficient, allowing faster-charging speeds, despite the charger itself being quite smaller
- Ireland-based Navitas Semiconductor, US-based Power Integrations and China-based Innoscience are the global top three suppliers of fast-charging solutions based on GaN-on-Si chips

New state of matter 'liquid glass'

Scientists have uncovered a new state of matter, the liquid glass, with previously-unknown structural elements. The surprise discovery comes 20 years after the existence of the 'liquid glass' was first predicted, and reveals new insights into the mysterious glass transition.

DISCOVERED

1 According to scientists, this new state seems to exist between a solid and a colloid (such as a gel) homogeneous mixtures with particles that are microscopic but still bigger than the atoms and molecules and easier to study

2 When materials transform from liquids into solids, their molecules usually line up to form a crystalline pattern, which is not the case with glass, which is why scientists are so keen to analyse and deconstruct it— with glass (and glass-like materials), the molecules are locked or frozen in a disordered state

3 In the liquid glass, the scientists noticed that the colloids were able to move, but couldn't rotate — they had more flexibility than the molecules in glass, but not enough to make them comparable to



regular materials that have already been extensively studied

4 The findings have the potential to go way beyond the glass as well, shedding light on everything— from the smallest biological cell to the biggest cosmological system — any scenario, where there is unexplained disorder



A solar-powered remote for your TV!

As part of its 'Going Green' scheme, tech giant Samsung has created a new solar-powered TV remote, which can also be charged by indoor lighting, removing the need for replaceable batteries...

- Called the Solar Cell Remote Control, the new TV remote contains a small solar panel, and can be charged using both indoor and outdoor light, as well as being plugged in
- Samsung says it estimates that the remote will help prevent waste from around 99 million batteries in the next seven years



- The remote, made of recycled-plastic bottles, is part of the company's eco-packaging scheme, which reduces text and images on the packaging in order to reduce the amount of oil-based ink used in printing
- In a more unusual step, the packaging is also covered in a pattern of microdots, aimed to help the buyers reuse, customise and repurpose the packaging

FOR A CAUSE

- The South Korean firm has also pledged to reduce the carbon footprint of its TV business over the next few years, as well as seek to reduce power consumption in its products and use more recycled materials
- Several tech giants have begun taking a range of steps to improve their green credentials. Last year,



Apple stopped including charging plugs in the box for new iPhone models, in an effort to reduce the weight and the amount of packaging required for each device

Should Dhyan Chand be conferred with the Bharat Ratna or is it too late? **SHARE YOUR VIEWS AT TOINIE175@GMAIL.COM. YOU CAN POST YOUR COMMENTS AT TOISTUDENT.COM**

Fundamental Science Physics is an essential part of most technological and scientific educational curriculum. Amongst the many tools that can be used for making knowledge of Physics and its learning fun, the most attractive is that of Hands-on Physics Experiments (HPEs), which helps in the understanding of many natural and technical processes via direct observation and experience. A study published by Prof. Sain Beilock in Psychological Science showed that students who took a hands-on approach to learning had activation in sensory and motor-related parts of the brain. Activation of these brain areas was associated with better quiz performance by physics students who participated in the research.

An HPE involves any material, object, instrument or experimental setup used for learning a properly contextualized concept, principle, law or application. They contribute to the student's use of basic concepts and experimental skills to construct something new and so give the pupil a chance to integrate theoretical and practical contents naturally.

Some Hands-on Physics Experiments are given below with an effort to allow students to become part of the learning process so that physics as a subject becomes interesting, exciting and easy to understand.

EXPERIMENT 1 BEND WATER WITH ELECTRICITY

This experiment is so simple you can do it at any time. Turn on the tap so that you get only a very thin stream of water flowing. Now comb your hair 10 times and then bring the comb close to the flowing water, without actually touching the water.

OBSERVATION:

If all goes well, the stream of water should bend towards the comb.

EXPLANATION:

While brushing hair, electrons are collected on the comb. These electrons have a negative charge. When you bring the negatively charged comb near the stream of flowing water, it is attracted to it. You can try another experiment with your comb. Tear up pieces of tissue paper into tiny bits. Then charge your comb again by brushing it through your hair and bring it close to the tiny pieces of tissue paper. They will jump off the table to the comb the same way that the water was pulled to the comb. It is all thanks to the wonders of static electricity.



