QUEST

August Edition(2023 - 2024)

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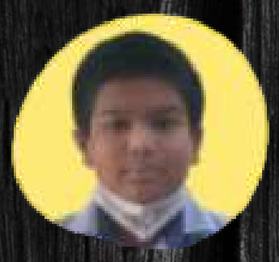

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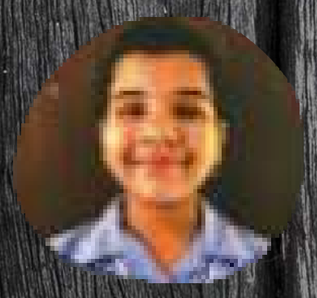

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FROM THE EDITOR'S DESK...

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Quest is an engaging platform for students to express their scientific and mathematical creativity through cartoons, art forms, creative writing. research articles, analysis, paintings, drawings and other forms relative to General Science and Mathematics.

All the students of classes P4- SS2 are encouraged to bring forth their scientific temperament in any representation of writings, videos, photography or art forms.

TABLE OF CONTENTS

HOW ARE WE ABLE TO WALK ?

Ever thought that how are we able to walk ? Let's understand. While walking, we step on the ground and tend to push it backwards. According to Newton's third law of motion, every action has an equal and opposite reaction. So when we push the ground backwards(Action), we are pushed forward in return(Reaction). Hence we are able to walk.

Action and Reaction forces:-

- Always act on two different bodies.
- Are the forces of the same type
- Are co-linear
- Act simultaneously

You would have heard about Chandrayaan-3, a recent mission launched by the Indian Space Research Organization(ISRO) on 14th July 2023 at 14:35hrs from Sriharikota Satish Dhawan Space Centre- Launchpad 2.

Do you know how rockets fly ?

Rockets fly using the same law. The gases ejected by the rocket exert force on the ground and the ground applies opposite force on them which pushes the rocket upwards.

Even birds fly using the third law of motion.

It requires 200 muscles just to take one step. This is why walking is considered a full-body exercise. It is not just your arms and legs that are responsible for the forward motion, your core is hard at work too!

QUIZ!!!!!??????

This is a quiz based on Newton's third law of motion and Chandrayaan- 3-

https://forms.office.com/r/83zHwgBa1c

Please attempt it . Your response would be appreciated and the one who scores the highest would get recogonition in the next month's quest with his/her photo and name.

INTERESTING

https://youtu.be/5gjWtGDjDX8

Last Month's Winner !!!!

Shrineet Mishra

Made by - Nikhil Asrani S1A and Supervised by - Mrs. Arvinder Kaur

The Day Satan Danced

In Japan it was a rather bleak day,
The shadows were pinned to the ground.
The destruction left by Enola Gay,
Had turned Hiroshima into a mound.

Flesh piled upon screaming bones,
The firestorm enveloped the city.
WWII had unfortunately grown,
Into a disastrous calamity.

Timber crushed against civilians' muscles,
Trapped in midst of sobs from brothers.
Remembering when chaos won the tussle,
Even today the Japanese shudder..

"Victory to us!" was what Truman believed,
Yet we turn around and look otherwise.
Had something good been achieved?
Still ask some anguished wet eyes.

Shreyas Mishra
M3-B

LVM3-M4 CHANDRAYAAN-3 MOON MISSION

What is the mission?

Chandrayaan-3, India's third lunar exploration mission with a building cost of ₹615 Crores, took off in the fourth operational mission (M4) of the LVM3 Launch Vehicle Mark-3 or LVM3 (previously referred to as the Geosynchronous Satellite Launch Vehicle Mark III or GSLV Mk III) launcher on 14th July 2023.

ISRO is crossing new frontiers by demonstrating a soft landing on the lunar surface by its lunar module and demonstrating roving on the lunar terrain. It is expected to be supportive of ISRO's future interplanetary missions.

