

DOIS LE BINDING PARTIE



Mirbhaya's body is taken from IGI airport to her family's residence for prayers before her cremation

Alert policemen prevent another horror in bus

Raj Shakhar | THE

New Delhi: On the day that Nirbhaya succumbed to her injuries, another horrific incident inside a bus in the heart of the city was averted in the nick of time by alert cops. A 16-year-old girl who had left home after allegedly being ill-treated by her stepmother and brother on Saturday night was molested and harassed by an off-duty con-

ductor inside a cluster bus plying on the city roads without a home guard, police said.

The incident came to light ► Cops got suspicious, P 4

after the driver forgot his way to Laipat Nagar and ended up stopping the bus on Tansen Marg near Mandi House to ask for directions. Two cops patrolling at Tansen Marg spotted the girl crying inside the bus, stopped it after a chase and arrested the accused who was in an inebriat-

NARROW ESCAPE

Girl boards bus from Khayala to Jal Vihar bus (in pic) around 10pm Accused sits next to her after bus empties out. Touches her inappropriately Girl begins to cry, asks driver to stop bus and let

her get down By 11pm, bus reaches Mandi House. Driver asks cops for directions to Laipat Nagar

Alert cops spot girl and stop bus. After questioning girl, they arrest the accused

ed condition. He has been identified as Ranjeet Singh, a resident of Palam Colony.

Singh worked as a conductor in another bus and has been booked for criminal intimidation, molestation and outraging a woman's modesty, a senior police officer said. The accused has been sent to



Driver and conductor let off by cops but later terminated from service by authorities

14 days judicial custody after

being produced in the court. The driver, Prehlad Singh and conductor, Tejveer, were let off after interrogation by the police. However, they have been terminated from service by the authorities for moving the bus ahead after asking for directions.

PM, Sonia Receive Body; Mom Faints, Rushed To Hospital Durgesh Nandan Jha & her condition as stable.

Vishwa Mohan TNN

New Delhi: Her funeral was conducted in near-secrecy and amid tight security, but all of India mourned as the mortal remains of 23-year-old Nirbhaya were cremated at Dwarka early on Sunday morning.

FULL COVERAGE ▶ Edit: Nirbhaya's story, P 20

The bubbly girl who was the could not live to fulfil her fond dreams. But as the protesters who congregated at Jantar Mantar a few hours later clearly demonstrated, the memory of her courage will never die.

The aircraft bearing her body reached Palam technical area of IGI airport from Singa-

Ordinance to firm up rape laws?

Taced with angry protests for a change in rape laws, the UPA government is considering an ordinance - ahead of the budget session - to implement the recommendations of the Justice Verma panel set up to review the laws following the December 16 gang rape. The Congress party, meanwhile, is reportedly looking at imprisonment up to 30 years and chemical castration of repeat offenders, according to several proposals in the works. TOI had, in its edition dated December 19, suggested chemical castration that makes a rapist incapable of sexual arousal, as part of a six-point action plan to tackle such heinous crimes. P7

pore at 3.30am. Prime Minister pride and joy of her family Manmohan Singh and Con- Nirbhaya's body was taken to gress president Sonia Gandhi arrived immediately. They spent around 30 minutes at the airport consoling the girl's parents. The body reached the family's residence at around 4:30am in an ambulance amid heavy security and a convoy of police vans.

After prayers by relatives, the Dwarka crematorium at 6:45am in dense fog. The charnel ground had no light and preparations for her funeral were made under torch and flashlights. The girl's emotionally drained mother collapsed and was rushed to hospital, where doctors later described

Nirbhaya's father lit the pyre with chief minister Sheila Dikshit, Union minister RPN Singh and Delhi BJP chief Vijender Gupta among those in attendance.

Sonia was learnt to have expressed her wish to receive the body and meet the griefstricken family at a Congress core group meeting at the PM's residence late on Saturday

The meeting - also attended by home minister Sushil Kumar Shinde and RPN Singh - agreed with Sonia's decision and also advised the PM to be there at the airport. Delhi CM Sheila Dikshit and West Delhi MP Mahabal Mishra, too, were informed about the plan.

