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IN SCHOOL **《**

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Why are landslides increasing in India?

Climate change, construction, rainfall patterns are all driving the surge, says a GSI scientist

The increasing frequency and intensity of landslides across India is no longer just a consequence of natural topography, but a combination of changing rainfall patterns, climate change, deforestation, and constructions in ecologically sensitive areas, a senior official of the Geological Survey of India (GSI) said.

Noting that though pollution is not a direct trigger for landslides, he said that air pollution and greenhouse gas emissions are, however, key

contributors to climate change, altering rainfall patterns across many parts of the world, including India, significantly increasing the risk of landslides in geologically sensitive areas such as Uttarakhand and Himachal Pradesh.

'The combined factors, namely, the geological makeup, climatic conditions, and increasing anthropogenic pressure together make our hilly regions particularly vulnerable to landslides," GSI Director General Asit Saha said in an interview at

the scientific agency's headquarters here in Kolkata.

Vulnerable areas

"While India has long been vulnerable to landslides, particularly in the Himalayas and Western Ghats, what we are witnessing in recent times is an increasing frequency and intensity of landslides, driven by both natural and anthropogenic factors, often acting in combination. Similarly, the formation and subsequent breach of glacial lakes, often formed due

Kalimpong: National Highway 10 blocked by a boulders after a landslide in West Bengal. PHOTOS: PTI



to landslides damming river valleys in the upper reaches of the Himalayas, have emerged as serious hazards causing downstream flooding and slope instability.

"Overall, we can say that the rise in landslide events in India is a result of both changing climate patterns and escalating human interventions, often acting together to destabilise slopes," he said. Elaborating on the possible reasons behind the rise in the incidents of landslides in the hills and mountains of India, the geoscientist cited several causes. 'These areas naturally have steep slopes, inherently more susceptible to gravitational movement of rock, debris, or soil. Even minor disturbances, whether natural or human-induced, can destabilise such slopes.

Active zones

"Secondly, many of these regions are tectonically active zones. The geological formations here are often young, fractured, and highly weathered, making them structurally weaker and more prone to failure during intense rainfall or seismic activity," Saha said. Besides, pointing to

monsoonal rain playing a big role behind the increase in the rise of landslide incidents, he also held constructions on unstable slopes, disrupting natural drainage systems, leading to destabilising the terrain.

'The prolonged or heavy rainfall typical of the Indian monsoon increases the moisture content in soil and rock, leading to higher pore pressure and reduced cohesion, both of which contribute significantly to landslides. And then there is the role of human activity: developmental activity, deforestation, road construction, and expansion of existing infrastructure, especially on unstable or un-engineered slopes, which many a time disrupt natural drainage systems and further destabilise the terrain," the geologist said. Further, he pointed to "deforestation and land degradation" as long-standing concerns behind incidents of landslides. "Our investigations and landslide susceptibility mapping studies have consistently shown that removal of vegetation cover significantly reduces slope stability," he said.

COUNTRY HOPPING



Scientists have also identified areas in peninsular India, like the Western Ghats, particularly in Kerala, Karnataka, and Maharashtra, as well as the Nilgiris in Tamil Nadu and the Konkan coast, as high-risk areas. Together, these landslide-prone regions span approximately 0.43 million sq km and including permafrost zones, the total landslide-prone area expands to 0.49 million sq km. FILE PHOTO: AFP

HERE A LANDSLIDE, THERE A LANDSLIDE!

Till August this year, India has experienced multiple deadly landslides, particularly in the Himalayan states, during the ongoing monsoon season.

Major incidents have occurred in Jammu and Kashmir, Uttarakhand, and Himachal Pradesh, often triggered by heavy rain, cloudbursts, and flash floods.

This month itself, India witnessed a landslide near the Vaishno Devi shrine, killing at least 30 people.

In the earlier weeks of August, cloudbursts and

heavy rain in the Ramban and Reasi districts led to flash floods and landslides, resulting in deaths and blocking the Jammu-Srinagar national highway.

In Uttarakhand, a cloudburst caused a major mudslide, destroying parts of Dharali in Uttarkashi district, leaving at least four people dead and dozens missing.

In late June, Himachal Pradesh recorded

numerous landslides, cloudbursts, and flash floods in the districts of Mandi, Kullu, and Chamba.

India set for wetter September; IMD warns of flash floods, landslides

India is likely to receive above-normal rainfall in September, capping a season that has already seen several disasters triggered by heavy downpours in many parts of the country. The India Meteorological Department (IMD) said that the monthly average rainfall in the month of September is expected to be more than 109% of the long-period average of 167.9 mm.

The forecast suggests most regions will get normal to above-normal rainfall, while some parts of the northeast and east, many areas of extreme south peninsular India and pockets of northwest India are likely to record below-normal rain. Addressing an online press conference, IMD Director General Mrutyunjay Mohapatra warned that

heavy rainfall in September may trigger landslides and flash floods in Uttarakhand and could disrupt normal life in south Haryana, Delhi and north Rajasthan.

"Many rivers originate in Uttarakhand. So, heavy rainfall means many rivers will be flooded, and it will impact cities and towns downstream. So, we should keep this in mind," he said. He added that heavy rainfall is also expected in the upper catchment areas of the Mahanadi River in Chhattisgarh. Mohapatra said there is a slight increasing trend in September rainfall since 1980, barring less rainfall in the month in 1986, 1991, 2001, 2004, 2010, 2015 and 2019.