EXPERIMENT 5

FUN WITH ICE CUBES

A Squeeze a few ice cubes together in a towel and hold them for a minute.

OBSERVATION:

When you stop pressing, the cubes are frozen together.

EXPLANATION:

The pressure causes the ice to melt by lowering its melting point. When the pressure is withdrawn the molten water re-solidifies and joins the cubes together.

B Take two heavy stones and a thin metal wire. Tie the stones at the two ends of the wire. Hang the wire along with the stones over a larger block of ice.

OBSERVATION:

The wire passes through the ice without breaking it, leaving a solid cube.

EXPLANATION:

The line of ice directly under the wire melts because the pressure lowers the melting point. The wire sinks into this water. The water above the wire freezes again due to decrease of pressure. Therefore the wire passes through.



EXPERIMENT 6

BAR MAGNET'S MAGNETIC FIELD LINES

Take some iron filings and spread them over a small region on a sheet of white paper. Put a bar magnet below the sheet of paper and tap the paper gently.

OBSERVATION:

Iron filings form a definite pattern.

EXPLANATION:

When the magnet is placed below the sheet of paper, it attracts the iron filings. The pattern of the iron filings shows the lines of force that make up the magnetic field of the magnet. The concentration of iron filings near the poles indicates that these areas exert the strongest force.

EXPERIMENT 2

FLOAT EGG IN WATER

Place an egg in a glass of fresh water. Notice what happens. Add salt to the water, stir gently, and observe what happens.

OBSERVATION:

In the fresh water, the egg sinks. As you add salt, it floats.

EXPLANATION:

A denser liquid exerts a greater up-thrust or buoyant force. Salt makes water denser. Now you understand easily why a ship rides higher in ocean water than in river water. You understand why it's easier to swim in the ocean than in a lake or pond.



EXPERIMENT 3

BOTTLE SUBMARINE

Take a soft drink bottle and fill it with water up to the brim. Collect a plastic dropper and wrap a few turns of a metal wire to make it heavy at one end. Fill up the dropper with water up to its neck and insert it into the bottle. If the plastic dropper floats on top of the water, add more water to it; on the other hand if it sinks, pour out a little so that the dropper just barely floats. Close the cap of the cold drink bottle tightly. Hold the palm of your hand over the bottle and press it firmly; then release your hand.

OBSERVATION:

The plastic dropper dives down. When you remove your hand, the dropper floats again.

EXPLANATION:

When you press with your hand, you force the air inside the plastic dropper to compress - to occupy less space. This leaves room for more water. When the added water enters the dropper, it becomes heavier than the water which it displaces and sinks.



EXPERIMENT 4

FLOATATION OF NEEDLE ON WATER

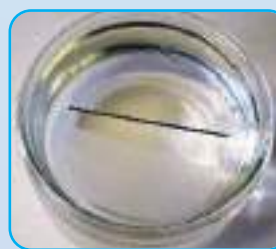
Using a tissue paper as a carrier, place a needle on the surface of water in a glass tumbler. With the help of a fork gently press the tissue paper so that it sinks into water.

OBSERVATION:

The needle will float.

EXPLANATION:

The needle is heavier than the amount of water it displaces and should be expected to sink. It, however, floats because of an invisible elastic skin of



water. When water comes in contact with air, the molecules on the surface of the water huddle closer together and form a thin film or skin over the surface. If you gently pour a drop of soap solution in a glass tumbler with the floating needle, the needle sinks immediately. The soap

solution reduces the surface tension of water. By lowering surface tension, soap makes water able to wet the surface of the needle.



Binay Biswas, Physics teacher, Birla High School, Kolkata

EXPERIMENT 7

TO SHOW THE PRESENCE OF ATMOSPHERIC PRESSURE

Take a glass tumbler, water and a card. Fill up the glass tumbler completely with water and cover it with the card. Putting your hand on the card, turn the glass upside down and then slowly remove your hand.