▶200 cops fortify lanes, P 3

Many cancel New Year bashes, others to tone them down

Prerna Sodhi & Piyali Dasgupta TNN

New Delhi: The new year is set to begin on a note of grief, mourning and introspection. And that's being reflected in decisions by many clubs, pubs and restaurants across the capital to either call off celebrations or tone them down.

Deciding to cancel musical festivities for the New Year, Delhi Gymkhana has asked its 7,000 members to come and light candles in solidarity with Nirbhaya. "It is a sad day for all. We join the nation in mourning and have decided to cancel our New Year celebrations," said Colonel O P Malhotra, CEO of

▶ Party for safety, P 5

Delhi Gymkhana.

Ashok Hotel's nightclub, Capitol, said it would remain shut on New Year's Eve following the tragedy. Earlier, it



IMMORTAL SPARK: Policemen stand guard outside the cremation ground at Dwarka on Sunday

had also called off Christmas celebrations on December 25. Chelmsford Club too decided on Saturday to call of New Year celebrations.

The Vasant Vihar Club too has decided to call off New Year celebrations. "Instead, we have asked all residents to join us for a candlelight vigil

praying for the departed soul and silently protesting crimes against women," said the club's president, Air Marshal DS Sabhiki.

NEWS DIGEST

GMR impact: India curbs visa perks for Maldives

India has stopped Maldivians from availing visa on arrival for anything other than tourism, in what is seen as retalation for the Island nation scrapping its airport deal with GMR. Maldivians, who come to India for treatment, will now need valid medical visas or face deportation, New Delhi has warned. P 7

Indian found dead at US store: An Indian from Andhra Pradesh was found dead at the supermarket store he ran in Cincinnati, Ohio, on Sunday, G V Reddy, 48, had left India 12 years ago and is married to a software engineer. P 22

West healthcare not all that better: A first-of-its-kind Johns Hopkins study estimates a surgeon in the US leaves a foreign object such as a sponge inside a patient's body after an operation 39 times a week, shattering the image of the west as a safe healthcare option. P 10

Aakash-3, with value-adds: The third version of low-cost tablet 'Aakash' will have a SIM slot and more exciting apps, all within the existing price band -Rs 1,130 for students. P 17

Train runs over 5 elephants: Five elephants were run over by a speeding train in Ganjam district of Odisha on Saturday. A 40-year-old bed-roll assistant in the train was also found dead. P 8

. WEATHER



Max 17°C (-4)/Min 7.7°C (0) Moonrise: Monday -8.23pm Moonset: Tuesday - 9.34am Sunset: Monday - 5.36pm

Sunrise: Tuesday - 7.14am Mainly clear sky, mist/fog in morning. Maximum & min temp on Saturday will be around 18°C & 7°C. Maximum humidity on Sunday was 97% and minimum 51%.



The year social media came of age in India

E-Change In Govt-People Equation

Javed Anwer & Rukmini Shriniyasan TNN

ambhavi Saxena, 19, was at Jantar Mantar on December 25 protesting against Nirbhaya's brutal rape when Delhi Police swooped down, rounded her up along with other agitators and took them to the Parliament Street police station. Sambhavi fired tweet after tweet even as she was bundled into a van. She went on broadcast-



P 2, 8, 10, 12, 17, 18, 19

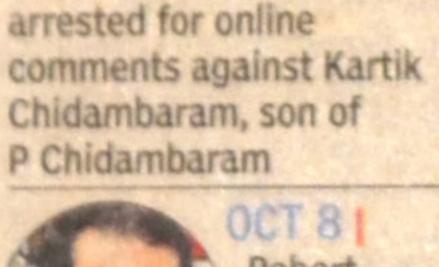
▶ Public mobilization, P 19

ing to the world all that was happening around her. "Illegally being held here at Parliament St Police Station Delhi w/ 15 other women. Terrified, pls RT," she tweeted. It worked. In a flash, more than 1,700 people retweeted her SOS. Social media analytics firm Favstar later said the message reac-

