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STUDENT EDITION

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WEB EDITION



NASA issues new guidelines to protect the Moon and Mars from EARTH'S GERMS

Adhering to planetary protection has always been a bit tricky, as practically everything we send into space has some kind of microbe

HOW NASA PLANS TO PROTECT MARS FROM EARTH'S GERMS

1 Develop capabilities to monitor biological processes associated with the human presence in space exploration, and to evaluate changes over time

2 Work on technologies for mitigating contamination release or intrusion, including closed-loop systems; cleaning/re-cleaning capabilities; quarantine, support systems, and biological waste disposal that minimise the impact of humans on the environment of Mars

3 Create an understanding of environmental processes on Mars that would contribute to transport and sterilisation of terrestrial organisms released by human activity

(BUSINESS INSIDER)

The National Aeronautics and Space Agency (NASA) has issued new guidelines to protect the Moon and Mars from 'terrestrial contamination', as the number of missions is set to increase in the near future.

THE GUIDELINES

■ The far side of the Moon, or the 'permanently-shadowed regions'

have been designated as 'sensitive locations'. According to the observations made by the Lunar Reconnaissance Orbiter (LRO), they lie between the latitudes of 79 degrees north and 86 degrees north.

■ NASA asserts that these areas are "of significant interest relative to the process of chemical evolution," which is why the reporting of biological materials is warranted.

HOW NASA PLANS TO PROTECT THE MOON FROM EARTH'S GERMS

■ Anyone or anything going to Moon is now required to provide an inventory of biological materials, living and dead, included in the spacecraft hardware and payloads

■ Crewed missions, like the Artemis mission scheduled for 2024, will have to provide a list of the amount and disposition of biological materials – including waste – that will remain in the lunar environment

ECONOMY



IMF calls for sustainable food systems in a post-Covid world

The rebuilding of economies after Covid-19 crisis offers a unique opportunity to transform the global food system and make it resilient to future shocks, ensuring environmentally-sustainable and healthy nutrition for all, the International Monetary Fund (IMF) has said. Food systems are at the cross-roads of human, animal, economic and environ-

mental health. Ignoring this exposes the world economy to ever-larger health and financial shocks as climate changes and global population grows. "By prioritising food system reforms in our 'build forward' agendas, we can instead make concrete inroads toward the Sustainable Development Goals and the Paris Climate Agreement," said IMF in a blogpost.

➤ The global food supply chain – highly-centralised and operating on a just-in-time supply basis – is prone to falter in the face of shocks. In many countries, for example, it became impossible to harvest or package food, as workers were blocked at borders or fell sick. Elsewhere, stocks piled up and avalanches of food went to waste because restaurants and bars were closed. In developing countries, the United Nations' Food and

Agriculture Organisation and the World Food Programme expect that a 'hunger pandemic' and a doubling of people starving may soon eclipse the coronavirus, unless action is taken. Cracks in the global food system's facade have long been apparent. According to the latest State of Food Security and Nutrition in the World, in 2018, about 820 million people suffered from hunger, and a third of all people lacked essential nutrients

TOPPERS' STORY

PRIYANKA RATNU,
TP School, Jaipur

STREAM: **COMMERCE**
SCORE: **94.6%**

I was very confident about my result, because I had written my exams very well.



Therefore, when I finally saw my score, I was thrilled that my strategy worked well. There was always a latent desire to prepare for the Boards, but the desire got wings, when my teachers believed in me, and started working hard with me. Time management, patience, and perseverance are the sine qua non for this exam.

QUOTE UNQUOTE

The pandemic has brought home the tragic disconnect between self-interest and the common interest; and the huge gaps in governance structures and ethical frameworks. A changing world needs new social protection policies with safety nets, including universal health coverage and the possibility of a universal basic income. Now, is the time for global leaders to decide: Will we succumb to chaos, division and inequality? Or will we right the wrongs of the past and move forward together for the good of all?



ANTONIO GUTERRES, SG, UN



Q How would the ministry of magic from Potterworld deal with this pandemic?

