



M.L.A HIGH SCHOOL DIMENSIONS

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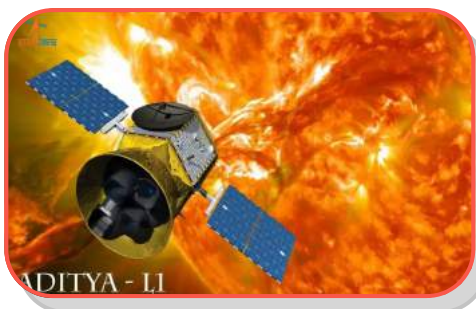
- A SCIENCE WATCH

Aditya L1

The mission will take around 109 Earth days after launch to reach the halo orbit around the L1 point, which is about 1,500,000 km (930,000 mi) from Earth. The spacecraft is planned to remain in the halo orbit for its mission duration while being maintained at a station keeping Δv of 0.2-4 m/s per year. The 1,500 kg (3,300 lb) satellite carries seven science payloads with various objectives, including instruments to measure coronal heating, solar wind acceleration, coronal magnetometry, origin and monitoring of near-UV solar radiation (which drives Earth's upper atmospheric dynamics and global climate), coupling of the solar photosphere to the chromosphere and corona, and in-situ characterisations of the space environment around Earth by measuring energetic particle fluxes and magnetic fields of the solar wind, and solar magnetic storms.



Aditya-L1 will provide observations of the Sun's photosphere, chromosphere and corona. Its scientific payloads must be placed outside the interference from the Earth's magnetic field, and hence, could not have been useful in the low Earth orbit, as proposed in the original mission concept back in 2008.



One of the major unsolved problems in the field of solar physics is coronal heating. The upper atmosphere of the Sun has a temperature of 2,000,000 K (2,000,000 °C; 3,600,000 °F), whereas the lower atmosphere is just 6,000 K (5,730 °C; 10,340 °F).[26] In addition, it is not understood exactly how the Sun's radiation affects the dynamics of the Earth's atmosphere on a shorter as well as a longer time scale. The mission will obtain near-simultaneous images of the different layers of the Sun's atmosphere, which will reveal the ways in which energy is channeled and transferred from one layer to another.

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Restoring coral reefs

Saving and restoring the world's coral reefs requires a multi-pronged approach that ranges from the local to the global level. Despite notable successes at the local level, we still have a gap to make significant impacts at the ecosystem level. To close this gap, we need to increase resources dedicated to restoration. At the same time, we need to significantly increase the efficiency of every dollar spent and every minute a diver spends underwater. This will require new ways of thinking and advances at a quicker pace than we have seen to date.

The [NOAA Coral Reef Conservation Program](#) leads the agency's coral research, conservation, and restoration efforts. The program's [strategic plan](#) outlines a framework for reducing the main threats to coral reef ecosystems: climate change, fishing impacts, and land-based sources of pollution. The plan also recognizes coral reef restoration as an important focus and the fourth "pillar" of the program.



Within this restoration pillar, NOAA's work focuses on four strategies:

- Improving habitat quality for corals. This includes supporting research and development of activities that will reduce nuisance and invasive species that compete with corals for habitat.*
- Preventing loss of corals and their habitat. Identifying high-risk areas, supporting emergency response, and recovering damages from physical events such as vessel groundings all play a role in reducing damage to coral reefs.*
- Enhancing coral population resilience. Research and development of innovative techniques will help improve the resilience and reduce the mortality of coral larvae. In addition, we are building partnerships to help conduct restoration at ecologically meaningful scales.*

Improving coral health and survival. Improving techniques that control the spread of coral diseases and reduce the impacts of organisms that feed on corals will help improve survival rates for corals at key reef sites.

Cosmetics

Cosmetics are constituted mixtures of chemical compounds derived from either natural sources, or synthetically created ones. Cosmetics have various purposes. Those designed for personal care and skin care can be used to cleanse or protect the body or skin. Cosmetics designed to enhance or alter one's appearance (makeup) can be used to conceal blemishes, enhance one's natural features (such as the eyebrows and eyelashes), add color to a person's face, or change the appearance of the face entirely to resemble a different person, creature or object. Due to the harsh ingredients in makeup products, individuals with acne-prone skin are more likely to suffer from breakouts. Cosmetics can also be designed to add fragrance to the body.