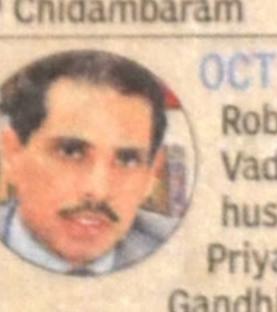
hed over two lakh people. Police later contested many of Sambhavi's claims. Yet, there was no denying it was her voice that was heard. Her tweets trig-

MEGA MOMENTS

NOV 19 Nationwide furore after 2 girls are arrested in Maharashtra for questioning Mumbai shutdown following Bal Thackeray's death



OCT 30 | Businessman



husband of Priyanka Gandhi, posted 'mango people at Banana republic' as his Facebook status update. He later

deleted the account Tharoor told Narendra Modi on Twitter, "My wife is priceless" after the

JAN 22 | PMO opened Twitter account. A few months later, the PMO courted controversy when it asked Twitter to shut down parody accounts mocking PM and govt

latter referred to her as a

₹50 crore girlfriend

Harsher

punishment

for minors?

Himanshi Dhawan TNN

New Delhi: Jolted by the ex-

treme cruelty unleashed on

Nirbhaya by the only juvenile

among the six accused in the

Delhi gang-rape case, the gov-

ernment may be looking at en-

hanced punishment for mi-

nors - even a waiver of the

delinquent's age by six

months to a year - keeping in

view the severity of that ime.

late for the Delhi gang-rape

case as it cannot be applied

with retrospective effect, the

shift is significant because hei-

nousness of the crime commit-

ted rather than the exact age of

the accused will determine the

The ministry of women and

child development that is re-

viewing the Juvenile Justice

Act is considering such a provi-

sion to treat guilty minors aged

17 or more like adults.

▶ Death penalty, P 10

punishment.

While this review comes too

APR 13 | Professor jailed for emailing a Mamata Banerjee-related cartoon. Online protesters promptly share

Frustrated by political marginalization and an indifferent regime, the middle class is expressing itself through the direct pipeline of social media, writes Santosh Desai | P 19

gered a social media frenzy. The media reacted swiftly. Lawyers volunteered, activists landed up at the police station. Celebrities condemned the action. The police stood no chance.

For the government and keepers of law, it was a PR disaster. They had lost a battle they were accustomed to winning hands down. Now, there was a pesky entity — the public - seeking to change the rules of the game. A teenager armed with a smartphone had used the magic

platform called social media to devastating effect, catching the agents of the state flatfooted. India might have tasted

the power of the smartphone first in 2011 when Anna Hazare's stinging anti-corruption message rode the social media wave. But this year saw social media creating a new phenomenon — the rise of the virtually connected Indian youth which is likely to redraw the terms of engagement between the state and its urban population.

Property dealer's son abducted

Neeraj Chauhan TNN

New Delhi: The 19-year-old son of a prominent property dealer was abducted in the early hours of Sunday, and a ransom of Rs 5 crore has been demanded, police sources said. A case has been registered.

The teenager was reportedly waylaid by the abductors when he was returning home to Hari Nagar from a party around 3am. Hours later, the family received a call for ransom. Sources said it was likely that somebody known to the family or the boy had tracked his whereabouts and abducted him.