Mission Specifications

Launch Date

14th July 2023

Landing Date

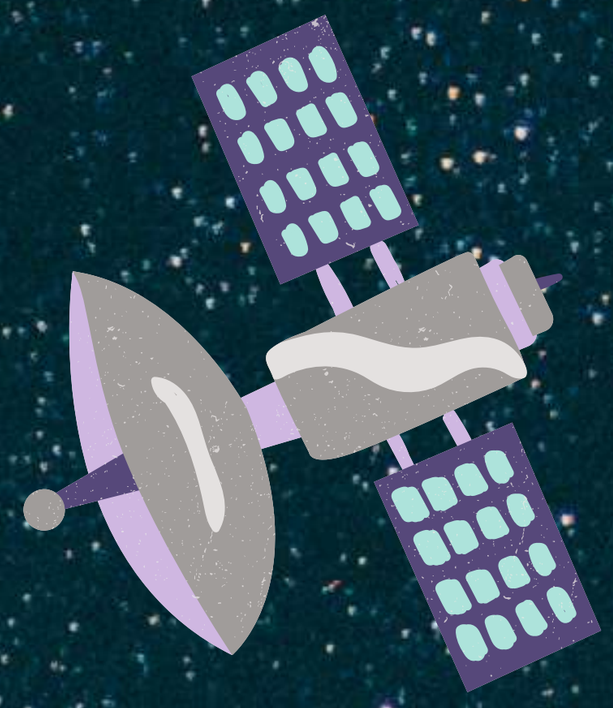
23rd August 2023

Fuel Used

Liquid Nitrogen & Oxygen

Power Generation

738 W, Summer solstices and with bias

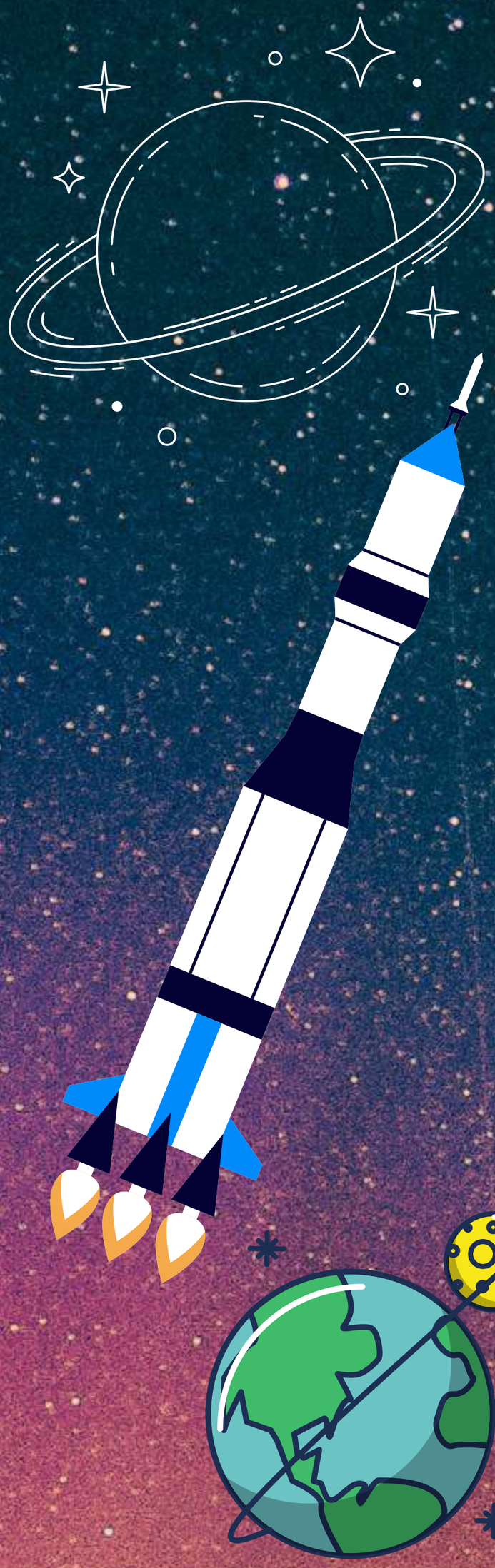


Mission Life

Propulsion Module- 3 months

Lander- 1 lunar day (14 Earth days), will recharge through solar panels

Rover- 1 lunar day (14 Earth days), will recharge through solar panels



Mission Sequence

Earth Centric Phase (Phase 1)

- Pre-launch Phase
- Launch and Ascent Phase
- Earth-bound Manoeuvre Phase

Lunar Transfer Phase (Phase-2)