✓ Name the first-ever

Indian judiciary.

Tokyo.

country?

country?

are fused?

female judge in the

An AI simulation of a

being used to prepare

🔰 discovered that a

dinosaur with spikes once

inhabited which African

🖊 Egusi soup is a dish

from which African

T Which are the only

Dirds in which the first

and second neck vertebrae

Scientists have

eruption is

Vietnam's French

Connection

As Vietnam celebrates the 80th anniversary of its declaration of independence from colonial rule this week, French cultural influence remains ubiquitous in the country, but not many of us are aware of its prevalence. Here's a look...



INDEPENDENCE A massive military parade will herald today the independence proclaimed by revolutionary leader Ho Chi Minh. Ba Dinh Square in Hanoi, where the legendary leader affectionately known as Uncle Ho, made his historical declaration, is flanked by two of the capital's best preserved French colonial buildings - now home to the presidential palace and the foreign ministry. Vietnam's relations with France have moved from colonial to congenial. When President Emmanuel Macron visited Hanoi, the two countries signed deals worth \$10 billion. (Above) St. Joseph Cathedral in Hanor. (Right) The opera house built by the French.

FOOD Nowhere is the French legacy more visible than in Vietnamese gastronomy. Cafes line virtually every street in the country, croissants are on display in myriad patisseries.





ABOUT THE COUNTRY Vietnam is a country at the eastern edge of Mainland Southeast Asia and one of the two Communist states in Southeast Asia. Its capital is Hanoi, while its largest city is Ho Chi Minh City.

For nearly 90 years, Vietnam was under French rule as part of French Indochina. Finally, in the First Indochina War, Vietnam defeated the French forces in 1954. Seen in the photo is a woman waving the Vietnam national flag. PHOTOS: REUTERS



The Hanoi Opera House



LOVE FOR BREAD Baquette-shaped bread is used for the most common local fast food option, known as banh mi, a savoury sandwich with unlimited fillings to please all tastes, including vegetarian.

Answers on page 3

Have you been

following the

news headlines?



20-MINUTE ACTIVITY FOR CHILDREN - 1329



GK Corner (3 mins)



This valley, located in the Dhofar region of a Middle Eastern country, is one of the rare places where the Boswellia tree grows — the source of frankincense, a resin once more valuable than gold. The resin is harvested by making small cuts in the tree's bark, allowing the sap to harden into aromatic crystals. The valley has been a UNESCO World Heritage Site since 2000 and is part of the historic Land of Frankincense. Can you name this country? PHOTO: AFP ุนภูพO :snA

WORD BUILDER

SOVEREIGN

How many words can you make with the letters in the word

Two-minute comprehension

Read the paragraphs below and answer the questions

Disney has unveiled the release date and title for 'Ice Age: Boiling Point,' the sixth instalment in the animated prehistoric franchise. The announcement was made during Saturday's Destination D23: A Journey Around the Worlds of Disney in Orlando. The film is set to hit theatres on February 5, 2027.

According to an official description, 'Boiling Point' is a "dinosaur-and-lava-filled madcap adventure that takes Manny, Sid, Diego, Ellie, Scrat and the rest of the herd to visit never-before-seen corners of the treacherous Lost World."

Disney and 20th Century Animation had earlier announced that the sixth 'Ice Age' film was in the works, and that series stars Ray Romano, John Leguizamo, Queen Latifah, Denis Leary, and Simon Pegg would return. The last 'Ice Age' film, 'Collision Course,' was released in 2016 and went on to gross 408.5 million USD at the worldwide box office. The first film bowed in 2002, spawning four mainline sequels, a spin-off film and a series of shorts on Disney+. The franchise as a whole has grossed \$3.2 billion since its inception.

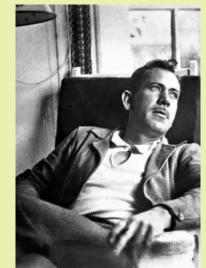
Also during the presentation, Chief Creative Officer Jared Bush unveiled the title and release date for Walt Disney Animation Studios' next original film, 'Hexed.' Josie Trinidad ('Zootopia+') and Jason Hand ('Moana 2') are set to direct the film, while Roy Conli and Juan Pablo Reyes Lancaster-Jones will serve as producers.

The official logline for 'Hexed' reads, "An awkward teenage boy and his Type-A mom discover that what makes him unusual might just be magical powers that will turn their lives and a secret world of magic upside down." Other projects teased at Destination D23 include Toy Story 5,' Tron: Ares, ' and Zootopia 2.'

- 1) What is the sixth movie in the Ice Age series called?
- 2) What was the official logline for the movie 'Hexed'?
- 3) Name some of the main characters of the Ice Age franchise.

LIT-WIT IN TWO MINUTES

Guess the novel



during the Great Depression, follows the life and experiences of two displaced migrant ranch workers, George Milton and Lennie Small, as they constantly move and travel across California, in search of jobs. This novel was written by Steinbeck based on his own experience from when he was a teenager working with migrant farm workers.