Indian's killing in US hate crime

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Chidanand Rajghatta TNN

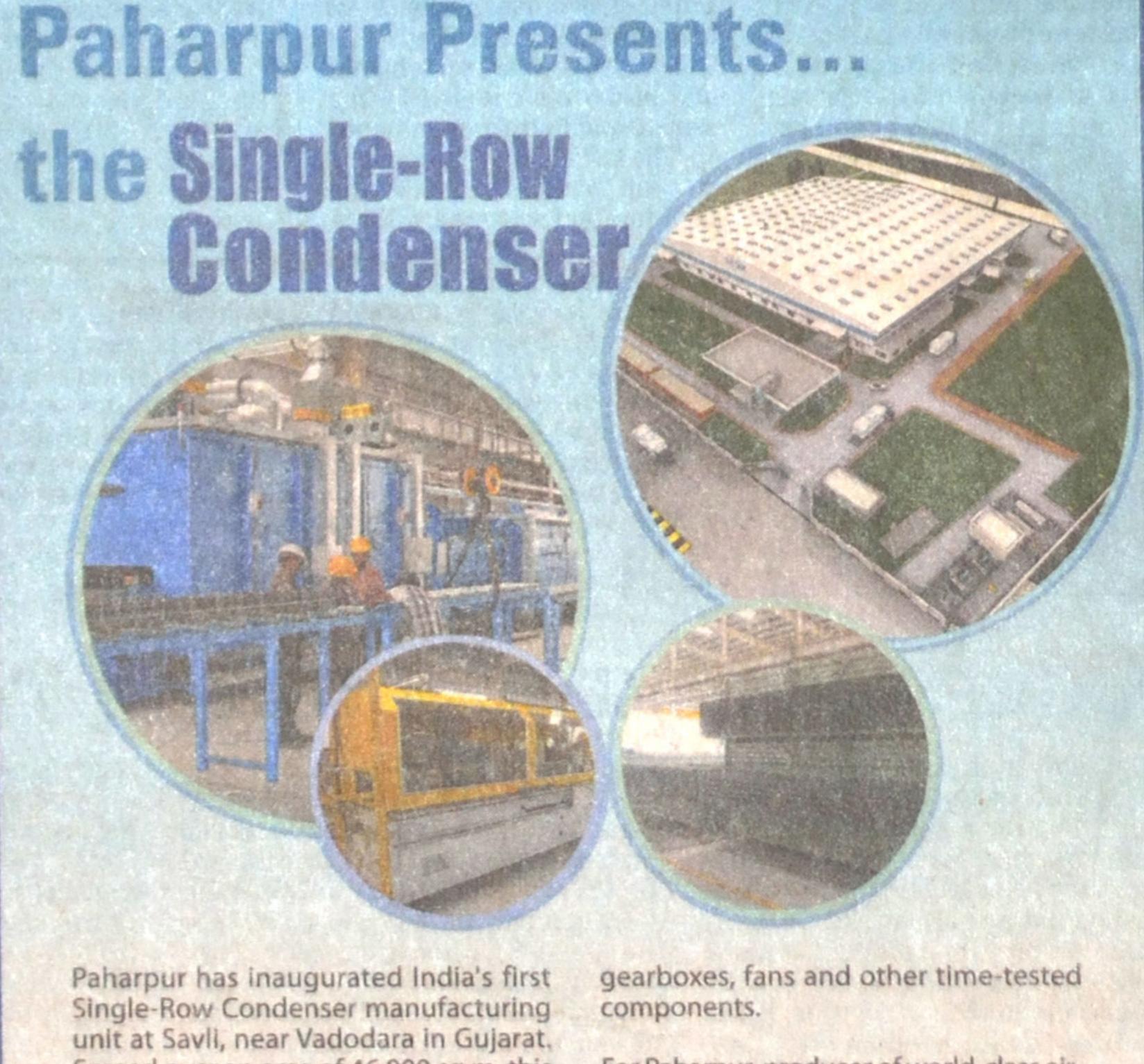
New York: A 31-year-old Hispanic woman has been charged with "second degree murder as a hate crime" af-



ter she admitted to pushing an Indian, Sunando Sen, on-

to the subway tracks two days ago. Erika Menendez faces life in jail if convicted.

Menendez reportedly told the police she believed she had pushed a Muslim man "because I hate Hindus and Muslims ever since 2001 when they put down the twin towers..." P 22



Spread over an area of 46,000 sq m, this factory produces both single-row condensers as well as conventional, multirow condensers.

