

Home beyond Earth

Ever wondered what it feels to live where the sun rises every ninety minutes and the Earth's a marble floating beneath your feet? International Space Laboratory is humanity's most expensive object floating in space where technology, science and dreams orbit together. **Arya Shukla, AIS Jagdishpur, VII A**, brings to you **part VII** of GT's Extreme Science Labs series, where we travel from the scorching arid deserts to sub-zero polar regions, from deep underground to towering mountain peaks, exploring laboratories that host some of the most daring experiments ever conducted.

Where is it situated?

The ISS doesn't sit on solid ground but orbits around the Earth's surface at an altitude of 400 kilometres above the Earth's surface, racing at 28,000 kilometres per hour. Every 90 minutes, it loops around the globe, giving its crew 16 sunrises and 16 sunsets each day. There is no weather, no breathable air, and no true day or night. Life exists only within the thin walls of the station.

Chasing the unknown

Researchers from varied nations work together to hunt questions whose answers



International Space Station (ISS) orbiting the Earth

can't be found on Earth. Experiments are carried out in a near-weightless state where fire forms strange blue spheres, plants twist and grow in surprising ways, and human bodies change - muscles shrink, bones thin, and fluids drift towards the head. Unsettling yet treasured, these experiments aim to improve life on Earth by conducting long term research on the effects of microgravity and radiation on the human body for treatments, while monitoring the Earth's weather pattern and atmospheric composition. It also pursues humanity's biggest dream - surviv-

ing on the Moon and reaching Mars.

Built for the extremes

Picture a football field-sized structure soaring through space, its solar panels glinting like wings. That's ISS. Inside, it's a maze of module-science rooms, living quarters, and control hubs. Outside, temperatures swing from blistering heat (+120°C) when facing the Sun to bone-chilling cold (-160°C) in Earth's shadow. To survive, the station is wrapped in insulation and armoured against micrometeoroids. Life



aboard is a balancing act where supplies are limited, accidents are risky, and gravity is absent. Astronauts rely on robotic helpers, computers, and resupply ships chasing the station to deliver food and oxygen.

Lab legends

Since 2000, the ISS has been home to more than 3,000 experiments. Some are iconic, like the first lettuce crop eaten in orbit while others curb curiosity by exploring how spiders spin webs in zero gravity. And then the breathtaking experiments where astronauts step outside for spacewalks, tethered only by a cord. The ISS itself is a record breaker; costing over 150 billion USD, it holds the title of the most expensive object ever built by humankind.

Why it matters

Its research up there has led to breakthroughs in medicine, technology, and clean water systems. But ISS is more than an outpost in space, it's a bridge between worlds emphasising cooperation amongst countries. It's a constant reminder that curiosity and courage can carry humanity far beyond limits and that our story spans larger than one planet alone.

Read Play and Win 94

Reading your favourite GT can fetch you a prize too. Complete all the boxes below. Click a picture and send it to editor@theglobaltimes.in or submit your responses by visiting The Global Times website (<http://theglobaltimes.in/readplaywin/>). Three lucky winners will win a prize every week!



Q.1 Which series has been reviewed in this edition?	Q.2 Which plane is nicknamed the Sky Mammoth on page 10?	Q.3 At what altitude does the ISS orbit around the Earth on page 4?
Q.4 What is the theme of pages 8 and 9 in this edition?	Q.5 Name the captain who led India's women cricket team to victory in the World Cup 2025.	Q.6 What award did Chairperson ma'am receive?
Q.7 _____ is the tagline of AIMUN 2025 on page 6.	Q.8 What's the headline of the perspective story?	Q.9 Which chain of bookstores is mentioned on Page 3?

Name:.....Class:.....School:.....

Results of Read Play & Win-93: **Vibhav Goyal**, AIS Gur 46, IV H; **Aadit Sharma**, AIS Vas 1, III D; **Garv Bhutani**, AIS MV, VIII D

A snowfall in the deep

Marine Matter That Snowdrifts Under The Sea!

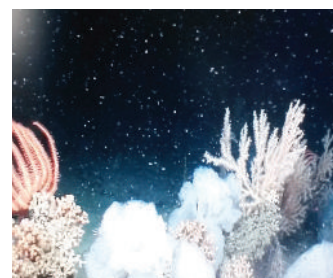
Aditi Pandey

AIS, VYC Lucknow, XI A

Imagine standing beneath the ocean's surface, where the sun disappears and snow falls. Not flakes of ice, but a ghostly shower of organic debris called marine snow, it was first spotted by deep-sea explorers in the 1930s.

What is marine snow?

Each 'snowflake' is a fragile cluster of dead plankton, faecal pellets, dust, and mucus that forms near the surface before drifting slowly down. The journey can take weeks, but along the way, about 97% of it is eaten or decomposed, leaving only 1-3%



to nourish life on the seafloor, acting as nature's own food delivery system for the abyss.

The ocean's carbon courier

Beyond feeding marine life, marine snow plays a vital role in Earth's climate. These particles carry carbon from the surface to the seafloor, locking it away for centuries in a process called the

biological carbon pump. This makes marine snow one of nature's efficient climate regulators.

The invisible MVP

Feeding the abyss, recycling the planet's waste, and locking away carbon - marine snow quietly keeps our planet in balance, one snowflake at a time.

The threats beneath

Human activity is changing this delicate system. Ocean warming, acidification, and plastic pollution disrupt plankton growth and contaminate these flakes with microplastics. Scientists using deep-sea cameras and sediment traps now find human fingerprints in once pure ocean snow.