OBSERVATION:

Water does not fall down.

EXPLANATION:

When you turn the glass upside down, the pressure of the air outside the glass is greater than pressure of water inside the glass. Therefore the card experiences an upward push. For this reason water does not fall the card stays in place.



EXPERIMENT 8

AIR CONTAINS NITROGEN AND OXYGEN IN RATIO 4:1 BY VOLUME

Take a flat container and fix a candle at its center. Put some quantity of water in the container. Place an empty, dry glass tumbler over it. Mark five marks above the water surface on the glass tumbler at equal distances. The candle is lightened and is covered with the glass tumbler.

OBSERVATION:

After some time the candle is extinguished and the water level is raised in the glass tumbler up to first mark.

EXPLANATION:

The air in Earth's atmosphere is made up of approximately 80 per cent nitrogen and 20 per cent oxygen. The raised level in water is 1/5 of the volume of air in the glass tumbler. This proves that one part of the air of the glass tumbler is a gas which supports combustion, i.e., oxygen. Hence, 1/5 by volume is oxygen in air.



PREP UP TO FRAME ANSWERS SMARTLY

My advice to students who will be appearing for their board exams is that they should not bank on last minute study plans. From what we can gather from the sample papers released by CBSE, the English paper could be quite tough and students would be required to use their critical thinking skills to comprehend questions and frame answers. Whether exams would be offline or online, students must keep the following points in mind:



1 First and foremost, reading the texts meticulously is a must. Read every story and make a mind map of the plot and the setting of the stories. According to the new pattern, extracts can be given from any part of the texts and questions will be based on the extracts. If you skip the reading part in your preparation, chances are you will get muddled with the plots and the characters.

2 Analyse the characters of each story carefully. Do not mix them up. If your details are correct but the character is wrong, your answer is technically wrong. Also remember the names of the writers and poets.

3 Remember the dialogues attributed to different characters and relate them to the situations in which those dialogues were spoken. Ask someone to quiz you on who said what, to whom and why.

4 For the advanced writing questions, regular practice on questions from sample papers is im-

portant. Read up on current affairs to make your writing authentic and matured.

5 Practice all formats regularly. Remember you stand to lose marks for messed up formats.

6 Spare some time to read newspapers, blogs, articles on relevant topics. Keep yourself updated. CBSE often gives topics from current affairs, and projects floated by the government. Be prepared with solutions to socio-economic-environmental issues. Think like a responsible citizen. Always give positive ideas. Your attitude will reflect in your writings and that can impress the examiners.

7 Finally, write neatly. Your neat presentation can win the hearts of the examiners and you might get some extra marks too.

Best wishes for a fantastic performance!

Lovely Dutta Prusty, Vice-Principal, DPS Whitefield, Bengaluru



MY SCHOOL PROJECT

CRISPR-CAS9

Marvels of genetic engineering

WHAT IS IT?

- The code of life; Deoxyribonucleic Acid (DNA) is a complex molecule that guides growth, development, function and reproduction of every living thing.
- Information is encoded in the structure of molecule.
- Genetic Engineering involves editing the DNA to change the traits of organisms.
- CRISPR is a powerful tool to edit genomes. The protein CAS9 is capable of cutting the DNA.

SALIENT FEATURES

- There are many genetically modified organisms used today in the food industry, especially meat sector.
- Genetic engineering is also widely used in the medicine industry to produce insulin for diabetic patients.
- Genetic engineering at research stages involves replacing the faulty gene of an embryo which might be carrying a genetic disorder.
- Genetic engineers today believe that it is possible to edit the genome of humans to alter certain traits.
- CRISPR-CAS9 can help defeat cancer by editing immune cells and making them better cancer hunters.

HOW WE WENT ABOUT WITH IT

- We used PPTs and graphic videos to explain the basic concept of genetic engineering, its procedure and how it is done today.
- To show the structure of DNA and the placement of nucleotides, we created a 3D model of the double helix that showed the hydrogen bonds between Adenine, Guanine, Thymine and Cytosine.
- We also wanted to show the audience a snippet of an actual DNA strand so we conducted an experiment deriving the DNA from strawberries.