Cosmetics designed for skin care can be used to cleanse, exfoliate and protect the skin, as well as replenishing it, by the use of cleansers, toners, serums, moisturizers, eye creams, retinal, and balms. Cosmetics designed for more general personal care, such as shampoo, soap, and body wash, can be used to cleanse the body.

Cosmetics designed to enhance one's appearance (makeup) can be used to conceal blemishes, enhance one's natural features (such as the eyebrows and eyelashes), add color to a person's face and in the case of more extreme forms of makeup used for performances, fashion shows and people in costume can be used to change the appearance of the face entirely to resemble a different person, creature or object. Techniques for changing appearance include contouring, which aims to give shape to an area of the face.

Effects of cosmetics

Clogged Pores : If you are applying makeup on a regular basis and leaving it on your skin for a long time, there are chances that your skin pores get clogged. This does not let your skin breathe, making it prone to acne, bumps and other facial skin problems. You may notice bumps around your eyes as well.

Dry or Oily Skin : Makeup products that do not suit your skin type, can make your skin drier or oilier. People with dry skin may experience extreme dryness if they use makeup that's not meant for their skin type. Similarly, those with oily skin may experience too much of oil production than usual after using the wrong products.

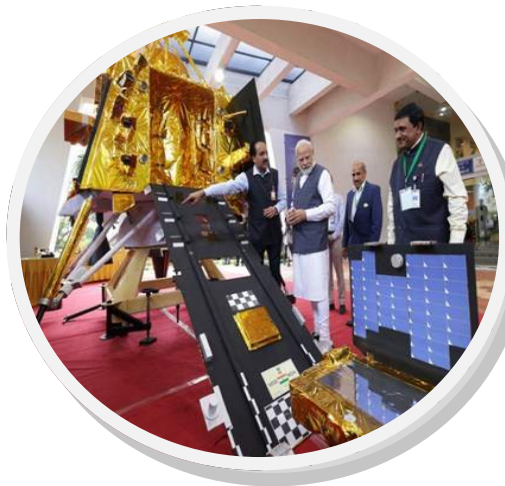
Allergic Reaction : While some makeup products look similar, ingredients vary from one brand to another. Products formulated with mild ingredients do not harm your skin. However products with harmful chemicals like parabens and SLES can cause allergic reactions. If you are allergic to certain ingredients, such products can make it worse. They can make your skin itchy and uncomfortable.



Chandrayaan - 3

Chandrayaan-3 is the third mission in the Chandrayaan Programme, a series of lunar exploration missions developed by the Indian Space Research Organization (ISRO). The mission consists of a lunar lander named Vikram and a lunar rover named Pragyan, similar to those launched aboard Chandrayaan-2 in 2019.

Chandrayaan-3 was launched from Satish Dhawan Space Centre on 14 July 2023. The spacecraft entered lunar orbit on 5 August, and the lander touched down near the Lunar south pole on 23 August at 18:03 IST (12:33 UTC), making India the fourth country to successfully land on the Moon, and the first to do so near the lunar south pole. On 3 September the lander hopped and repositioned itself 30-40 cm (12-16 in) from its landing site making the second hop on lunar surface after Surveyor . After the completion of its mission objectives, it was hoped that the lander and rover would revive for extra tasks, on 22 September 2023, but missed the wake-up call. On September 30, the second lunar night began, eliminating hopes of revival. On the other hand, Propulsion module returned to Earth's orbit on 22 November 2023 after exiting lunar orbit via a series of maneuvers starting from 9 October 2023.



- **Scientific advancement:** *The mission will collect data on the Moon's geology, atmosphere, and potential for resources. This information will help scientists to better understand the Moon and its role in the formation of the Solar System.*
- **Technological development:** *The mission will also test and develop new technologies for space exploration. This will help India to build its own space capabilities and to become a more competitive player in the global space market.*
- **Economic boost:** *The success of Chandrayaan-3 is expected to boost India's economy in a number of ways. It will create jobs in the space industry and it will attract foreign investment. It will also help to raise India's profile on the world stage and to promote its scientific and technological prowess.*
- **National pride:** *The success of Chandrayaan-3 will be a source of national pride for India. It will show the world that India is a major player in the space race and that it is capable of achieving great things.*

Environmental Impact of war in Ukraine



Ravaged forests, flooded towns and dead dolphins: after nearly two years of war in Ukraine, experts say environmental damage is becoming an "enormous" tragedy that will affect generations to come.