This novel, written by John Steinbeck and set

РНОТО: АР Answer: Of Mice and Men

Unscramble - in a minute

M	E	L	R	E	В	T

A verb, the word means to shake or vibrate involuntarily

Ans: Tremble

Word of the Day

- 2 minutes

Author John Steinbeck

PERCIPIENT

Pronounced as puh-si-pee-uhnt

Meaning:

Percipient is an adjective that is used to define one's quality of having good perception and insight.

Origin: The word percipient is derived from the mid-17th-Century Latin verb percipere, meaning 'to seize or understand'.

They made some percipient observations on the drama performance.

Activity: Use the word in a sentence or two of your own.

Character Crossover

Given below are two characters from different fictional worlds. How would a conversation between them go? Continue the conversation provided.



PHOTOS: WIKIMEDIA COMMONS, FLICKR

MINI QUIZ 2 mins...

Today's quiz is all about lotuses!

- 1) Which flower's seed can stay alive for over 1,000 years and still grow?
- 2) What is the natural self-cleaning property of lotus petals called?
- 3) In India, roasted lotus _____ are a favourite healthy snack.
- 4) In Buddhism, what does the lotus flower symbolise?
- 5) Which ancient civilisation linked the lotus to the sun and



enlightenment and spiritual awakening, 5) Egyptian civilisation Answers: 1) Lotus seed, 2) The Lotus Effect, 3) seeds (makhana), 4) Purity, 20

In how many minutes did you

complete today's activities?

Journal	Writing
---------	---------

5 minutes

Dear Diary,
If I had the power to fly, I'd

QUIZ CREATED BY VENILA SURESH



FACTS AND FRAMES

Interesting garments we have ever worn!

With a flair for fashion and crafty hands to make it all come true, our history showcases a myriad of clothing styles across different regions. While some are easily forgotten, others stay and embed themselves into contemporary culture. Let's go through some peculiar garments!

Toga seized the days of ancient Rome where it was high fashion at its best. This classical dress, worn exclusively by male Roman citizens, was a mark of their identity, social class, and citizenship. Yet, the earliest version of toga was worn both by men and women. Popular during the Republican and Imperial periods of classical Rome, toga came in several types like Toga Praetexta (the most famous!), Toga Candida, Toga Picta and more. Each style was worn according to the social class one belonged to. First glance at a toga tells you the art of drapery- heavy and flowing, fitting and loose, the long cloth is arranged around the body with severe skill. PHOTO: WIKIMEDIA COMMONS



VICTORIAN MASSIVE GOWNS

The Victorian Age was one of maximalist touch when it came to garments. Skirts and petticoats were the talk of the era-the larger and voluminous, the cooler. Stiffened petticoats gave rise to cage crinoline (resembles the cage of birds), an undeniable symbol of the era which was worn to support and create volume under skirts. Crinoline was lightweight and hence people experimented to make it bigger and bigger which, along with all the petticoats worn, made the gowns look massive. On top of these, the gowns retained structure by the use of corsets. Puffed sleeves, a dashing low neckline, and decorated with ruffles, lace, and pleats, these gowns were truly one of a kind. PHOTO: FLICKR



ANIMAL SKIN

One of the first types of dress we've ever worn, animal skin clothing dominated early human history. A method called "skinning" was followed to remove skin from the body of an animal and this skin (called hide for larger animals) was used to make clothes. Worn by early Homo sapiens and Neanderthals, this clothing served as protection against the biting cold of the Ice Age. One of the most famous, naturally preserved mummies ever, called "Ötzi the Iceman" is an exceptional example. His garments were all different types of animal skin. Even his shoe-laces were made with cow leather. PHOTO: WIKIMEDIA COMMONS



For South Asian countries, saree is poetry. Since the time of early civilisations to modern era, saree has been a garment that has never gone out of fashion. A rather long single woven fabric is draped around the body to form the garment. Across the ages and across different regions, saree has always reinvented itself and evolved into unique styles. The way a saree is draped also differs from time to time and from region to region. It comes in a variety of patterns, designs, and materials. PHOTO: PICRYL



Fostering a love for reading

and more. PHOTO: WIKIMEDIA COMMONS

China's legendary history with silks is well-known. During the Han

dynasty era, silk was used in a new style: upper and lower garment.

As the dress became in vogue, greater variety of styles emerged. The upper and lower garments were arranged such that the elegance of the silk is maintained within the style. Hanfu came in different

colours and each colour denoted different social ranks. In the Tang

dynasty, the colour yellow was worn only by the emperor. A hanfu

was only complete with necessary accessories like headwear, footwear

The Oxford Big Read is a global competition open till October 2025, inviting children to celebrate reading and showcase their creativity.

Famous author Neil Gaiman once said, "A book is a dream that you hold in your hands." This beautiful quote captures the magic of reading how each hook is a doorway into someone's imagination, a world crafted from thought and emotion. Reading for pleasure means discovering stories, ideas, and worlds that speak to you.

Regular reading also sharpens focus and concentration, helping students perform better not just in academics but in everyday tasks. And without even realizing it, they absorb new words, improve grammar, and become more confident communicators.

Begin your reading journey by picking topics or genres that excite you, whether it's comics, sports, mysteries, biographies, or poetry. Set aside just 15-20 minutes a day; even a short reading session before bed or during a quiet moment can make a big difference. Keep things fresh by exploring different formats like print books, newspapers, eBooks, and audiobooks.

