Hepatorenal Syndrome (HRS)

- Hepatorenal syndrome causes functional kidney failure in people with advanced liver disease.
- Complications of end-stage liver disease affect your circulatory system, breaking down the blood supply to your kidneys.
- HRS progresses rapidly, in a matter of weeks to months.
- The only cure is a liver transplant
- Risk of diseases in a new setting
- A Down to Earth report explains that when animals are being introduced to a new landscape, there is a risk of disease spread to both the individual animals and the wildlife species which inhabit the site chosen for reintroduction.
- The stress of unfamiliar or unnatural conditions of confinement, especially during the translocation process might trigger diseases in cheetahs
- Genetic differences in cheetah subspecies
- One of the major issues that has concerned experts is the genetic differences in the cheetah subspecies.
- The cheetahs coming to India will not be from the Asiatic subspecies, but instead from the African subspecies.
- The African cheetah not only look different, but are also used to a different habitat and prey base. In comparison, the Asiatic cheetah is smaller, thinner and slightly paler in colour than its African counterpart.
- Introducing a different subspecies to new ecological setting carries its own set of biodiversity issues and disease risks.
- Not enough space to accommodate cheetahs
- A cheetah requires a substantial amount of space.
- Many activists have said that the proposed habitats in India are not large enough to accommodate cheetahs, and do not have enough prey to sustain the big cats.
- According to a report by Smithsonian Magazine, the proposed Indian wildlife habitats do not have an area of more than 1,000 square kilometers, and also have much less prey base than the African homes of cheetahs.

THE HINDU

Etikoppaka

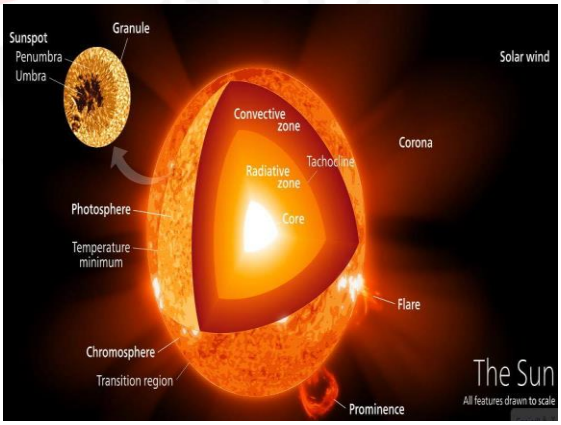
- Etikoppaka is a small village on the banks of the Varaha River at a distance of 64 Kms away from the Visakhapatnam district of Andhra Pradesh.
- The name Etikoppaka is synonymous with the beautiful wooden artifacts and lacquer colours.

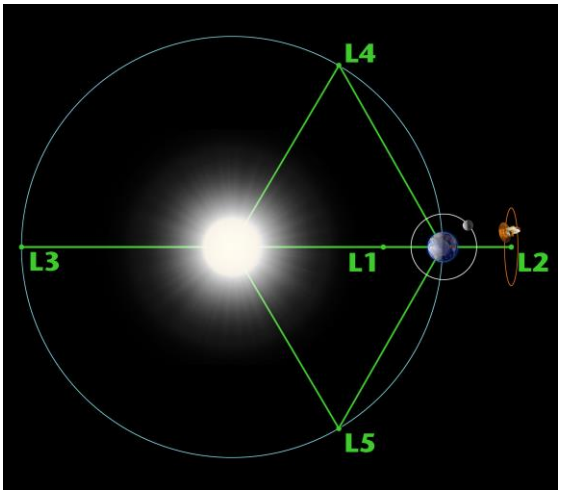
About the toys

- The toys are made with lacquer color and are traditionally known as Etikoppaka toys or Etikoppaka Bommalu.
- The village is very famous for its toys made of wood.
- The toys are also called as lacquer toys because of application of lacquer coating.
- The toys are made out of wood and are coloured with natural dyes derived from seeds, lacquer, bark, roots and leaves.
- The wood used to make the toys is soft in nature and the art of toy making is also known as turned wood Lacquer craft.
- Agricultural, natural or manufactured goods are registered as Geographical Indications (GI) by the Geographical Indications Registry as per the provisions of the Geographical Indications of Goods (Registration & Protection) Act, 1999.
- Etikoppaka Toys have obtained its GI tag under the Handicrafts category in the state of Andhra Pradesh.

THE HINDU

Aditya L1mission





What is Lagrange points?