The invasion of Ukraine has been particularly devastating for nature, said Doug Weir, head of research at the Conflict and Environment Observatory, a British / non-governmental organization.

Along with intense artillery fire, there has also been an increase in pollution due to frequent attacks on energy infrastructure and vast amounts of debris generated by bombing in urban areas.

The mapping and initial screening of environmental hazards only serves to confirm that war is quite literally toxic," said UNEP Executive Director Inger Andersen. "The first priority is for this senseless destruction to end now.

"Ukraine will then need huge international support to assess, mitigate and remediate the damage across the country, and alleviate risks to the wider region. The 2022 Russian invasion of Ukraine has led to widespread and possibly serious and long-term environmental damage, The Ukrainian government and journalists and international observers describe the damage as ecocide.

Explosions inflict toxic damage along with physical destruction. After every explosion particles of toxic substances; such as lead, mercury and depleted uranium; are released into air, water, and soils. When ingested explosives like TNT, DNT, and RDX, cause illness.

Fights in heavily industrialized areas lead to technological disasters, such as spills of tailings and fuel, that poison vast territories not only in Ukraine, but also in Europe and Russia. Destroyed buildings release carcinogenic dust for decades. Heavy metals and chemicals penetrate underground waters and poison water sources, killing all life in rivers and water bodies. Destruction of civil infrastructure has already left more than 4 million people without access to pure drinking water. Soils in areas of military conflict are no longer fit for agriculture, because plants draw up and accumulate the pollutants. War also increases the risk of nuclear accidents. Power shortages at nuclear plants and fights in vicinity of stations may result in disasters like in Chernobyl or Fukushima. Military emissions of CO₂ reach hundreds of million tonnes and undermine the goals of the Paris Agreement.



Estimating the total environmental damage inflicted by the war is not possible until it ends. According to preliminary data, it will take Ukraine's nature at least 15 years to recover.

Health benefits

Curry Leaves Benefits



Improves Oral Health

Improved Vision

Promotes Better Digestion

Good For Weight Loss

Good For Respiratory Issues

Benefits of Indian Borage (Mexican Mint) Organic Facts

-  Beneficial in providing relief from osteoporosis and arthritis
-  Provides relief from irritable bowel syndrome
-  Aids in treating breast prostate cancer
-  Boosts immune system
-  Gives relief from stress and anxiety
-  Promotes sweating and helps to reduce fever
-  Stimulates urination and helps to keep kidneys healthy
-  Prevents macular degeneration and reduces stress on eyes



Caution: Pregnant women and breastfeeding mothers to avoid use

www.organicfacts.net

HEALTH BENEFITS OF BASIL

- IMPROVES MENTAL CLARITY & MEMORY
- MAY HELP PREVENT CERTAIN TYPES OF CANCER
- COULD HELP REVERSE LUNG DAMAGE
- REDUCES THE SEVERITY OF ASTHMA ATTACKS
- LOWERS BLOOD PRESSURE
- REDUCES INFLAMMATION
- REDUCES STRESS AND ANXIETY
- BOLSTERS THE IMMUNE SYSTEM
- AIDS IN DIGESTION
- EXCELLENT FOR SKIN CARE
- PROTECTS THE BODY AGAINST TOXINS
- REDUCES THE RISK OF HEART DISEASE



Eucalyptus Health benefits and Medicinal uses



- * Treats wounds
- * Controls Diabetes
- * Fights skin diseases
- * Good for dental care
- * Eliminates intestinal worms
- * Great anti-inflammatory & analgesic
- * Good for the respiratory system

KM Mint Chemicals

Health Benefits Of Avocado



- Its good for digestion
- It's good for dental care
- It has cosmetic properties
- It's good for your liver
- It is good for your kidneys
- It helps with morning sickness
- Its good for arthritis
- It has antioxidant properties
- Great for eyes
- Other benefits

www.lybrate.com   **lybrate**

HEALTH BENEFITS OF WOOD APPLE OR BEL FRUIT



- Aids in digestion 
- Prevents scurvy 
- Purifies blood & removes toxins 
- Effective for ear aches 
- Protects against malaria 
- Improves kidney health 
- Good for diabetic patients 
- Relieves respiratory problems 
- Excellent energy booster 
- Cures snakebites 

