



Ministry of Culture
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VIGYAN CONNECT

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Goa Science Centre

(A unit of National Council of Science Museums)

Ministry of Culture, Government of India

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<https://gscgoa.org>

<https://www.facebook.com/GSCPGoa>



<https://www.instagram.com/goasciencecentre>

OPENING NOTE

Dear Members and Science Enthusiasts,

It gives me immense pleasure to share with you the latest edition of our quarterly newsletter for the period October to December 2026. The coming quarter promises to be an exciting and eventful period, with a wide range of programmes aimed at promoting scientific awareness, creativity, cleanliness, environmental responsibility and a spirit of innovation among our visitors, students and the community.

As a part of our commitment towards a clean and responsible society, the Centre will actively participate in Swachhata Hi Seva – Phase 6.0. Through various cleanliness and awareness activities, we hope to reinforce the message that cleanliness is not merely a campaign but a collective responsibility and an integral part of our everyday lives.

The Centre will also host a State-Level Science Drama Competition on October 21-24, 2026, providing a platform for students and young participants to express their creativity and communicate message of science through the performing arts. Such programmes help us demonstrate that science communication can take many engaging and imaginative forms.

Our popular initiative will continue to engage young minds through a series of Creative Science Workshops from November 16 to 20, 2026 in disciplines viz. Science Buzz, Amazing Astronomy, Model Rocketry etc. encouraging participants to explore scientific concepts through hands-on activities, experimentation and innovative thinking.

The Centre will also celebrate Children's Day and National Mathematics Day, with specially designed activities and programmes that encourage curiosity, creativity and scientific temper among children.

This quarter is also special as we continue our 25th Anniversary Celebrations. The occasion provides us with an opportunity to look back with pride at the Centre's journey and its contribution towards popularising science among the people of Goa, while also looking ahead towards new initiatives and greater public participation.

I am confident that the diverse programmes planned during this quarter will strengthen our efforts to bring science closer to society and encourage young minds to observe, question, experiment and innovate.

Let us continue our journey of inspiring minds, promoting scientific temper and making science an integral part of everyday life.

With best wishes for a successful and inspiring quarter.

Shri A.K. Bhelave
(Centre Head)

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EXHIBIT AT THE CENTRE

Roller Coster



In this exhibit, visitors test their precision by releasing a ball from the highest point along the track. The primary goal is to discover the optimum velocity needed for the ball to glide smoothly across a continuous series of humps. As the ball drops, its gravitational potential energy transforms directly into speed and kinetic energy. Because energy is continuously lost to friction along the track, each consecutive hump is engineered to be slightly lower than the last—ensuring the ball has just enough momentum to complete its full coasting journey.



FRESH FINDINGS

ISRO EOS-05

On September 4, 2026, ISRO entered a new era of space-based surveillance with the successful launch of the Earth Observation Satellite-05 (EOS-05) using the GSLV-F17 rocket. Known as India's new "Eye in the Sky," EOS-05 is the nation's first dedicated imaging satellite positioned in a geosynchronous orbit, approximately 36,000 km above the Earth.

Unlike conventional Low Earth Orbit platforms that offer only periodic snapshots as they fly over a region, this spacecraft remains continuously synced with the Earth's rotation to maintain a continuous gaze over the Indian subcontinent and its surrounding waters.



Image: https://www.isro.gov.in/media_isro/image/index/GSLVF17_EOS05/DJ_20260831215048_0150_D.webp

EOS-05 is equipped with many spectral sensors and is designed to deliver high-quality visual updates as frequently as every five minutes. This rapid imaging capability is crucial in disaster management, allowing agencies to track fast-moving natural hazards like flash floods, cyclones, and forest fires in real-time. Beyond disaster relief and agricultural planning, the satellite serves as a very important asset for national security by providing 24-hours surveillance over sensitive border regions like the Line of Actual Control and crucial maritime trade routes.



Image: https://www.isro.gov.in/media_isro/image/index/GSLVF17_EOS05/43_c.webp

Did you Know?

GSLV-F17 is the 19th flight of India's Geosynchronous Satellite Launch Vehicle (GSLV) and the configuration of GSLV-F17 Payload Fairing is 4 m dia Ogive (composite) version.

SCIENCE & TECHNOLOGY HERITAGE OF INDIA

The Temple with Musical Pillars

On the quiet north-eastern edge of Hampi, Karnataka where the boulders of the Deccan meet the banks of the Tungabhadra River, stands the Vijaya Vittala Temple — not just a temple, but the crown jewel of the Vijayanagara Empire.