How would Dolores Umbridge deal with it? Would she order all the wizards for a lockdown and ask for Harry, Ron and Hermione's help? Would all the families start stocking their food items, including the Malfoys and the Weasleys? What do you think would happen?, asks **Kanakdeep Kaur Sohal, class IX, The Orbis School, Pune**

Send your replies at timesnet175@gmail.com

CELEB TALK

It's an extraordinary time for us to educate: Dia Mirza

Actress Dia Mirza, a United Nations Sustainable Development Goals advocate, feels that the world is passing through testing times, courtesy, the Covid pandemic. She said, "it is an extraordinary time for mankind to educate and push ourselves to do better". In a conversation with the UN deputy secretary general Amina Mohammed and fellow SDG advocate, the Norwegian Prime Minister, Erna Solberg, Dia said, "this pandemic is the outcome of our broken relationship with nature and the disruptions that we've caused in our ecological balance. I hope more people recognise this interconnection, and the fact that our lives, our health, our progress is not separate from the health of the environment and nature," she added.

The only way we can actually hope to achieve the sustainable development goals is by protecting, conserving and securing biodiversity; that's fundamental to everything that we hope to achieve

Dia Mirza, actress and UN ambassador



TECH

Google says no to 'dangerous content', ban ads on Covid-19 conspiracy theories

Alphabet Inc's Google has said that it would prohibit websites and apps, which use its advertising technology, from running ads on "dangerous content" that goes against the scientific consensus during the corona virus pandemic. The world's largest search engine updated its policy, as the health crisis has continued to rage throughout the United States. Digital advertising giants, like Google and Facebook Inc have faced calls to do more to clamp down on misinformation.



➤ Google has already barred ads with harmful content, like "miracle" health cures, or which promotes the anti-vaccination movement. It also prevents ads from running on publisher content that encourages these topics

➤ Google's new policy will also bar advertisers from creating their own ads that promote coronavirus conspiracy theories

NEWS IN BRIEF

CLICK HERE FOR MORE

Now, Keanu Reeves turns into a comic book writer

Hollywood star Keanu Reeves is all set to launch his career as a comic book writer with Boom Studios' 'BRZRKR'. For the upcoming 12-issue limited series, the John Wick actor has collaborated with writer Matt Kindt, artiste Alessandro Vitti, colourist Bill Crabtree and letterer Clem Robins. The print versions of 'BRZRKR', featuring cover art by Rafael Grampa, will be released in the US in October.

The action-packed comic book focuses on a warrior, who resembles Reeves, and has walked a blood-soaked path across the world for centuries. In the present day, he does dangerous jobs for the US government in exchange for the truth about his existence

'Chernobyl' wins big at virtual BAFTA TV Craft Awards



HBO and Sky's nuclear drama, 'Chernobyl' emerged as the biggest winner at the BAFTA TV Craft Awards on Friday, after taking home prizes in seven categories. The 2019 released historical drama revolves around the Chernobyl nuclear disaster of April 1986. The explosion at the Chernobyl nuclear power plant in the Union of Soviet Socialist Republics was one of the world's worst man-made catastrophes. The award ceremony was hosted by Stephen Mangan from a socially-distanced studio and broadcasted as-live on BAFTA's social media channels.

BBC and HBO's Philip Pullman adaptation, 'His Dark Materials', which got a nomination for five prizes, won two awards, while Aisling Bea won in the Breakthrough Talent category for her writing debut, 'This Way Up'

'Superman' Henry Cavill builds gaming PC from scratch and documents it with video



In his latest Instagram video, PC gamer and Hollywood actor Henry Cavill documented how he built a high-end gaming computer from scratch. The time lapse video shows the actor, best known for playing Superman, from reading the manual to assembling the parts, part by part, even documenting the errors and reversals. Sharing the time lapse video on Instagram, the actor wrote, "this kind of material isn't for everyone", and that you "may see a lot of parts that you haven't seen before." With R&B singer Barry White's, 'You're the First, the Last, My Everything', playing in the background, Cavill seems to have taken hours to assemble the computer.