To take your love for reading even further, participate in spelling bees, reading competitions, and dictionary quizzes. Oxford University Press organizes the Oxford Big Read, a global competition that invites children from Grades 1 to 9 to celebrate reading and showcase their creativity. The competition is open till October 2025, and students can send their entries via schools.

The Oxford Big Read is a global competition that offers participation tailored to different age groups: Level 1 (Classes 1-3), Level 2 (Classes 4-6) and Level 3 (Classes 7-9) with varying degrees of challenges from students



requiring designing a book jacket to writing a critical review or comparison of two books. As part of the initiative, participating schools receive complimentary access to the Oxford Reading Buddy platform, with 100 students per school granted a one-month digital subscription. The entries will be judged globally on originality, imagination, clarity, and expression. Additionally, national winners have the opportunity to compete against peers from over 15 countries.

Reading for pleasure is like planting a seed. With time, it grows into a tree full of knowledge, imagination, and wisdom. So go ahead—pick up a book and let the joy of reading take you places you've never been before.

Important Dates:

- 30th October 2025 Deadline to
- send entries from schools • 30th November 2025 - National

level winners announced

• 30th December 2025 – Global winners announcedSo far, 1200 schools have registered for this

To participate in Oxford Big Read, ask your school teacher to visit

https://india.oup.com/ oxfordbigread/ and register students for the competition. Participation is via schools, and no individual entries are permitted.

Participants will receive exciting prizes from OUP, along with additional gift hampers and vouchers from Faber-Castell and Amazon. Rewards will range from medals and certificates at the school level to gift hampers, tablets, iPads, and a special internship opportunity for the Level 3 global winner with the Oxford University Press team. Additionally, all school-level qualifiers will be entitled to a complimentary three-month digital subscription from Young World Club.

For queries, schools can write to Priyadarshini Bhattacharyya at priyadarshini.bhattacharya @oup.com

Disclaimer: The use of artificial intelligence or similar tools or technologies (collectively "AI") in the creation of an entry shall not be permitted. Oxford reserves the right to check each entry for plagiarism and/or use of AI and Oxford may disqualify any entry which it determines, in its sole discretion, not to be original.

LEARNING TREE

What is Malthusianism?

Malthusianism is a theory that describes how the human population grows at an exponential rate (1,2,4,8, etc.), whereas the food supply (and other resources) grows at a linear rate (1,2,3,4,5, etc.).



THE HINDU

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TODAY'S QUIZ: ANSWERS

- 1. Anna Chandy
- 2. Mount Fuji
- 3. Morocco 4. Nigeria
- 5.- Hornbills

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How is an animal feeling at a given moment? Humans have long recognised certain well-known behaviour like a cat hissing as a warning, but in many cases we've had little clue of what's going on inside an animal's head.

Now we have a better idea, thanks to a Milan-based researcher who has developed an AI model that he claims can detect whether their calls express positive or negative emotions.

New AI model on the scene

Stavros Ntalampiras's deep-learning model, which was published in Scientific Reports, can recognise emotional tones across seven species of hoofed animals, including pigs, goats and cows. The model picks up on shared features of their calls, such as pitch, frequency range and tonal quality.

The analysis showed that negative calls tended to be more mid to high frequency, while positive calls were spread more evenly across the spectrum. In pigs, high-pitched calls were especially informative, whereas in sheep and horses the mid-range carried more weight, a sign that animals share some common markers of emotion but also express them in ways that vary by species.

For scientists who have long tried to untangle animal signals, this discovery of emotional traits across species is the latest leap forward in a field that is being transformed by AI.

The implications are far-reaching. Farmers could receive earlier warnings of livestock stress, conservationists might monitor the emotional health of wild populations remotely, and zookeepers could respond more quickly to subtle welfare changes.

The ethics in thought

This potential for a new layer of insight into the animal world also raises ethical questions. If an algorithm can reliably detect when an animal is in distress, what responsibility do humans have to act? And how do we guard against over-generalisation, where we assume that all signs of arousal mean the same thing in every species? Of barks and buzzes Tools like the one devised by Ntalampiras are not being trained to "translate" animals in a human sense, but to detect behavioural and acoustic patterns too subtle for us to perceive unaided.

Similar work is underway with whales, where New York-based research organisation Project Ceti (the Cetacean Translation Initiative) is analysing patterned click sequences called codas.

Long believed to encode social meaning, these are now being mapped at scale using machine learning, revealing patterns that may correspond to each whale's identity, affiliation or emotional state.

In dogs, researchers are linking facial expressions, vocalisations and tail-wagging patterns with emotional states. One study ed that subtle shifts in ca muscles correspond to fear or excitement. Another found that tail-wag direction varies depending on whether a dog encounters a familiar friend or a potential threat.

At Dublin City University's Insight Centre for Data Analytics, we are developing a detection collar worn by assistance dogs which are trained to recognise the onset of a seizure in people who suffer from epilepsy. The collar uses sensors to pick up on a dog's trained behaviours, such as spinning, which raise the alarm that their owner is about to

AI and animal communication

The project, funded by Research Ireland, strives to demonstrate how AI can leverage animal communication to improve safety, support timely intervention, and enhance quality of life. In future we aim to train the model to recognise instinctive dog behaviours such as pawing, nudging or

Honeybees, too, are under Al's lens. Their intricate waggle dances – figure-of-eight movements that indicate food sources – are being decoded in real time with computer vision. These models highlight how small positional shifts influence how well other bees interpret the message.