MORE FACTS

- December 10, 2018: A scientist in China successfully altered the faulty genes of twin babies during the procedure of IVF.
- CRISPR CAS9 tech is a defense system used to make bacteria fight against viruses.

Sonakshi Sood, class XI, NES International School, Mulund (W), Mumbai

8 WAYS TO

OVERCOME SHYNESS

Here are 8 ways to overcome shyness and be more confident:



My first language was shy. It's only by having been thrust into the limelight that I have learned to cope with my shyness.

AL PACINO actor



Overcome Shyness Tip #1: WORK ON DEEPER FEARS.

Take shyness as a symptom for the need to address your deeper fears. Is your shyness a case of poor self-esteem, related to childhood conditioning, excessive worrying and so on? If you need help and assistance with overcoming shyness once and for all, consider doing some emotional release work.

Overcome Shyness Tip #2: APPRECIATE YOUR INDIVIDUALITY.

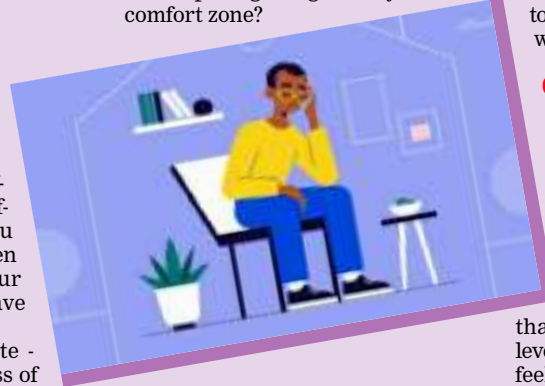
In case you haven't noticed, everyone is unique and different. Instead of feeling self-conscious, embrace who you are – unconditionally. When you learn to embrace your uniqueness, you will have more confidence. Remember this quote - "The significant business of your life is alive and well, awaiting discovery within your very soul. You and I were born to come into ourselves as complete and distinctive persons. Accepting this, we build a valuable life." – Marsha Sinetar

Overcome Shyness Tip #3: TAKE DEEP BREATHS.

When you are in situations where you feel shyness trying to takeover, it can be helpful to take deep breaths. This will help you to clear your mind, give you some time to gain composure and avoid an anxiety attack.

Overcome Shyness Tip #4: GO ON NEW ADVENTURES.

When most people think about stepping out of their comfort zones, they usually run the other way. Being bold is an important step in overcoming feelings of shyness. The next time you are presented with a social opportunity that is not your usual scene, go out on a limb and give it a try. Need more tips on getting out of your comfort zone?



Overcome Shyness Tip #5: STOP SAYING YOU ARE SHY.

Have ever noticed that the more you say you're shy, the more your shyness increases? Instead of constantly talking about how shy you are, try reframing your mind with positive affirmations. Affirm statements such as "I am confident", "I speak clearly and with ease" and "I can articulate beautifully, eloquently and freely".

Overcome Shyness Tip #6: RELEASE THE PAST.

Have you ever been rejected by someone that you admire? And so you have found

it difficult to bounce back from the hurt. Don't allow past hurts to rule your future. Everyone can't be friends with everyone, so instead of allowing hurt to hold you back, find new friends who will appreciate you for who you are.

Overcome Shyness Tip #7: LEARN TO SPEAK UP.

Do you talk so quietly that people are always asking you to talk louder? It is okay to speak and be heard, so try to get into the habit of talking louder. Feeling afraid? Practise in front of the mirror. Visualise your voice as a dial that you can turn for managing the level of your volume. Get someone you feel comfortable with to provide you with feedback about your audibility.

Overcome Shyness Tip #8: MEET NEW PEOPLE REGULARLY.

A great way to overcome shyness is to make it a point to meet someone new every week. When you are constantly focused on making new friends, you will forget all about your shyness. Try overcoming your shyness by volunteering to organise social outings for senior citizens every week. Maybe start an online video outing to start with and generally progress to meetings in reality.

