

NEWS TODAY

CHANDRAYAAN 3 SOFT LANDING SUCCESSFUL

- The successful landing of the Vikram Lander, onboard Chandrayaan 3, made India the 4th country to land on the Moon and the first to land on its south-pole
- The lander was manoeuvred from an altitude of 30 kms in various phases namely **Rough Braking, Altitude Holding, Fine Braking and Terminal descent**
- **Why South Pole is Important?**
 - The **South pole is speculated to consist of pockets of ice**, which could provide valuable insights on
 - The record of **lunar volcanoes**.
 - Material **that comets and asteroids delivered** to Earth.
 - To **understand the origin of oceans**.
- ISRO will be **conducting experiments** to understand
 - Seismic events on the moon's surface.
 - Temperature and thermal conductivity study
 - The composition of the elements at the landing site.
- **Upcoming Missions of ISRO:**
 - **Lunar Polar Exploration Mission (LUPEX):** Between the **ISRO and JAXA** (Japan Aerospace Exploration Agency) to **explore the lunar polar region**
 - **XPoSat (X-ray Polarimeter Satellite):** Country's first polarimetry mission to study various **dynamics of astronomical X-ray sources**.
 - **Aditya-L1:** The first space-based Indian observatory to **study the Sun**.
 - **NISAR (NASA ISRO SAR mission):** Is a synthetic aperture radar which will **map the entire globe in 12 days**.

Lander Payloads		
 <p>RAMBHA-LP Langmuir Probe To measure the near surface plasma (ions and electrons) density and its changes with time</p>	 <p>ChaSTE Chandra's Surface Thermo-physical Experiment To carry out the measurements of thermal properties of lunar surface near polar region.</p>	 <p>ILSA Instrument for Lunar Seismic Activity To measure seismicity around the landing site and delineating the structure of the lunar crust and mantle.</p>
Rover Payloads		Propulsion Module Payload
 <p>APXS Alpha Particle X-Ray Spectrometer To derive the chemical composition and infer mineralogical composition to further enhance our understanding of lunar surface</p>	 <p>LIBS Laser Induced Breakdown Spectroscopy To determine the elemental composition (Mg, Al, Si, K, Ca, Ti, Fe) of lunar soil and rocks around the lunar landing site</p>	 <p>SHAPE Spectro-polarimetry of Habitable Planet Earth An experimental payload to study the spectro-polarimetric signatures of the habitable planet Earth in the near-infrared (NIR) wavelength range (1-1.7 μm).</p>

EXPANSION OF BRICS

- BRICS has decided to invite **Argentina, Egypt, Ethiopia, the Islamic Republic of Iran, Saudi Arabia and the United Arab Emirates** to become full members.
 - The membership will take effect from 1 January 2024.
- **Significance of Expansion**
 - New members will help make a **collective voice for restructuring of global institutions**.
 - Lead to **upholding and strengthening of Multilateralism**.
 - To raise **South-South Cooperation amongst developing countries**.
 - Lead to **Democratization of the World order**.
- **Challenges**
 - **Internal trust deficit** among the 5 member states and lack of a common understanding on standards, criteria, and procedures of expansion.
 - India-China border dispute is an example.
 - **Divergence between countries** with respect to their world view.
 - **Dominance of Authoritarian and Autocratic regimes within BRICS**.
 - The **perception of being an Anti- Western Group** would challenge its integration in World order
 - Various **economic and Political Sanctions** on present and potential members may cause economic disruptions.

• Initially formalised as BRIC in 2006, group was renamed as **BRICS (Brazil, Russia, India, China, South Africa)** after South Africa was accepted as a full member in 2010.

MIZORAM BECAME THE FIRST STATE TO OPERATIONALIZE AYUSHMAN BHARAT'S MICROSITE PROJECT

- **Microsite** is a cluster of all small and medium-scale clinics, nursing homes, hospitals (preferably <10 beds), labs, pharmacies, and other healthcare facilities that are ABDM-enabled and offer digital health services to patients.
 - **National Health Authority (NHA)** in 2023 launched **100 Microsites Project** under the **Ayushman Bharat Digital Mission (ABDM)**.
- **Types of facilities under a Microsite:**
 - **Private facilities** such as standalone clinics, polyclinics, etc.
 - Health Facilities and Health Professionals from **all the systems of medicine**.
- **Implementation:** by state **Mission Directors of ABDM** while the **financial resources** and overall guidance would be provided by NHA.
- Microsites will **counter the challenges of ABDM adoption** faced by private hospitals like:
 - Digitisation is **seen as an additional cost**,
 - Fear of **increased regulatory scrutiny**,
 - issue with data security,
- ABDM launched in **2021** is a **flagship digital health initiative** that aims to develop **integrated digital health infrastructure** of the country.
 - Its aim is to establish a **National Digital Health Ecosystem** by creating an **online platform enabling interoperability of health data** within the health ecosystem.