Caveats

These systems promise real gains in animal welfare and safety. A collar that senses the first signs of stress in a working dog could spare it from exhaustion. A dairy herd monitored by vision-based AI might get treatment for illness hours or days sooner than a farmer would notice.

Detecting a cry of distress is not the same as understanding what it means, however. AI can show that two whale codas often occur together, or that a pig's squeal shares features with a goat's bleat. The Milan study goes further by classifying such calls as broadly positive or negative, but even this remains using pattern recognition to try to decode emotions.

Emotional classifiers risk flattening rich behaviours into crude binaries of happy/sad or calm/stressed, such as logging a dog's tail wag as "consent" when it can sometimes signal stress. As Ntalampiras notes in his study, pattern recognition is not the same as understanding.

One solution is for researchers to develop models that integrate vocal data with visual cues, such as posture or facial expression, and even physiological signals such as heart rate, to build more reliable indicators of how animals are feeling.

AI models are also going to be most reliable when interpreted in context, alongside the knowledge of someone experienced with the species.

Ecological Price

It's also worth bearing in mind that the ecological price of listening is high. Using AI adds carbon costs that, in fragile ecosystems, undercut the very conservation goals they claim to serve. It's therefore important that any technologies genuinely serve animal welfare, rather than simply satisfying human curiosity.

Whether we welcome it or not, AI is here. Machines are now decoding signals that evolution honed long before us, and will

The real test, though, is not how well we listen, but what we're prepared to do with what we hear. If we burn energy decoding animal signals but only use the information to exploit them, or manage them more tightly, it's not science that falls short – it's us. (Author Shelley Brady is with Dublin City University) THE CONVERSATION

STORYBOARD Have you read today's The Hindu In School?

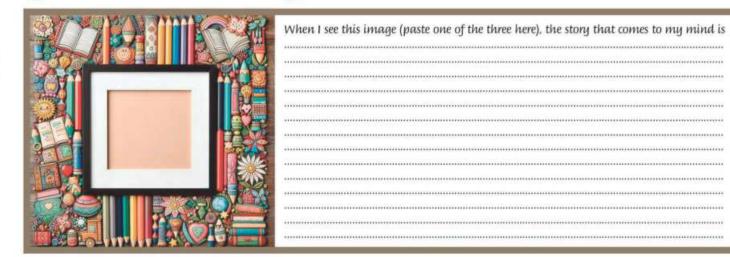
Using the newspaper as a tool, enhance your learning process.

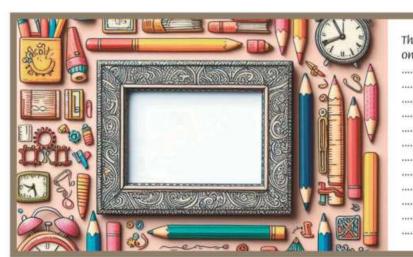
They say a picture is worth a thousand words as complex and even multiple ideas can sometimes be conveyed using just one image. Using that as an inspiration, pick three images from this newspaper and complete these activities.

Please don't be curtailed by the context in which these images appear here and feel free to create stories on your own. Let your imagination run riot!

Once you have completed this activity sheet, cut it out and stick it in a book that you maintain exclusively for this purpose. This way, you can have a record of all the creative stories that you have written using newspaper images as your prompts.

PHOTOS: DALL-E 3 BASED ON A.S.GANESH'S PROMPTS





This is how I will connect both these images (stick two images on either side) in



PHOTO: UNSPLASH IMAGES

QWIKIPEDIA:

A DAILY SEARCH-AND-LEARN ACTIVITY

Ever been on Wikipedia to search for something? More often than not we start with one topic, click a few links and within no time, are eagerly reading something else. Qwikipedia is a game that tries to quench our curiosity to learn something new. Start with one search from a specific article in this newspaper, and get started on a journey of learning with multiple clicks. Surprise yourself by finding new routes each time!

THE TUESDAY'S TRAVELLER: AMAZON RAINFOREST \rightarrow FLORENCE NIGHTINGALE

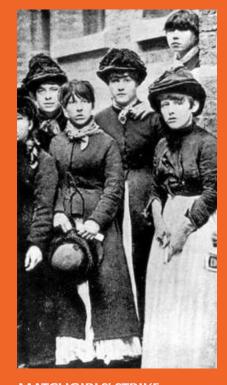
AMAZON RAINFOREST

The Amazon rainforest is considered to be the worlds' largest rainforest, spanning an area over 5,500,000 square kilometres. It is a tropical rainforest which covers the majority of the Amazon basin in South America. The rainforest is home to over 400 different indigenous groups. The name 'Amazon' is said to have been coined by Spanish explorer Francisco de Orellana who fought alongside the Tapuyas people and other tribes in this forest. He discovered that the women of this tribe fought alongside the men, as it was expected in their custom. He named the forest after the Amazons from Greek mythology, who were powerful and skilled female warriors. It is also said to contain over 16,000 species of trees. The dust from the Bodele depression that fertilizes the greenery of the forest contains **phosphorus**.