The trendiest workout of 2020

The year 2020 has been difficult for all of us. Due to the lockdown imposed in the wake of coronavirus pandemic, we have spent almost the entire year indoors. With offices and gyms shutting down, our levels of physical activity also decreased drastically. One of the greatest lessons that we learned during this testing time was that to stay fit we do not need to go to the gym or step outdoors. A report

YOGA

1 The pandemic took a major toll on our physical as well as mental well-being. Staying indoors, limiting contact from the outer world and constant fear of contagion caused stress and anxiety. This forced most of the people to add yoga in their daily routine. The ancient Indian form of physical activity helped to calm the mind and flex the muscles. A lot of people opted for yoga during the pandemic to sail through a hard time.

ZUMBA

2 Zumba is another form of cardio exercises that people followed in 2020. This workout routine does not have any set rules. It is more of a fun activity that helped people a lot to get relief from stress and stay fit during the lockdown. There has been a surge in the online Zumba classes during the pandemic

STATIONARY BIKE

3 Cycling both indoor and outdoor was a top pick of the year. This is the reason why the price of outdoor and stationary bikes skyrocketed in the mid of last year. Biking helped people get a good cardio session and burn some serious calories. Besides, it also helps to lift the mood and reduce stress.

HIIT

4 For a good cardio session, most people opted for High-intensity interval training (HIIT). This workout routine has been around for quite some time, but during the lockdown, its popularity touched a new height. The primary reason being it gives the maximum result in minimum time. In just 10 minutes of workout, one can burn a considerable amount of calories by performing HIIT.

BODYWEIGHT WORKOUT

5 Bodyweight workout has always been famous among people. It can be anywhere and one does not need any kind of equipment for it. Besides, it is effective and the results are visible if you are consistent. This is what made this workout routine more popular during the pandemic.

WEAR CLOTHES THAT HEAL

This year, you can focus on your well-being by picking up clothes that heal you. Brands across the globe are coming up with concepts like sun-protective clothing, collagen-infused apparel and vitamin-infused collections. This trend of wellness clothing, a fad over the years in the West, is slowly getting a boost in India. A few brands have unveiled collections with 'no toxic irritants' and 'immunity boosters'... Here are a few 'wellness clothing'

Sun-protective clothing

This is rated on Ultraviolet Protection Factor (UPF); a higher SPF number means better protection. Tsippora Shainhouse, MD, a US dermatologist, was quoted as saying that "Sun-protection clothing carries a rating that indicates exactly how much UV can be blocked by the special fabric." Experts say these fabrics must be tight in structure and dark coloured.

WEARABLE COLLAGEN

In 2018, US sportswear brand Buki unveiled a collection made of fabric that has protein collagen in its fibres. The clothes are also said to provide protection from the sun.

Vitamin-infused clothing!

Some international brands have come up with the idea of 'wearable vitamin technology' textiles, which are made with fibre infused with pro-vitamin substances. One such brand is a Japanese company Fuji Spinning Co, which is working on a tee containing the equivalent of two lemons in its fibre, said a spokesperson.

Ayurvedic apparel

Many are following Ayurveda to take a lead in wellness clothing. A Kerala brand - Niraamaya's handwoven 'ayurveda' are free and equipped with healing properties of neem, tulsi, turmeric, red sandal. The use of herbs imparts their goodness.

GLORIOUS DRAW

Batting out 258 balls with a fierce home team throwing everything it had up its sleeve is no mean feat. But the Indian duo of Hanuma Vihari and R Ashwin stood their ground and managed to do just that as they eked out a draw in what was nothing short of an action-packed fifth day in the third Test between India and Australia at the Sydney Cricket Ground

BRAVEHEARTS VIHARI, ASHWIN

■ Batting out 131 overs, the most India have batted in the fourth innings of a Test since 1980, showed exactly what Ashwin meant when he spoke about playing like true warriors at the end of the fourth day's play at the SCG.

■ A hamstring injury notwithstanding, Vihari hit an unbeaten 161-ball 23 while Ashwin hit 39 off 128 balls as the two defended away any hopes Australia had of registering a win. With an injured Ravindra Jadeja waiting in the pavilion, it was important for the two to ensure they saw India to the end and that is just what they did as the players shook hands with an over left.