SHIPPING DISRUPTIONS IN A DROUGHT HIT PANAMA CANAL

- Panama Canal is a **constructed waterway** that connects the **Atlantic and the Pacific Oceans**.
 - It enables ships to **avoid the lengthy and hazardous voyage around Cape Horn** at the southern tip of South America.
 - Panama Canal **connects nearly 2,000 ports in 170 countries**.
 - Panama is an **isthmus** connecting North and South America.
- **Isthmus** is narrow strip of land connecting **two larger landmasses**. For example, **Suez Canal is constructed on the isthmus of Suez**.
 - However, **they are different from Straits which** are narrow waterways connecting **two larger bodies of water**.
 - For example, **Strait of Gibraltar** connecting the **Mediterranean Sea and the Atlantic Ocean**.
- **Role of Straits and Isthmus in Global Trade:**
 - **Important trade link:** Approximately 12% of global trade passes through the Suez canal.

➤ Time and Cost Savings

➤ **Global Supply Chain:** Supporting the movement of various commodities, including Dry Bulk, Container, etc.

➤ **Strategic significance:** Panama Canal's significance goes beyond economic benefits and encompasses national security, defense capabilities, and logistical resilience for the region, especially for USA.



NCERT RELEASED THE NATIONAL CURRICULUM FRAMEWORK FOR SCHOOL EDUCATION (NCF-SE)

- NCF-SE is the **curriculum framework** with a **5+3+3+4 (in terms of ages) design** for **schooling** as proposed by the **National Education Policy 2020 (NEP 2020)**.
 - Presently, schooling is divided into 4 stages based on age groups —**Foundational Stage** for ages 3-8, **Preparatory Stage** for ages 8-11, **Middle Stage** for ages 11-14, and **Secondary Stage** for ages 14-18.
- It aims to **transform the school education system** through changes in **curriculum, pedagogy, school environment, and culture**.

Key Highlights

- **Board examinations:** For Grades 10 and 12, **all students will be allowed** to take Board examinations on at **least two occasions** during any given school year, with **only the best score being retained**.
- **Multilingualism:** In Grades 11 and 12, at **least two languages will be studied**, at least one of which will be a language native to India.
- **Pattern of study:** should move to a semester design instead of an annual exam.
- **Flexibility and Choice in the Secondary Stage:** with **no hard separations between academic and vocational subjects**.
- **Vocational Education:** proposes engagement in the **three different forms of work** – work with life forms (**agriculture, animal husbandry**), work with materials and machines, and work in human services.



MINISTRY OF COAL TO PROMOTE RAIL-SEA-RAIL (RSR) TRANSPORTATION

- **RSR is a multimodal transportation system** that **seamlessly transports the coal to end-users**.
- It is required to meet the **coal production target of doubling the mining in the next seven years**.
 - Currently, **railways account for about 55% of coal evacuation** in the country and are expected to handle 75% of the coal by 2030.
- **Issues in Coal transportation:** Low handling capacity, improper loading and unloading infrastructure, non-availability of wagons, and congestion on the road or rail network.
- **Advantages of RSR system:**
 - Decongests the rail routes and creates export opportunities,
 - Reduces the logistic cost for end-user states.
 - Ensures a resilient and efficient coal supply system.
 - Lowers the carbon footprint.
- **Initiative for Coal Transportation**
 - Around 67 First Mile Connectivity (FMC) Projects with 885 MT capacity are being implemented.
 - The Ministry of Coal released a draft National Coal Logistic Plan.
- **Coal in India**
 - **India has an estimated coal reserve of 361411.46 million tonnes**, with most of it lying in the states of Odisha, Jharkhand, and Chhattisgarh.
 - **Consumption centers:** Coal-based **generation capacities are in proximity** to the Coal production center and other coal-powered industries are in northern or coastal regions.