PHOSPHOROUS

Phosphorous is a chemical element with the atomic number 15. Since its elemental forms are highly reactive, phosphorous can't be found in nature, but can be prepared artificially. Some believe that it was accidentally isolated by Arabian alchemists in the 12th Century. But records show that it was discovered by Hennig Brand, a German alchemist and merchant in 1669, and he called it 'cold fire' since it glowed in the dark. It holds various allotropes which display different properties. The two most common of these allotropes (different physical forms in which an element can exist) are white and red phosphorus. It is used in the making of matchsticks. White phosphorous was used in early productions of matchsticks. But it was incredibly toxic in nature and caused risks for workers. These risks caused many worker strikes in history, like the 1888 Matchgirls' strike.



MATCHGIRLS' STRIKE

The Matchgirls' strike was an industrial movement which occurred in the Bryant & May match factory in London during the year 1888. The strike first began when a worker was dismissed after the employees refused the demand of the management to deny the content of an article which described the terrible working conditions of the factory. As it continued, the women went on to demand fair pay and improvement of working conditions. With the aid of socialist Annie Besant, the strike was a success. In literature, it was mentioned in the childrens' book Florence and the Mischievous Kitten with a matchgirl named Beth protesting in the strike and meeting Florence Nightingale.



Florence Nightingale was a statistician and activist who founded modern nursing. Her work and contributions became renown when she sewed as a trainer for nurses in the Crimean War. She saw to improving sanitation, living conditions, and the hygiene of the patients. This led to high recovery rates and improved the reputation of the nursing profession. She also worked to establish formalised nursing education and created the first scientifically based nursing school, which was named the Nightingale School of Nursing.



So, the path we have travelled today is Amazon rainforest → Phosphorus → Matchgirls' strike → Florence Nightingale Three clicks! Hop over! It's time for the next question.

Wednesday's Wanderer Ceviche → HMS Rosario

Send in your paths for the above to school@thehindu.co.in with the subject:

Qwikipedia

Sivanand Sujith of class 6, Sree Narayana Guru Central School, Ezhukone, Kollam, Kerala, came up with an alternate path for yesterday's Monday's Marauder.

The path he traversed is Hornbill \rightarrow Hoopoes \rightarrow Europe \rightarrow London \rightarrow River Thames \rightarrow Southwark.

Well done!



PHOTOS: AFP, WIKIMEDIA COMMONS

IN SCHOOL INBOX

Showcase your creativity

A couple of artivity entries sent in by students.

ARTIVITY

Read the newspaper and create an original artwork based on a news item that interests you and send your entry in JPEG format (not as PDF) to school@thehindu.co.in with the subject - Artivity. ONLY artworks based on current news or issues relating to Science, Space, Environment, Wildlife and Sports will be considered for publication. Please AVOID mailing other works. Mention your name, class, school and city in the same mail (not in separate mails).



Name: Parin V Class: VII School: Lawrence High School, HSR, Bengaluru, Karnataka

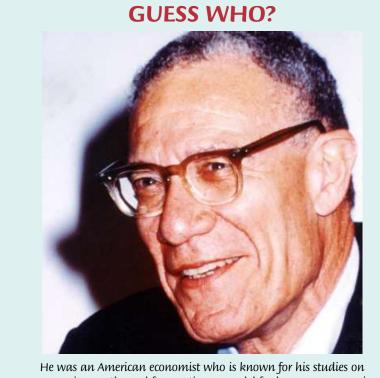


Name: Harsitha Ravishankar Class: V School: PSBB KK Nagar, Chennai, Tamil Nadu

WATER LILY SEASON



A farmer collects water lilies from Tomnup Tadeng lake to sell at a market, in Kampong Speu province, southwest of Phnom Penh, Cambodia. Water lilies are an integral part of Cambodian art, cuisine, and spirituality. The stalks are used in soups, and are even eaten raw as accompaniment with various dishes like *Khmer* noodles and *teuk kreung*, a Cambodian fish and vegetable dip. They are also used in religious offering to the Buddha, as well as for decoration. PHOTO: AP



He was an American economist who is known for his studies on economic growth, and for creating a model for long-run economic growth with fellow economist, Trevor Swan. He received the 1987 Nobel Memorial Prize in Economic Sciences for his research. He has also been an Institute Professor Emeritus of Economics at the Massachusetts Institute of Technology (MIT). He received the Presidential Medal of Freedom in 2014.

Answer: Robert Solow

SUDOKU

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DIFFICULTY RATING: ★☆☆☆☆

A mind game and a puzzle that you solve with reasoning and logic. Fill in the grid with digits in such a manner that every row, every column and every 3x3 box accommodates the digits 1 to 9, without repeating any. The solution to today's puzzle is at right.

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Djokovic strolls into US Open quarter-finals as Sabalenka cruises

Meanwhile, Alcaraz beats Rinderknech 7-6 (7/3), 6-3, 6-4 to join these two tennis icons in the quarters

NEW YORK, U.S.: Carlos Alcaraz and Novak Djokovic motored into the quarter-finals of the US Open on Sunday as reigning women's champion Aryna Sabalenka kept her title defence firmly on track.

Spanish second seed Alcaraz and tennis icon Djokovic — who are on course to meet in the semi-finals — both recorded straight-sets wins on the Arthur Ashe Stadium main court.

Five-time Grand Slam champion Alcaraz overpowered France's Arthur Rinderknech 7-6 (7/3), 6-3, 6-4 and has not dropped a set to date at the championships.

"I think my style of tennis suits pretty well the energy here in New York," the 22-year-old said.