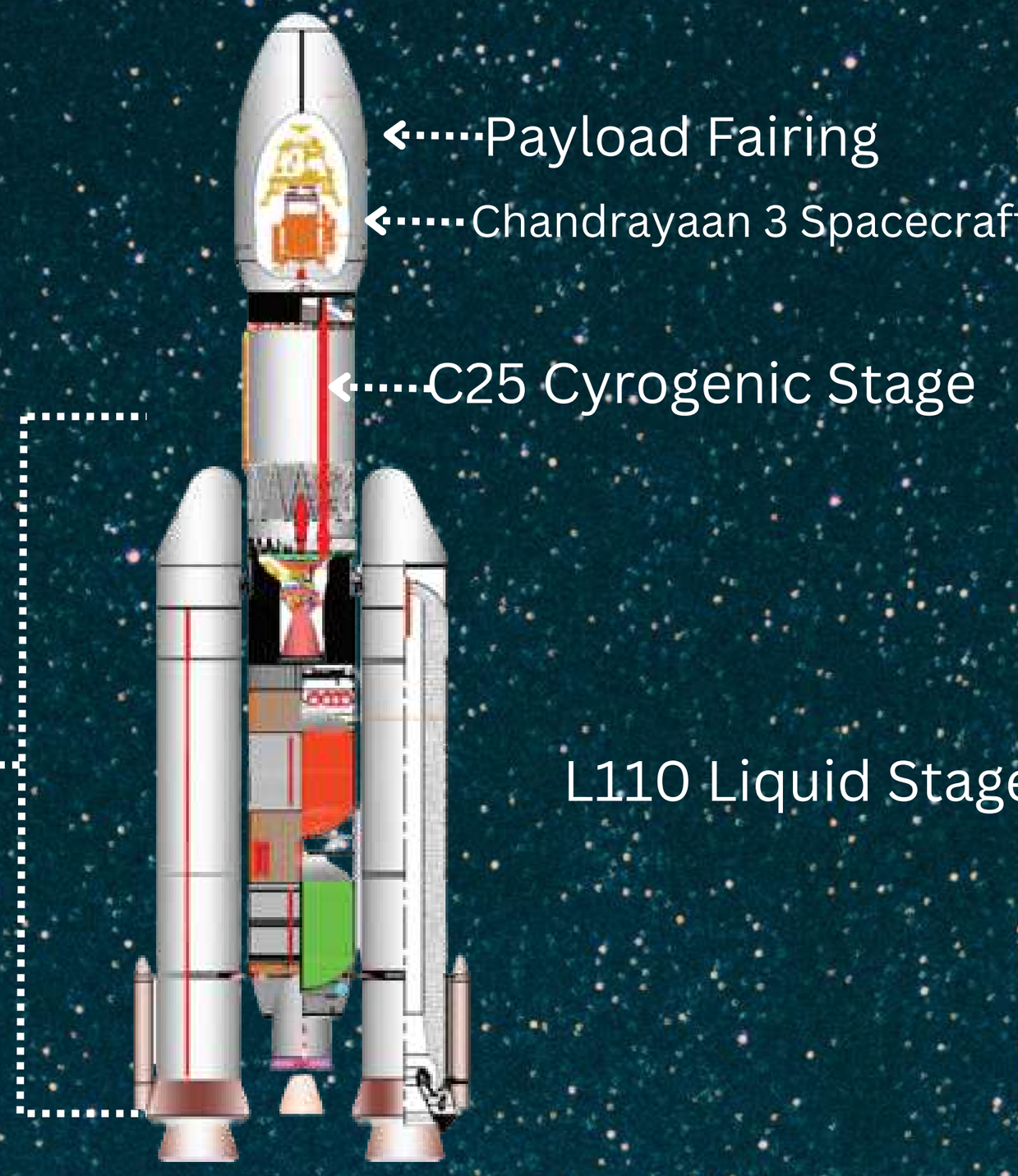
- Transfer Trajectory Phase

Moon Centric Phase

- Lunar Orbit Insertion Phase (LOI)-(Phase-3)
- Moon-bound Manoeuvre Phase (Phase-4)
- PM and Lunar Module Separation (Phase-5)
- De-boost Phase (Phase-6)
- Pre-landing Phase (Phase-7)
- Landing Phase (Phase-8)
- Normal Phase for Lander and Rover (Phase-9)
- Moon Centric Normal Orbit Phase (100 km circular orbit) - For Propulsion Module (Phase-10)

LVM3-M4 Vehicle

LVM3 has a spectacular pedigree of completing 6 consecutive successful missions. This is the 4th operational flight of LVM3, which launched the Chandrayaan-3 spacecraft into the Geo Transfer Orbit (GTO).



Propulsion Module

Chandrayaan-3 consists of an indigenous propulsion module, lander module, and a rover with the objective of developing and demonstrating new technologies required for inter-planetary missions.

The propulsion module will carry the lander and rover from injection orbit to till 100 km lunar orbit. It also carries a Spectro-polarimetry of Habitable Planetary Earth (SHAPE) payload to study the spectral and polarimetric measurements of Earth from the lunar orbit.