- Lagrange Points are positions in space where the gravitational forces of a two body system like the Sun and the Earth produce enhanced regions of attraction and repulsion.
- These can be used by spacecraft to reduce fuel consumption needed to remain in position.
- Lagrange points are named in honor of Italian-French mathematician Josephy-Louis Lagrange.
- Aditya L1 will be ISRO's 2nd space-based astronomy mission after AstroSat, which was launched in 2015.
- Aditya 1 was renamed as Aditya-L1. The Aditya 1 was meant to observe only the solar corona.
- The Indian programme to study the Sun and the region between the Sun and the Earth from space
- It will carry seven payloads which have been developed by various institutions across the country.
- Aditya L1 is the first space-based Indian mission to study the Sun from a halo orbit around the Lagrangian point 1 (L 1) of the Sun-Earth system.
- This mission with seven payloads on board to observe the photosphere, chromosphere and the outermost layers of the Sun (the corona) will provide greater advantage of observing the solar activities and its effect on space weather, according to officials of Indian Space Research Organisation (ISRO).
- The other six payloads are: Solar Ultraviolet Imaging Telescope, Aditya Solar Wind Particle Experiment, and Plasma Analyser Package for Aditya, Solar Low Energy X-ray Spectrometer, High Energy L1 Orbiting X-ray Spectrometer, and Magnetometer
- The scientific studies by the satellite will enhance our current understanding of the Solar Corona and also provide vital data for space weather studies",
- Once the mission is launched, there will be a need for a ground support centre to monitor and coordinate the work on its various payloads.
- This role will be played by the ARIES facility (short for Aryabhata Research Institute for observational Sciences) which is situated near Nainital.

THE HINDU

Fukushima waste water

- Japan is expected to start flushing 1.25 million tonnes of wastewater from the embattled Fukushima nuclear power plant into the Pacific Ocean this year, as part of a $76-billion project to decommission the facility.

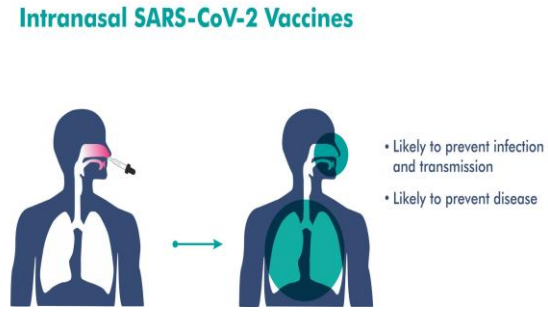
- The water that the Japanese government wants to flush from the plant was used to cool the reactors, rainwater, and groundwater.
- It contains radioactive isotopes from the damaged reactors and is thus itself radioactive

What are Japan's other options?

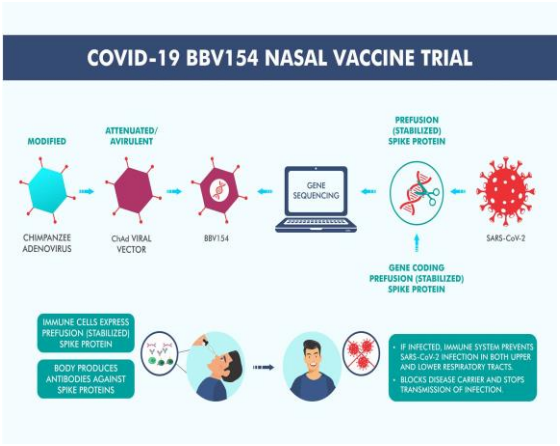
- Some have asked why the Japanese government can't store the water for longer and then discharge it.
- This is because tritium's half-life the time it takes for its quantity to be halved through radioactive decay is 12-13 years.
- The quantity of any other radioactive isotopes present in the water will also decrease in this time (each isotope has its own half-life).
- So, at the time of discharge, the water could be less radioactive.
- There are concerns about the water body as well as the region.
- China, South Korea and Taiwan have expressed concerns over Japan's plan.

Intranasal vaccine

- An intranasal vaccine stimulates a broad immune response neutralizing IgG, mucosal IgA, and T cell responses.
- Immune responses at the site of infection (in the nasal mucosa) – essential for blocking both infection and transmission of COVID-19.



- The nasal route has excellent potential for vaccination due to the organized immune systems of the nasal mucosa.
- Non-invasive, Needle-free.
- Ease of administration does not require trained health care workers.
- Elimination of needle-associated risks (injuries and infections).
- High compliance (Ideally suits for children's and adults).
- Scalable manufacturing able to meet global demand.



THE HINDU