"The energy is special playing the day session, playing the night session. It doesn't matter, people are always there. I love it and I think that's why I play my best tennis here," he added.

Alcaraz will face Czech 20th seed Jiri Lehecka in the quarter-finals on Tuesday. Lehecka reached the last eight of a Grand Slam for only the second time after battling past veteran Frenchman Adrian

Mannarino, winning 7-6 (7/4), 6-4, 2-f6, 6-2. Djokovic, 38,

continued his latest bid for a record 25th Grand Slam singles title with a brisk (active) 6-3, 6-3, 6-2 defeat of unseeded German Jan-Lennard Struff.

"It definitely helps if you serve well. I think I had a great serving performance last round and also tonight," said Djokovic. 'That helps make it easier on the

Djokovic faces a quarter-final on Tuesday against fourth seed Taylor Fritz, the lone American man left in the draw.

Fritz sprinted into the last eight with a 6-4, 6-3, 6-3 defeat of the Czech Republic's Tomas Machac in

> Fritz is carrying hopes of being the first US men's Grand Slam champion since Andy Roddick in 2003 following the exits of fellow seeds Ben Shelton, Tommy Paul and Frances

But Fritz will head into his quarter-final against Djokovic with history stacked against him. Djokovic has won all 10 of their past meetings, including a 2023 quarter-final win at the US Open.

"I think the first, almost like seven or eight times I played him, I probably just

Aryna Sabalenka celebrates her win. PHOTO: REUTERS

wasn't a good enough player to really have that much of a chance," said Fritz.

"I think only the last couple times we've played I think I've been this just better player that can, you know, I'd say compete and have chances."

Sabalenka's balance

In the women's draw, Sabalenka never looked troubled in a 6-1, 6-4 defeat of Moldova-born Spaniard Cristina Bucsa, ranked 95th in the world. Sabalenka has now reached the quarter-finals or better at 12 straight Grand Slam tournaments, a consistency she attributes to striking a balance in her life on and off the court.

"I'm super proud, I think that's an incredible achievement." Sabalenka said."I think for me the key was balancing on and off-the-court life. I think I've done a great job on balancing really hard work and also great recovery and some fun time outside of tennis court. I think that's been the key."

Sabalenka faces a quarter-final against the Czech Republic's Marketa Vondrousova, the 2023 Wimbledon champion, who upset ninth seed Elena Rybakina 6-4, 5-7, 6-2 in the late game on Arthur

In other women's draw action on Sunday, another Czech, unseeded former French Open and Wimbledon champion Barbora Krejcikova, conjured (produced) a remarkable escape to oust Taylor Townsend, saving an incredible eight match points before digging out a 1-6, 7-6 (15/13), 6-3 victory.

Krejcikova fought off a match point on her own serve at 5-4 down in the second set, and then somehow survived seven match points in an enthralling (captivating) tie-breaker to move

"What a match," said Krejcikova, who revealed she had wondered if she would ever play tennis again after missing the opening months of the season with a back injury.

"I was sidelined for six months and didn't know if I would ever play again. I'm super happy I can he here." AFP

Three talking points from the Premier League

Here's what we have learnt from the Premier League games over the weekend



Liverpool's Dominik Szoboszlai (left) and Mohamed Salah celebrate after the match. PHOTO: REUTERS

LIVERPOOL, U.K.: Liverpool boast the only perfect Premier League record three games into the new season after Dominik Szoboszlai's brilliant free-kick defeated title rivals Arsenal 1-0 at Anfield.

Manchester City's title challenge is already crumbling after a second defeat in three games for Pep Guardiola's men at Brighton, while Tottenham's fine start under Thomas Frank came off the rails in a 1-0 defeat to Bournemouth.

Manchester United secured their first win of the season against Burnley on Saturday, but needed a dramatic 97th minute Bruno Fernandes penalty to ease the scruting on Ruben Amorim heading into a two-week international break.

Liverpool show Arsenal reward of taking risks

Szoboszlai said he took a "risk" with the power he put behind his free-kick to become the first player to score against Arsenal this season.

That desire to go for the winner rather than fear losing was symptomatic of the difference between the two sides.

"At the end of the game, I said we have to find a way to win these big matches," said Arteta.

Man City making 'kids mistakes' Guardiola has spent over £300 million

(\$270 million) on new signings since January, but Sunday's shock 2-1 defeat at Brighton showed the Manchester City manager's expensive revamp of his spluttering side is yet to pay dividends.

Faced with the evidence of a team in decline during the first half of last season, Guardiola responded by splashing out £180 million on Omar Marmoush, Abdukodir Khusanov, Vitor Reis and Nico Gonzalez in the winter window.

There was little improvement as City limped to a third place finish and lost the FA Cup final against Crystal Palace.

"We are Manchester City and we come here to win, but this is the reality. We are not at the level for a long, long time," said midfielder Rodri. "Some of the mistakes we are making are kids' mistakes; you are not concentrating and paying attention. The reality is that we have to raise the level if we want to compete.'

Amorim safe for now

Amorim himself had cast doubt on his future in an emotional tirade after United lost to League Two opposition for the first time in the club's history.

Bruno Fernandes missed from the spot in last weekend's 1-1 draw at Fulham. But the United captain took responsibility again to bury the spot-kick and secure his side's first win of the season. AFP

+ First slip for champions Barca in Rayo draw

Even champions have off days, and this is one such



Barcelona's goalkeeper Joan García (right). PHOTO: AP

MADRID, SPAIN: Champions Barcelona dropped their first points of the La Liga season with a 1-1 draw at Rayo Vallecano on Sunday.