With their special aluminium-clad oblong carbon steel tubes and high-efficiency, dimpled aluminium fins, single-row condensers are easier to maintain, take up less space and are more suited for large applications in the power industry. This new single-row condenser technology is complemented by Paharpur's rugged For Paharpur, producer of world-class aircooled steam condensers (ACCs) and a major innovator of ACC technology, the single-row condenser is yet another step in redifining dry cooling technology in the country, so that power plants of any size can be located where they are needed, even if water is not available.

So get ready for this next generation of ACCs, get ready for the Single-Row Condenser...



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Paharpur Cooling Towers Ltd Paharpur House, 8/1/B Diamond Harbour Road, Kolkata - 700 027, INDIA

Phone: +91-33-4013 3000 • Fax: +91-33-4013 3499 • pctccu@paharpur.com

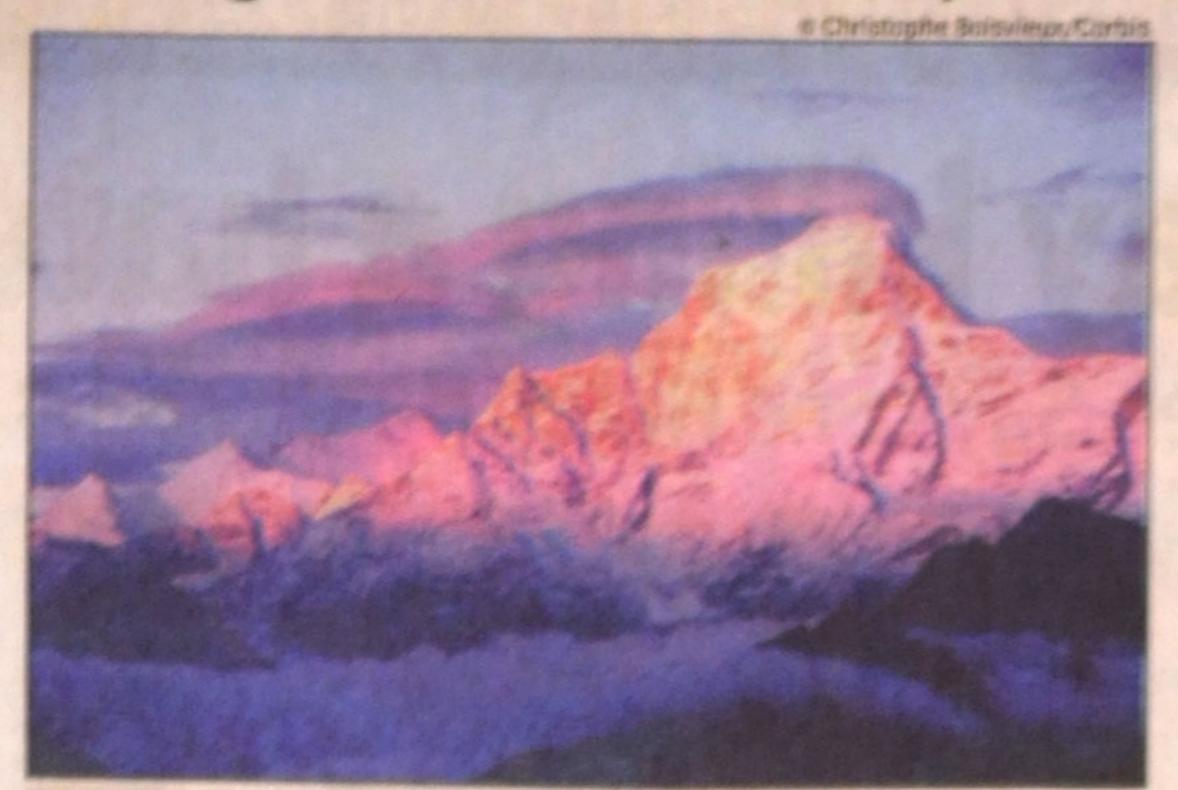
AIR-COOLED HEAT EXCHANGERS COOLING TOWERS AIR-COOLED STEAM CONDENSERS

Experts warn of massive quakes in Himalayas

Temblors Of 8.5 Magnitude Predicted; Areas Along Range, Like India, Face Devastation