Caution: Excessive consumption of Bel fruit may cause flatulence in the abdomen

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Fun Corner

Biology Terms

S	S	P	M	B	I	O	L	O	G	Y	Y	O	H
C	Y	R	W	I	L	O	Y	C	E	K	M	O	Y
I	S	O	E	O	T	R	Y	O	M	T	O	I	P
E	E	P	O	Y	O	O	N	S	N	Y	T	A	E
N	N	H	I	N	M	N	S	E	I	O	A	N	R
C	E	A	G	E	N	E	T	I	C	S	N	A	T
E	G	S	E	Y	A	C	O	I	S	T	A	P	O
Y	C	E	E	C	O	L	O	G	Y	P	T	H	N
N	O	T	E	L	E	K	S	O	T	Y	C	A	I
E	I	W	I	S	O	T	O	N	I	C	P	S	C
O	T	O	E	M	P	Y	S	I	S	O	I	E	M
R	O	C	C	I	N	O	T	O	P	Y	H	O	P
M	S	A	L	P	O	T	Y	C	N	T	C	N	T
R	L	O	E	M	O	S	O	B	I	R	K	E	E

HYPERTONIC
PROPHASE TWO
CYTOSKELETON
MITOSIS
RIBOSOME
CYTOPLASM
ANAPHASE ONE
ISOTONIC
HYPOTONIC
ANATOMY
ECOLOGY
MEIOSIS
GENES
GENETICS
BIOLOGY
SCIENCE

Play this puzzle online at : <https://thewordsearch.com/puzzle/39029/>

**A MAN DIES OF OLD AGE
ON HIS 25TH BIRTHDAY.
HOW IS THIS POSSIBLE?**

The man was born on 29th February

FACTS

- Hot water will turn into ice faster than cold water. ...
- The Mona Lisa has no eyebrows. ...
- The strongest muscle in the body is the tongue.
- Ants take rest for around 8 Minutes in 12-hour period.
- "I Am" is the shortest complete sentence in the English language.

- Why is Europe like a frying pan?
- What month of the year has 28 days in it?
- What has to be broken before you can use it?
- I have cities, but no houses. I have mountains, but no trees. I have water, but no fish. What am I?
- What is seen in the middle of March and April that can't be seen at the beginning or end of either month?
- What English word has three consecutive double letters?
- I come from a mine and get surrounded by wood always. Everyone uses me. What am I?
- I have keys, but no locks and space, and no rooms. You can enter, but you can't go outside. What am I?
- This belongs to you, but everyone else uses it.
- What can you hold in your right hand, but never in your left hand?

1. Greece at the bottom.
2. All the month
3. A egg
4. A map
5. Your name
6. Bookkeeper
7. A pencil
8. Keyboard
9. Your name

ANSWER KEY:

Ecoclub

J.C Bose Eco club organizes various activities to create awareness among students towards environment

- ◆ *40 students of grade IX volunteered as Eco club members.*
- ◆ *Students of Eco club took part in skit on effects of plastic, collage making over beat plastic on occasion of World environmental day celebrated on June 5th 2023*



- ◆ *Students of Eco club took part in clay model of Eco friendly Ganesha and use of cloth bag over plastic by stitching cloth bag on occasion of International ozone day celebrated on sept 16th 2023*



- ◆ *Students of Eco club participate in Science online quiz and achieved third prize organized by CTD.*
- ◆ *Students of Eco club participated in state level Science quiz organized by WWF.*



- ◆ *Students of Eco club took part in session regard effect of climate change on nature organized at Parikrma oxygen by Parikrma.*
- ◆ *Students of Eco club participate in science quiz organized at our school.*



- ◆ *All the students took part in activities with joy and excitement.*

Editorial

“Exploration is wired into our brains. If we can see the horizon, we want to know what’s beyond”.

- Buzz aldrin

“ A giant step for India , and a gigantic leap for Indian dreamers, we are transitioning From ‘ Make in India ‘ to a ‘Made possible in India ‘ enterprise era of first principle thinking innovation “

Along with J C Bose Eco club champs. Dimensions is also one of the tool through which scientific thinking favours humility over pride, doubt over certainty , curiosity over closure among learners.

My gratefulness to our Management for their harmonious inspiration . I express my gratitude towards my Head Mistress S Inba Kumari Mam for her Support and encouragement .

My appreciation to my dear learners for their intense Zeal in bringing out this issue .

- Sushmitha N Revankar