IIM, K develops 'veli band' for social distancing

An Indian Institute of Management Kozhikode (IIM,K) initiated startup has come up with a wearable device for organisations, 'Veli Band', keeping in mind the social distancing norms. Developed by Qual5 India, the device to be worn on wrists, can keep track of interactions with other devices, thereby helping in tracking the movement of the employees.

■ By using location and contact tracing, it can help organisations comply with the social distancing norms during the current pandemic situation

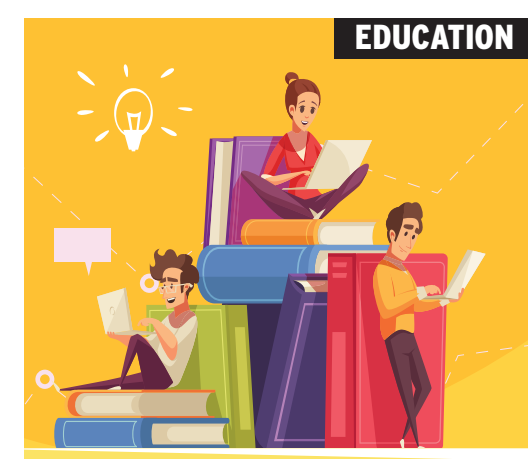
■ To notify wearers about other band wearers, who are within three-foot or one-metre radius, the Veli Band, momentarily vibrates, sounds buzzer, and flashes LED simultaneously



INNOVATION

HRD minister launches first online NISHTHA programme

Union HRD minister Ramesh Pokhriyal Nishank has launched the first online National Initiative for School Heads and Teachers Holistic Advancement (NISHTHA) programme for 1,200 key resource persons of Andhra Pradesh. Around 23,000 key resource persons and 17.5 lakh teachers and school heads have been covered under the NISHTHA face-to-face mode till date.



EDUCATION

1 The module developed under NISHTHA focuses on the holistic development of children, including curriculum and inclusive education, health and well-being, personal social qualities, art integrated learning, initiatives in school education, subject-specific pedagogies, ICT in teaching-learning, leadership, pre-school education and pre-vocational education. All the modules are centered around learning outcomes and learner-centered pedagogy

2 These modules are made interactive with reflective and engaging activities for teachers, providing space to educational games and quizzes for joyful learning by the teachers and school heads, which in turn will motivate teachers to implement this in their classroom for enhancing students' learning outcomes

A recent study by the University of Michigan (US) revealed surprising findings. The study found that nearly 45% of children (global sample size of nearly one million students) in the age group of 9-16 years are suffering from liver-related ailments. More than 20% end up being hospitalised due to a liver issue at this young age. Why is it happening? Medical experts say, pollution and lifestyle are the main causes. Can it be helped? YES! Times NIE brings you a list of to-dos. These little changes could help you keep your liver strong, healthy and happy. Try these...

HOW TO

LOSE 10 PER CENT OF YOUR BODY WEIGHT
Keeping liver disease at bay doesn't necessarily mean a complete body transformation. In fact, experts say if you are overweight, shedding just 10 per cent of your overall body weight gives liver function a significant boost and may help reverse non-alcoholic fatty liver disease (NAFLD). The same simple approach has also been found to help prevent Type 2 diabetes in young children. This means somebody who weighs around 90 kilos would need to shed around nine kilos to reverse the early stages of NAFLD.

ADD GARLIC TO YOUR DIET
Garlic contains numerous health-boosting compounds - one of which is called S-allylmercaptocysteine. In tests, this has been found to protect the liver against diet-related damage. One study at the University of Hong Kong discovered rats with NAFLD suffered less injury to the liver, had lower levels of liver fat and reduced inflammation when they were injected with the garlic compound. Scientists said it appears to shield the liver against the worst of the damage and added, "Garlic and its derivatives could be considered as a potent supplement."