The Catalan giants had goalkeeper Joan Garcia to thank for earning them that as he made several fine saves on a testing night

in the Spanish capital. Barca took the lead through a contested Lamine Yamal penalty, at a time in the match VAR was not working, but Fran Perez levelled after the break for the hosts, who could have gone on to win.

After leaders Real Madrid won

their third game on Saturday and Athletic Bilbao followed suit earlier on Sunday, Barcelona are fourth and trail the leaders by two points.

"We didn't deserve more — in the end we had a fantastic goalkeeper," said Barca coach Hansi Flick. "We made too many mistakes, too many errors and this is why they come hack and this was not a good match for us." Barca's teenage star Yamal said his team had to come back strongly in a fortnight when La Liga resumes. "We have to learn from this after the international break, and come back with the intensity that we had last year, and start to win every time we can," Yamal stated.

Garcia, who arrived from neighbours Espanyol this summer, made a superb save to thwart Andrei Ratiu early on.

Barca took the lead in the 40th minute from the spot as 18-year-old Yamal sent Augusto Batalla the wrong way, although Rayo were unhappy with how the Spain international won the penalty.

Barca stopper Garcia, having a superb night, denied Isi Palazon early in the second half before Rayo levelled. Ratiu turned home after Rauo kept the chance alive but it was disallowed for offside.

"We totally (could have won), we controlled the game," said Palazon.

Lyon leaves it late to beat 10-man Marseille 1-0 in the French league

Marseille's own error earned Lyon a clear 1-0 victory

LYON, FRANCE: Lyon finally prevailed in a 1-0 win over 10-man Marseille thanks to a late own-goal from Leonardo Balerdi in the French league on Sunday.

Lyon substitute Nicolas Tagliafico struck the crossbar (the horizontal bar between the two upright posts of the goal) and teammate Pavel Šulc's pressure forced the despairing Balerdi on the line to bundle the ball into his own net in the 88th minute.

Lyon had two goals ruled out in the first half, and Marseille had defender CJ Egan-Riley sent off in the 29th for taking down Malick Fofana when he was through on goal.

The visitors improved after the break despite their numerical disadvantage. Hamed Junior Traoré and Pierre-Emile Höjbjerg both missed good chances for Marseille.

It's Marseille's second loss from



Pavel Sulc (right). PHOTO: AFP

three league games so far this

Lyon was without star player Georges Mikautadze, who has been linked with a move away to alleviate the financial situation at

The seven-time French champion was in June demoted to the second tier because of financial irregularities and debts estimated at 175 million euros (\$203 million), but it secured its top-division status on appeal.

Celebrations in the capital

Paris FC celebrated its first win since clinching promotion as it defeated visiting Metz 3-2 in a game watched by Red Bull head of global soccer Jürgen Klopp. The energy drinks manufacturer is a minority stakeholder in the team backed by France's richest family, the Arnaults of luxury empire LVMH.

Paris' Ilan Kebbal scored twice for the hosts - the first was a penalty – before Boubacar Traoré drew the visitors level at 2-2. Moses Simon scored what proved to be the winner in the 67th and Metz ended the game with 10 men as Sadibou Sané, who got the opening goal, was sent off in the 80th.

The win gave Paris its first points after opening losses to Angers and Marseille. AP

ARE YOU A SPORTS WIZ?

Test your knowedge with this weekly guiz!

1. Who clinched the Sinquefield Cup this year? 2. India beat

China in the men's hockey Asia Cup opener. What was the score line?

3. In football, a match between two local rivals is called a

4. In tennis, when the ball hits the edge of the racket instead of the strings, it is called to

5. What medal did Satwik-Chirag win at the Badminton World Championships?



Satwiksairaj Rankireddy, left, and Chirag Shetty. PHOTO: AP

5. Bronze 4. รหณทห 3. Derby 2. 4-3 1. Wesley so

:NSWENS

Inter suffer shock 2-1 defeat against Udinese at San Siro

Inter Milan was off to a good start, and then came Udinese



MILAN, ITALY: Inter Milan were handed a shock 2-1 loss at home to Udinese in Serie A despite taking the lead through Denzel Dumfries as the visitors responded with two goals before the break on Sunday.

Inter won their opening game 5-0 at home to Torino but looked well off that form despite opening the scoring in the 17th minute when Dumfries tapped in from a Marcus Thuram pass in the box.

Udinese had already looked dangerous before that and continued to threaten after going behind, equalising 12 minutes

the area was penalised and Keinan Davis converted from the spot. The equaliser was no more than Udinese deserved and with Inter looking nervy, the visitors went in front five minutes before the break.

later when a Dumfries handball in

A Davis pass sent Arthur Atta driving towards the danger zone and he steered his shot from the edge of the area into the far corner.

"After the last season, I realised where we could improve and Atta was one with more potential," Udinese manager Kosta Runjaic stated. "Now he has certainly become more dangerous."

Under new manager Cristian Chivu, Inter are aiming to reclaim the Scudetto but find themselves already playing catch-up in the standings, with champions Napoli on maximum points after two games alongside Juventus, and AS Roma. Reuters