■ But it all started in the morning when the team management

decided to send in Rishabh Pant at the fall of stand-in skipper Ajinkya Rahane's wicket. With the game clearly in Australia's court, Pant decided to show why the team has backed him despite his inconsistent run.

■ A fearless brand of cricket from him suddenly saw India walking into the lunch break with the score on 206/3. With 201 needed and Pant on a roll, it suddenly looked like India was playing to go 2-1 up in the series. Credit must also be given to Cheteshwar Pujara as he kept the board ticking and didn't get into a shell.

■ But Nathan Lyon sending Pant back on 97 suddenly saw the Indian fans fear another collapse. But the out-of-form Vihari wasn't letting anybody

down this time round.

■ He first combined for a short partnership with Pujara and then after the latter's dismissal for 77, combined with Ashwin to see India home. The scoresheet might call this a draw, but both teams know that India will walk away with their heads held high. Not just that, they will walk onto The Gabba high on confidence after this inspiring effort.

■ There was banter, there was humour and there were a few ugly gestures in-between, but it was all in the spirit and nothing that crossed the line in what was an adrenaline-filled final session of the third Test. While the Australian skipper Tim Paine tried to get into the skin of Ashwin, the Indian spinner was no less.

THIS RESULT IS TOUGH TO SWALLOW: PAINE

Australia skipper Tim Paine on Monday said that the result was a tough one to swallow and not holding onto catches costed the side. "I thought we created enough chances to win the game, this one's a tough one to swallow. Our bowlers were superb, (Nathan) Lyon bowled well. Just that we didn't hold onto our catches. Looking forward to Brisbane. We didn't play our best in the last two games, but we were somewhat good with the bat in this Test. There were a few positives for us, our bowlers created plenty of chances," said Paine during the post-match presentation. "Today was a whole-hearted effort from the boys, just that things didn't go our way," he added. Paine did not have a good day behind the stumps as he ended up dropping three catches (two of Rishabh Pant and one of Hanuma Vihari). **ANI**



Photo: AP

PLAN WAS TO FIGHT TILL THE END WITHOUT THINKING ABOUT THE RESULT: RAHANE

The talk going into day five was to fight till the end without thinking about the result, said India skipper Ajinkya Rahane. "Our talk coming this morning was to show character and fight till the end. Not to think about the result. Really happy with the way we fought especially today, but also throughout the game," Rahane said at the post-match presentation. "Even in the first innings when Australia were 200 for 2 and getting them all out for 338 was really good," he added. Pant came ahead of Hanuma Vihari at number five, a move that was made keeping the left-right combination in mind, said Rahane. "There are few areas we can improve (ahead of fourth Test) on but special mention to Vihari and Ashwin. The way they batted in the end and showed character was really good to see. Credit to him (Pant) for the way he played," said the skipper. **ANI**



Photo: AFP

VIHARI'S KNOCK WAS EQUAL TO SCORING A HUNDRED: ASHWIN

Chasing 400 in Sydney was never going to be easy, as the ball was going up and down. That knock by Pant set us up. After Pujara and Pant's wicket and with Vihari injured, it was going to be difficult to go for the win. Touring Australia is never easy so Vihari can be proud of himself. It was a knock equal to scoring a hundred. I was just telling the batting coach during the lunch break that I have never left the SCG without a fifty, this is a venue where I have done well with the bat and today's innings is right up there.

The game will be definitely be remembered for a great show of character by an Indian team which has missed the services of regular skipper Virat Kohli and a bunch of seniors like Mohammad Shami, Ishant Sharma and Umesh Yadav in what is one of the toughest places to tour

Australia's seamers attacked Ashwin relentlessly with short-pitched deliveries aimed at the body

NEVER BACKING DOWN FROM A CHALLENGE

Hats of to both @Hanumavihari and @ashwinravi99. To draw the test! A lot has to be said about vihari for his grit and determination even after being injured! This knock is as good as any hundred in test cricket! Ashwin always had the talent to be a main allrounder! #AUSvsIND K Srikanth, former India batsman

Tried all tricks including Steve Smith trying to remove Pant's batting

guard marks from the crease. Par kuch kaam na aaya. Khaaya peeya kuch nahi, glass toda barana. But I am so proud of the effort of the Indian team today. Seena chonda ho gaya yaar.