GO SWIMMING REGULARLY
Exercise is a great way to keep the liver healthy - but what's the best type? One study involving mice found swimming to be effective at keeping fatty liver disease at bay. Scientists fed the rodents a high-fat diet and then monitored whether regular swimming protected against the build-up of harmful fats. Mice allowed to swim regularly had significantly lower liver fat levels than those not given access to the water. Other research shows children who swim two to three times a week have healthier livers. Dancing and hill walking had similar benefits.

TUCK INTO OILY FISH
Oily fish such as salmon and sardines can lower fat levels in your liver if they are consumed on a fairly regular basis - at least a couple of times a week. That's because they are rich in immunity-boosting omega-3 fatty acids. A 2016 study pooled data from 10 different investigations into omega-3 and liver problems. It revealed that those who were eating healthy fats regularly had lower levels of harmful fats in the liver, while at the same time bolstering levels of HDL.

GET MORE SLEEP
It's not just diet and exercise that can help keep the liver healthy. A research suggests getting proper amount of rest is also crucial. A study in Taiwan, involving more than 30,000 boys and girls, found those suffering with common sleep disorders like insomnia, sleepwalking or teeth grinding, were nearly 80 per cent more at risk of fatty liver disease than others getting a good night's sleep. The most likely explanation is that broken sleep interferes with eating habits and increases snacking behaviour during the day - leading to fatty deposits in the liver.
TNN

5 ways to keep your Liver healthy

For the scientist

MAKE A LAVA LAMP in you

You will need

A wide bottle (or a fancy drinking glass/wide glass vase), food colouring, vegetable oil, water and an Alka-seltzer tablet.

Step 1: The Oil

Fill the container about 3/4 with vegetable oil. You can choose the size of the container based on how much vegetable oil you have to spare.

Step 2: The Water

Fill the rest of the container with water, leaving 2-3 inches at the top. Watch the water fall through the vegetable oil and settle at the bottom. Can you believe that water is more dense than oil? Water molecules are "polar" and oil molecules are "non-polar", so they are not attracted to each other in the least.

Step 3: The Colour

What colour would you like the "lava" in your lava lamp to be? After the water has settled for a minute or so, add your food colouring. You can add about 10 drops. Watch as each drop falls through the oil and sits on top of the water layer. Wait until all of the water droplets break through the oil/water line and bursts into the water.

Step 4: The Bubbles

Drop your Alka-seltzer tablet in and let the games begin! The Alka-seltzer water reaction produces carbon dioxide gas bubbles, which sticks to the water droplets. The water/gas combo is less dense than the vegetable oil, so they rise to the top. The gas bubbles then break and are released into the air and the water sinks back down to the bottom to start over again.



KNOWLEDGE BANK BIRDS

Budgerigar

This is a long-tailed, seed-eating parrot usually nicknamed budgie, or in American English, the parakeet. The species is green and yellow with black, scalloped markings on the nape, back, and wings. Budgies are bred in captivity - they have colourings of blue, white, yellow, grey, along with small crests.



BE A DETECTIVE



Hello, aspiring detectives! Do you have what it takes to join the Detective Society? Complete the activities below and join Daisy and Hazel in detecting crimes!

Word search:

L	E	B	D	Q	Z	C	T	R	K
O	D	K	P	A	H	V	E	B	A
S	B	J	A	I	I	D	D	V	E
L	X	X	N	C	R	S	D	O	R
O	T	A	F	U	N	J	Y	E	B
D	M	G	M	K	W	O	G	I	N
K	N	P	U	V	G	U	O	M	U
J	Y	W	Q	S	P	Y	S	M	B
U	R	E	T	W	F	L	Q	N	R
H	A	Z	E	L	B	Y	H	L	V

Create your own Detective Society Pledge!

Your pledge is a sort of promise. Here's part of Daisy and Hazel's in case it helps: "I swear to be a good and clever member of the Detective Society, and to logically detect the crimes presented to me using all the cleverness I have, not placing reliance on grown-ups, especially the police."

Fill in the lines below with your own pledge!