Singapore: In what can have huge implications for countries like India, scientists have warned of massive earthquakes of the magnitude 8 to 8.5 on the Richter scale in the Himalayas, especially in areas with their surface yet to be broken by a temblor.

A research team led by Nanyang Technological University (NTU) in Singapore has discovered that powerful earthquakes have left clear ground scars in the central Himalayas. This ground-breaking discovery has huge implications for the area along the front of the Himalayan Moun-



MOUNTAIN OF DISASTER?

tains, given that the region has a population density similar to that of New York City, researchers said in a statement.

Paul Tapponnier, a leading neotectonics scientist, said that the existence of such devastating quakes in the past means that quakes of the same magnitude could happen again in the region in future, especially in areas which have yet to have their surface broken by a temblor.

The study showed that in 1255 and 1934, two great earthquakes ruptured the surface of the earth in the Himalayas. This runs contrary to what

scientists previously thought. collapsed hill-slope deposits,

art dating techniques, they could show that the 1934 earthquake did indeed rupture the centuries apart. surface over a length of more than 150 km, essentially south of the part of the range that harbours Mount Everest.

This break formed along the main fault in Nepal that the Richter scale, each causcurrently marks the bounda- ing tremendous damage. But ry between the Indian and they were previously thought Asian tectonic plates - the not to have broken the earth's Main Frontal Thrust fault.

of offset river sediments and more difficult to track. PI

Tapponnier said that by the researchers managed to combining new high resolu- separate several episodes of tion imagery and state of the tectonic movement on this major fault and pin the dates of the two quakes, about seven

Massive earthquakes are not unknown in the Himalayas, as quakes in 1897, 1905, 1934 and 1950 all had magnitudes between 7.8 and 8.9 on surface — classified as blind Using radiocarbon dating quakes - which are much



LANGUAGE OF FOOD

Bored of eating?

A talking fork

chicken clucking, the Daily

of food will cause the fork to The fork is the concept of produce multiple sounds and a research group from the words while they are eaten. Ochanomizu University in

As the lady licks icecream off it, it produces a rather high pitched and fast spoken "pakupaku".

Researchers from the Ochanomizu University in Tokyo aimed to inspire people to try different types of food and encourage a more varied diet, the report said.

They also suggest the fork be used as a communication tool for couples. PTI

SHORT CUTS

Alien-like skulls found at 1,000 year old cemetery

number of alien-like skulls have been A discovered in a 1,000 year old cemetery in Mexico. The finding initially stunned the researchers, however, upon closer inspection the skulls were found to be human skulls warped into strange, alien-like shapes. Scientists said the practice of deforming skulls of children as they grew was common in Central America, and these findings suggest the tradition spread farther north than had been thought.

Mystery behind itching solved:

Scientists have discovered nerve cells that deal solely with itching sensations in humans, a breakthrough which can lead to effective treatments for pain relief. The new findings are also important because they provide a target for new gen-next anti-itch medications. According to a new study, certain nerve cells are specialized to detect itchy sensations, and those receptors don't detect painful sensations.



ICY DIP: People dressed as Santa Claus swim in the ice-hole of a pond in the Siberian city of Novosibirsk on Sunday

Japan eyes asteroid study for its space mission in '14

New York: Building on its successful first round-trip mission to space rock Itokowa, Japan's space agency is readying to launch an ambitious new asteroid sampling probe in 2014.

The new space mission, Hayabusa2 is aimed at the asteroid 1999 JU3, a large space rock about 3,018 feet in length.