Brief History

Chandrayaan-1 22 Oct 2008 – 28 Aug 2009

Chandrayaan 1 was an unmanned spacecraft weighing 1380 kg along with 11 scientific payloads built in India, UK, USA, Germany, Bulgaria and Sweden.

Chandrayaan-2 22 July 2019

The primary objectives of the Chandrayaan-2 lander were to demonstrate the ability to soft-land and operate a robotic rover on the lunar surface for future plans, the Chandrayaan-2 orbiter is still orbiting the Moon on a polar orbit at an altitude of 100 km (62 mi)

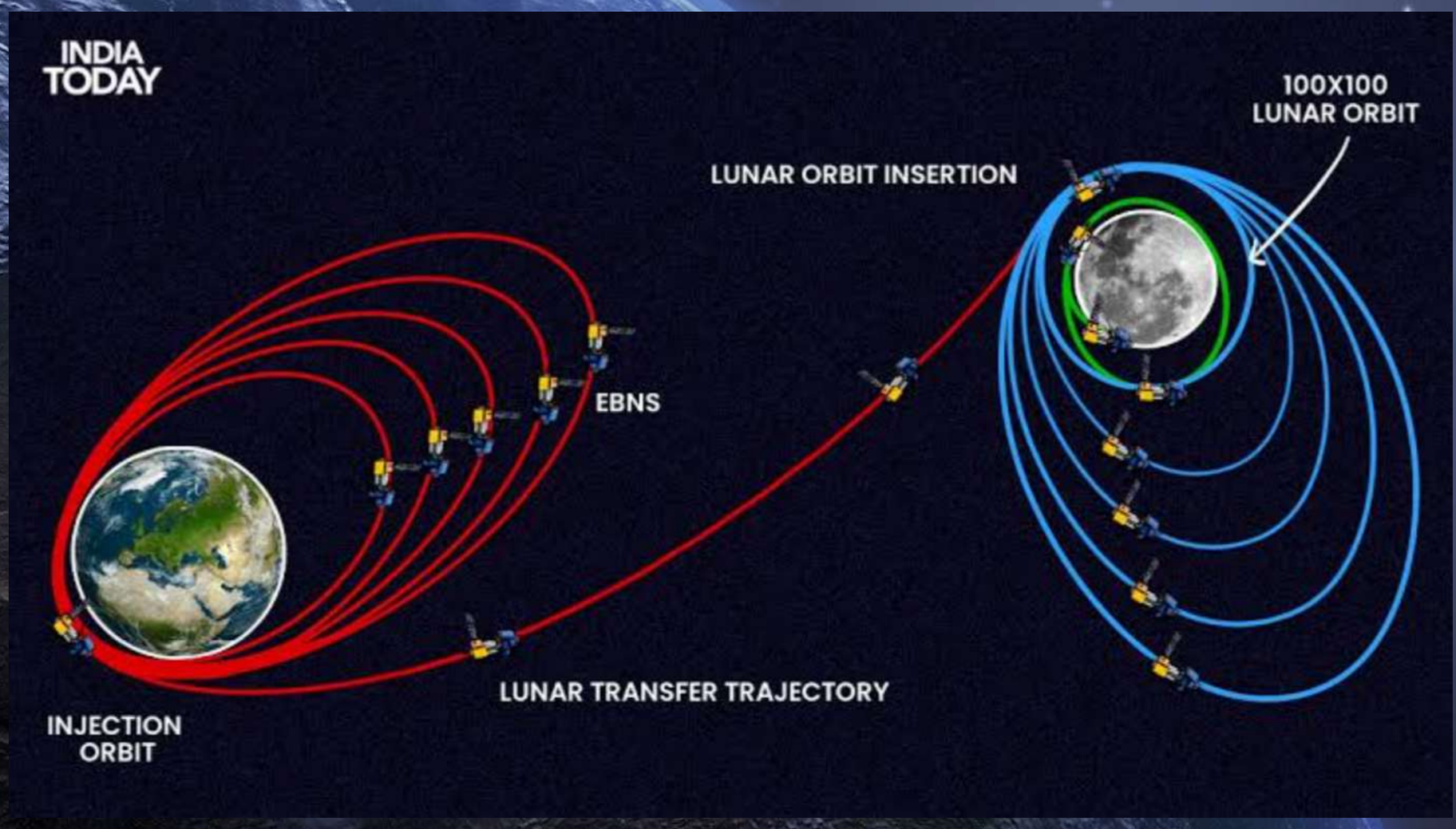
Chandrayaan-3 14 July 2023

The primary goal of Chandrayaan-3 is to land a rover on the moon and conduct scientific experiments to study the lunar environment. The landing is planned for 23rd August 2023. We hope that this endeavour of ISRO accomplishes its goals and brings India into the league of nations that have this feat.