Make invisible ink

CAN USE MILK AND LEMON



Step 1

Gather your ingredients and tools. For this experiment, you need a piece of paper, a cotton swab, a heat source (a lamp or electric stove works), and milk or lemon.

Step 2

If you are using lemon juice, squeeze your lemon into a glass. You can mix it with a little bit of water. Dip your cotton swab into the milk or lemon juice and start writing your message. Let your message dry completely.

Step 3

Once dry, an adult should help you hold the sheet of paper over a heat source like an electric stove top, lamplight or a blow-dryer.

Step 4 Learning

As the milk or lemon "ink" heats up, it will oxidize and turn brown. You can try this experiment with other food items too such as vinegar, honey or orange juice. Enjoy the game.

ROALD DAHL

CHARLIE AND THE CHOCOLATE FACTORY

INVENT YOUR OWN SWEET

Time to present your sweet to Mr Wonka! Write a short presentation about your sweet to persuade Willy Wonka to hire you as his new inventor. Use the table below to make some notes first.

NAME OF MY SWEET	
MY SWEET'S PARTICULAR FUNCTION	
REASON PEOPLE WILL BUY MY SWEET	
SOME POWERFUL VERBS AND ADJECTIVES TO DESCRIBE MY SWEET	
A BOLD STATEMENT OR CLAIM ABOUT MY SWEET TO FINISH	

Now write your presentation. Remember, Willy Wonka is very busy so he won't listen for long! Keep your presentation to five sentences or less.

FIND MORE LEARNING RESOURCES AT
WWW.ROALDDAHL.COM/TEACH

ROALD DAHL

CHARLIE AND THE CHOCOLATE FACTORY

BOOK QUIZ

- WHAT DO CHARLIE'S GRANDPARENTS DO ALL DAY IN CHARLIE AND THE CHOCOLATE FACTORY?
a) They eat sweets
b) They stay in bed
c) They play cards
- IN GEORGE'S MARVELLOUS MEDICINE, WHAT COLOUR IS THE MEDICINE AFTER GEORGE BOILS IT?
a) Gorgeous gruesome green
b) Fearsome fiery red
c) Deep and brilliant blue
- IN MATILDA, WHICH PUNISHMENT DOES MISS TRUNCHBULL GIVE BRUCE BOGTROTTER?
a) Puts him in The Chokey
b) Forces him to eat an enormous cake
c) Makes him touch a newt
- IN CHARLIE AND THE CHOCOLATE FACTORY, WHERE CAN YOU FIND WHANGOODLES, HORNSWOGGLERS AND SNOZZWANGERS?
a) In Caterpillar Country
b) In Loompland
c) In Eucalyptus Land
- WHAT DOES GRANDMA TELL GEORGE TO EAT THREE TIMES A DAY IN GEORGE'S MARVELLOUS MEDICINE?
a) Cauliflower
b) Cabbage
c) Curly kale
- IN BILLY AND THE MINPINS, WHAT IS THE LEADER OF THE MINPINS CALLED?
a) Don Mini
b) Don Mono
c) Don Mani
- IN MATILDA, WHAT FIRST AMAZES MISS HONEY ABOUT MATILDA?
a) Her mathematical ability
b) Her musical ability
c) Her reading ability
- WHAT ARE THE NAMES OF THE THREE FARMERS IN FANTASTIC MR FOX?
a) Doggis, Dunc and Lean
b) Moggis, Munce and Mean
c) Boggis, Bunce and Bean
- IN GEORGE'S MARVELLOUS MEDICINE, WHAT HAPPENS TO GRANDMA WHEN SHE DRINKS MARVELLOUS MEDICINE NUMBER FOUR?
a) She disappears
b) She blows up
c) She bursts her boiler
- IN THE GIRAFFE AND THE PELLY AND ME, WHAT DOES THE WORD 'GRUBBER' MEAN?
a) It is an old word for a sweet shop
b) It is a name for someone who is very dirty
c) It is a name for someone who eats too quickly



Send your answer to
timesnie175@gmail.com