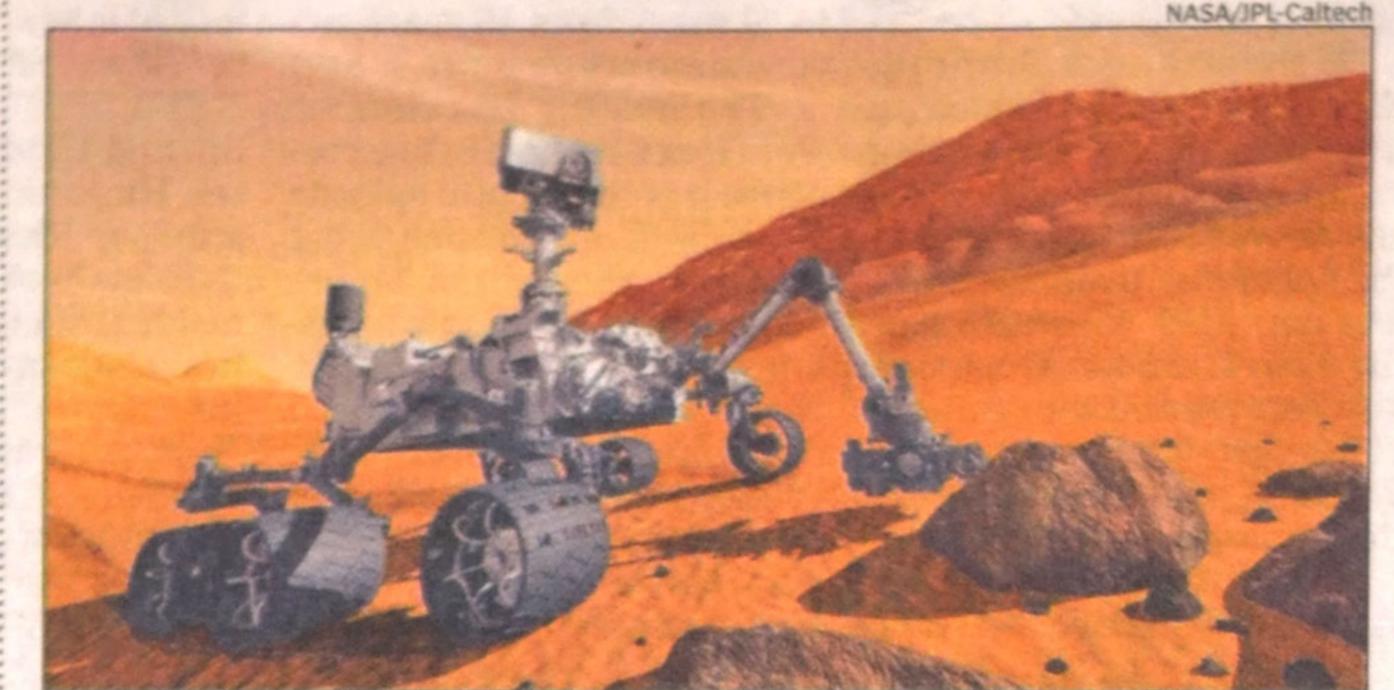
The mission is due to arrive at the asteroid in mid-2018, loiter at the space rock and carry out a slew of challenging firsts before departing the scene at the end of 2019, Space.com reported.

The Hayabusa2 spacecraft is scheduled to return to Earth with samples of asteroid 1999 JU3. The probe's name is Japanese for "Falcon2".

Officials with the Japanese Aerospace Exploration Agency (JAXA) said Hayabusa2, like its Hayabusa predecessor, will also involve a significant level of international cooperation.

The initial Hayabusa mission launched in May 2003 and returned samples of Itokawa — the first asteroid samples ever collected in space — in June 2010. Hayabusa2 is expected to stay with 1999 JU3 for 18 months, allowing ample time for observation and careful sample collection. PTI

Curiosity's next task: Trek Mars mountain



NEW YEAR'S ROAD MAP

take up a good chunk of the year.

starting the drive before the Times Square ball drop on December 31, but Curiosity lingered longer than planned at a pit stop, delaying the trip. Curiosity will now head for Mount Sharp in mid-February after it drills into its first rock.