ALSO IN NEWS



Members of Parliament Local Area Development Scheme (MPLADS)

- **MPLADS, launched in 1993**, enables MPs to **suggest and execute** developmental works of **capital nature** based on local needs for the creation of durable assets.
- **Provisions:**
 - MPs receive **Rs.5 crore each year** in two **installments of Rs. 2.5 crore** each.
 - MPs **shall recommend at least 15% and 7.5 % of MPLADS funds** for areas **inhabited by the S.C.** population and S.T. population respectively.
- **Funds** are non-lapsable.
- **District Authority coordination and supervision** at the district level.
 - The district authority must inspect **at least 10% of all work under** implementation every year.
- Ministry of Statistics and Program Implementation is **responsible for policy formulation**, and the **release of funds** under the scheme.



ASTRA missile

- Light Combat Aircraft Tejas, has successfully been test fired the ASTRA missile.
 - It is a **Beyond Visual Range Air - to - Air missile**, indigenously developed by DRDO
- **Key Features:**
 - Range: 80-110 kms for version Mk1 and 160kms for version Mk2.
 - Altitude: up to 20 km.
 - Max Speed: Mach 4.5



Galaxy ESO 300-16

- **Hubble Space Telescope (HST)** captured an image of the **irregular galaxy ESO 300-16**.
 - An irregular galaxy **lacks the distinct spiral arms or elliptical shape of some galaxies**. It lies 28.7 million light-years from Earth in **constellation Eridanus**.
 - It resembles the **shape of a cloud**, comprised of many tiny stars all clumped together.
- HST, launched in 1990, is collaboration between **NASA and European Space Agency**.
 - It observes the universe in **visible, near-infrared light, and ultraviolet light**.
 - It **orbits above Earth's atmosphere**, which gives it a better view of universe than telescopes have at ground level.

 <p>G20 welcomes global Initiatives to curtail AMR</p>	<ul style="list-style-type: none"> ● Global Antibiotic Research and Development Partnership (GARDP): It is a non-profit organization created by WHO and others to tackle antibiotic resistance. <ul style="list-style-type: none"> ➤ It accelerates the development and access of treatments for drug-resistant infection. ● SECURE: the first dedicated mechanism to expand access in LMICs to essential antibiotics which goes beyond access to single products. <ul style="list-style-type: none"> ➤ It is being developed by the WHO and GARDP ● Combating Antibiotic Resistant Bacteria (Carb-X): A global non-profit partnership to accelerate antibacterial innovation.
 <p>Mylara cult</p>	<ul style="list-style-type: none"> ● Recently discovered sculptures in Karnataka has proved the existence of the cult in the state <ul style="list-style-type: none"> ➤ The members of the Cult worship, Mylara who is a folk deity also identified as a manifestation of Lord Shiva. ➤ The deity is often depicted seated, standing or on a horse and he is generally seen holding a sword, trisula (trident), a damaru (hour-glass shaped drum) and a bowl. ➤ The cult is prevalent in the states of Karnataka, Maharashtra, Andhra Pradesh and Tamil Nadu.
 <p>Khelo India Programme(KIP)</p>	<ul style="list-style-type: none"> ● KIP was introduced in 2017 to revive the sports culture in India at the grassroots level by building a strong framework for all sports played in our country. <ul style="list-style-type: none"> ➤ Under this, Khelo India Youth Games (KIYG), the Khelo India University Games (KIUG) and the Khelo India Winter Games were set up as annual national sports competitions. ➤ Components of Scheme: Competitions, Talent Identification, Sports Infrastructure.
 <p>Personality in News</p>	<p>Calyampudi Radhakrishnan (C.R) Rao, a pioneering statistician passed away.</p> <ul style="list-style-type: none"> ● Contributions: <ul style="list-style-type: none"> ➤ He founded fundamental statistical concepts such as - Cramer–Rao inequality and Rao–Blackwellization theorem, information geometry, and Fisher–Rao metric. ➤ Served as chairman of the Committee on Statistics and Demographic and Communication for Population Control. ➤ Book: Statistics and Truth: Putting Chance to Work ➤ He was awarded Padma Bhushan (1969) and Padma Vibhushan (2001). ● Ethical values: Integrity, Professionalism, Dedication to duty.
 <p>Places in News</p>	<p>Ecuador (Capital: Quito)</p> <ul style="list-style-type: none"> ● Ecuador voters reject oil drilling in Yasuni National Park, a protected area under Amazon rain forest. ● Political Boundaries <ul style="list-style-type: none"> ➤ Country of north-western South America. ➤ Borders Colombia (north), Peru (east and south), and Pacific Ocean (west). ➤ It includes Pacific archipelago of Galapagos Islands. ● Geographical features <ul style="list-style-type: none"> ➤ Situated on Equator. ➤ Highest point above Earth's centre: Mt. Chimborazo. ➤ Major rivers: Amazon, Marañón, Putu-mayo etc. 