Virender Sehwal, former India batsman

Really proud of #TeamIndia! Special mention to @RishabhPant17, @cheteshwar1, @ashwinravi99 and

@Hanumavihari for the roles they've played brilliantly. Any guesses in which dressing room the morale will be high?

Sachin Tendulkar, former India captain

Loved the fight and determination of India all day today. Starting with Pant and Pujara, and then for Vihari and Ashwin to withstand Australia and look largely in control for most

of the day was very impressive. Can't wait for Brisbane now. #AUSvsIND

Ricky Ponting, former Australia captain

Never giving up. Never backing down from a challenge. Great character and resilience displayed by the team. Mayank Agarwal, India batsman



Photo: GETTY IMAGES

QUIZ TIME!

Q1: In which year did Andy Murray last win a Grand Slam title?

- a) 2010 ☐ b) 2012 ☐ c) 2014 ☐ d) 2016 ☐

Q2: Who is the first person to have won Olympic volleyball gold medals as a player and a coach?

- a) Lang Ping ☐ b) Zhang Changning ☐ c) Hui Ruoyi ☐ d) Ding Xia ☐

Q3: Which country holds the record of most consecutive wins in T20Is?

- a) India ☐ b) England ☐ c) Afghanistan ☐ d) Pakistan ☐

Q4: Who has been the longest-serving International Olympic Committee president?

- a) Thomas Bach ☐ b) Avery Brundage ☐ c) Demetrius Vikelas ☐ d) Baron Pierre de Coubertin ☐

Q5: The Wimbledon women's singles event was first introduced in 1884. Which players won the title?

- a) Lottie Dod ☐ b) Maud Watson ☐ c) Blanche Bingley ☐ d) Ellen Hansell ☐

Q6: Which footballer was the top scorer of 2020-21 German Bundesliga?

- a) Lars Stindl ☐ b) Robert Lewandowski ☐ c) Erling Haaland ☐ d) Wout Weghorst ☐

Q7: In which tournament did Serena Williams win her first Grand Slam title?

- a) US Open ☐ b) Wimbledon ☐ c) Australian Open ☐ d) French Open ☐



Photo: GETTY IMAGES

Q8: In the year 1877, which tennis player won the first Wimbledon Championship?

- a) William Renshaw ☐ b) John Hartley ☐ c) Spencer Gore ☐ d) Frank Hadow ☐

Q9: Which woman cricketer has made the most runs on debut in a ODI match?

- a) Reshma Gandhi ☐ b) Mithali Raj ☐ c) Nicole Bolton ☐ d) Lynne Thomas ☐

Q10: Which cricketer made the most runs in his debut T20I match?

- a) Ravinderpal Singh ☐ b) Leslie Dunbar ☐ c) Ricky Ponting ☐ d) JP Kotze ☐

Q11: Other than Virat Kohli, which Indian batsman has made most career fifties in T20 Internationals?

- a) Rohit Sharma ☐ b) KL Rahul ☐ c) Shikhar Dhawan ☐ d) Yuvraj Singh ☐

Q12: Which cricketer holds the record for longest Test career?

- a) Sachin Tendulkar ☐ b) Wilfred Rhodes ☐ c) Brian Close ☐ d) Frank Woolley ☐

Q13: Which of the following players won the 2020 Women's Australian Open?

- a) Simona Halep ☐ b) Iga Swiatek ☐ c) Sofia Kenin ☐ d) Naomi Osaka ☐

ANSWERS: 1 d) 2016 2 a) Lang Ping 3 c) Afghanistan 4 d) Baron Pierre de Coubertin 5 b) Maud Watson 6 b) Robert Lewandowski 7 a) US Open 8 c) Spencer Gore 9 d) Lynne Thomas 10 b) Leslie Dunbar 11 a) Rohit Sharma 12 b) Wilfred Rhodes 13 c) Sofia Kenin