"We'll probably be ready to hit the pedal to the metal and give the keys back to the rover drivers," mission chief scientist John Grotzingeted Gale Crater near the Martian month odyssey. AP

Pasadena (California): Since cape equator. Soaring from the center of tivating the world with its acrobatic the ancient crater is a 3-mile-high landing, the Mars rover Curiosity peak with intriguing layers of has fallen into a rhythm: Drive, snap rocks. Curiosity's job is to figure out pictures, zap at boulders, scoop up whether the landing site ever had dirt. Repeat. Topping its to-do list in the right environmental conditions the new year: Set off toward a Mar- to support microbes. Scientists altian mountain — a trek that will ready know water flowed in the past thanks to the rover's discovery of The original itinerary called for an old streambed. Besides water, life also needs energy, the sun.

What's missing are the chemical building blocks of life: complex carbon-based molecules. If they're preserved on Mars, scientists figure the best place to hunt for them is at the base of Mount Sharp where images from space reveal hints of interesting geology. It's a six-month journey if Curiosity drives nonstop.

But since scientists will want to ger said. The road trip comes amid command the six-wheel rover to great expectations. After all, it's the rest and examine rocky outcrops reason the \$2.5 billion mission taralong the way, it'll turn into a nine-

Docs rebuild human liver from a tissue of cow's heart

London: A woman from Liverpool, who was suffering from an incurable liver cancer, was saved by using a tissue from a cow's heart to rebuild her liver.

Michelle Morgan-Grainger became one of the first to benefit from surgery that used the process known as xenotransplantation — animal organ donation, the Daily Mail reported. The 40-year-old woman, who was diagnosed with a rare form of liver cancer in October 2010, underwent a procedure to remove the tumour in her liver along with a large portion of her Inferior Vena Cava (IVC).

This blood vessel was reconstructed with a patch made from the outer lining of a cow's heart, a material called bovine pericardium.

Hassan Malik, a consultant hepatobiliary surgeon at Aintree University Hospitals NHS Foundation Trust, said Grainger's case was different because of the use of bovine material, as well as the fact that most of the IVC was removed. The pre-treated bovine material reduces the risk of infection and of blood clots.

The patient left the hospital 11 days after the surgery, and less than 18 months on, she is cancer-free. ANI

Art student GREEN INVENTION technology inrabhi, which promises to be met design, the report said.

15% lighter than standard helmets, while absorbing up to three times the impact energy during a collision.

create the Kranium following a nasty fall from his bicycle which caused a cracked helmet and minor concus-

The designer was also

heavy impact, thanks to the bird's unique corrugated cartilage structure which separates beak from skull. The Formula 1 team

struck by the woodpecker's

ability to withstand repeated

the Kranium

to its own hel-

The Kranium is waterproof, and boasts some green credentials, due to it being manufactured from recycled paper. The helmet is designed to allow a degree of flexing to help absorb impact force, of which it can withstand up to three times as much as typical expanded polystyrene helmets. PTI

A cardboard helmet for safer bike rides

Washington: An Indian-origin researcher has designed a new lighter and safer bicycle-helmet entirely made up of cardboard.

Mail' reported.

speaks to her.

word "Paku".

Tokyo. A video shows a wom-

an enjoying bites of numer-

ous types of foods as the fork

produces some rather odd

sound effects and even

eo tucks in to a piece of tem-

pura the fork proclaims "Ga-

rigori" and "shori" while a

stick of cheese produces the

Apparently longer pieces

When the lady in the vid-

The helmet 'Kranium' has been constructed from cardboard and designed by Force India is incorporating Royal College

Anirudha Su-

Surabhi was inspired to sion, Gizmag reported.