-Kavish Gupta
M2C

CHANDRAYAAN 3

- CHANDRAYAAN 3 IS THE LUNAR MISSION WHICH HAS STARTED AT 14 JULY AND LAND ON MOON AT 23 AGUST. THE SATELLITE WILL ORBIT 5 TIMES TO EARTH AND 5 TIME TO MOON



ABOUT SATELLITE

THERE IS THE SATELLITE IS VERY NECESSARY FOR CHANDRAYAAN 3 THERE ARE ONE ROVER AND LANDER WORK OF ROVER IS IS STUDY ABOUT SOME CHEMICAL COMPONENT LANDER WORK IS TO LAND IN MOON AT VERY SAFE LANDING

WHAT IS THE MOTIVE OF CHANDRAYAAN 3

THE MOTIVE OF CHANDRAYAAN 3 IS TO GO TO SOUTH OF MOON TO STUDY CHEMICAL REACTION WHEN THIS MISSION WILL BE SUCCESSFUL , INDIA WILL BE 4TH COUNTRY WHO HAS LAND SAFELY AT MOON (AFTER CHINA,AMERICA AND RUSSIA)

By Arunav of M2B

video gallery

Art Gallery

-Delisha Sharma M2-A

-Delisha Sharma M2-A

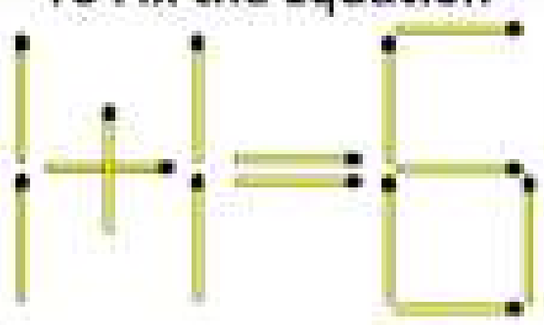

AADYA SRIVASTAVA S1D


AADYA SRIVASTAVA S1D


AADYA SRIVASTAVA S1D

BRAIN TEASERS

① Move 1 & Remove 1 Matchstick To Fix the Equation



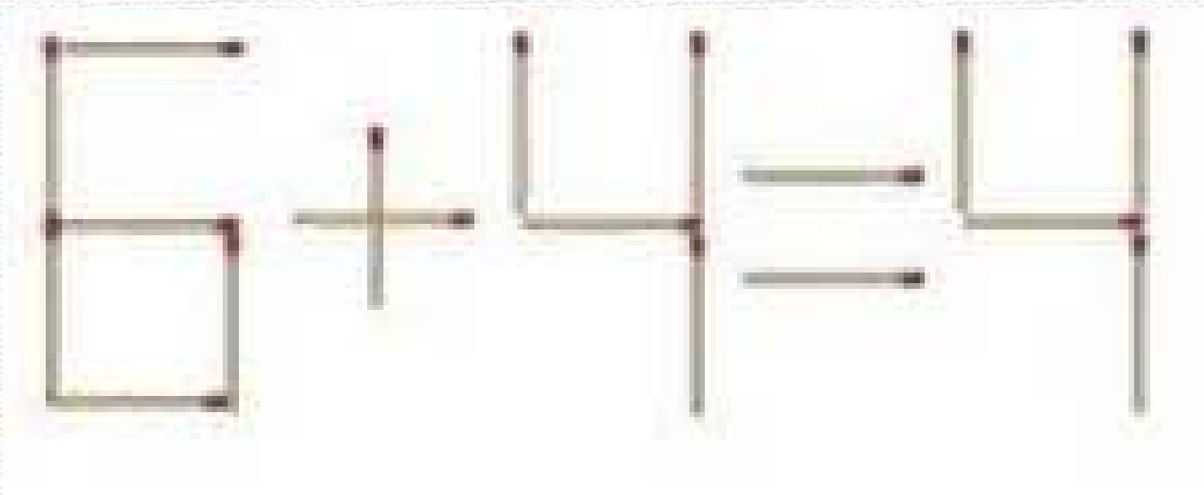
② 

③ If John's son is my son's father, who am I?

Who am I?

④ 

How many holes does this t-shirt have?

⑤ 

Move 1 match to make this sum correct

"IF YOU ARE WORKING ON SOMETHING THAT YOU REALLY CARE ABOUT, YOU DON'T HAVE TO BE PUSHED. THE VISION PULLS YOU."

—STEVE JOBS