Walking inside feels like walking into a stone symphony. To your east is the world-famous monolithic Stone Chariot, carved to resemble Garuda's chariot and now the very symbol of Hampi and Karnataka. Just beyond, in the Ranga Mantapa, 56 slender pillars stand in silence, the famous musical pillars that sing SA-RE-GA-MA when tapped, a mystery of granite and genius.

Inside the Ranga Mantapa of the Vittala Temple, there is a forest of 56 tall pillars and 16 smaller ones, lovingly called the SAREGAMA pillars. At first they look like any other carved stone, but when tapped gently they once sang - producing the seven notes of Indian classical music and the soft thud of a mridangam and veena. So amazed were the British that they cut two pillars open to find the secret, only to find solid granite, nothing inside.



Science of acoustics in its magic:

The pillars are made of resonant granite, each with a different length, diameter and density, and each cluster around a main pillar vibrates at a different frequency, much like the bars of a xylophone. The intricate carvings also change the way sound travels through stone. Some scholars also believe the mandapa itself was designed as an acoustic chamber that amplifies the tone. Today, touching is banned by the ASI to save them, but even in silence, they remain one of ancient India's finest experiments where art meets acoustics.



DANCING SNAKE

You will need

- Paper Cup
- Pipe Cleaner
- Card Sheet
- Tape
- Scissors



What to do?

Step 1: Take your small piece of pipe cleaner and coil/curl it gently to resemble a tiny resting snake.

Step 2: Roll the card sheet tightly into a slender tube and tape it so that it maintains its shape.

Step 3: Carefully cut a small hole near the bottom side of the cup, sized so the paper roll can fit snugly into it.

Step 4: Turn the cup upside down onto your flat palm. Place the curled pipe cleaner "snake" right in the center of the inverted cup's base (now the top surface).

Step 4: Insert one end of the paper roll through the side hole of the cup.

Step 5: Place your lips to the outer end of the paper roll and hum or blow softly through it to see the dancing snake



Science behind it

As you hum or blow into the pipe, the air vibrations pass into the cup chamber. These sound waves and air currents cause the thin surface of the cup to vibrate, making the lightweight pipe cleaner snake wiggle and "dance" across the top.



Elements in the PERIODIC TABLE

1. Who is widely considered the father of the periodic table?
2. Which element is the most abundant in the entire universe?
3. What is the chemical symbol for Gold?
4. Which metals is a liquid at standard room temperature?
5. Which of these elements is named in honour of a famous scientist?

Brain Teaser

1. I am the lightest of them all, sitting first in line but without a fixed family. I fuel the stars you gaze at night, yet I am also found in every single drop of water. What am I?
2. I am the basis of all known life, hiding in your DNA and your dinner. Squeeze me hard enough for millions of years, and I become a sparkling gemstone; leave me alone in a soft state, and I am just the lead in your pencil. What am I?



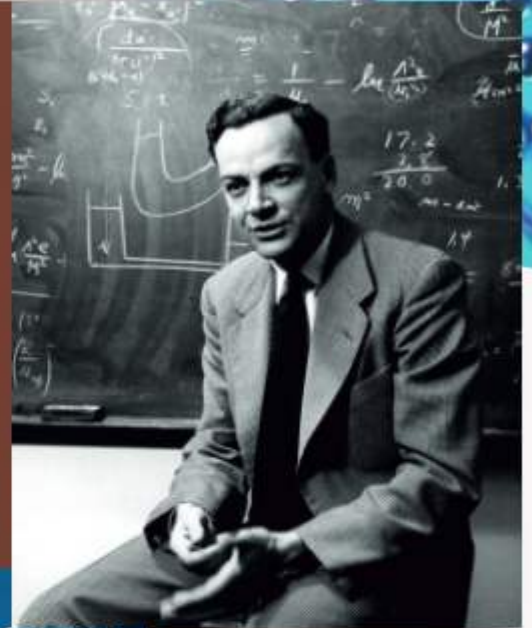
Send your answers to
vigyanconnectgsc@gmail.com

HISTORY OF SOLVING MYSTERY

Richard Feynman

On a December evening in 1959, Nobel laureate Richard Feynman stood before the American Physical Society at California Institute of Technology (Caltech) and presented a lecture entitled "There's Plenty of Room at the Bottom". While the world raced toward outer space, Feynman proposed an unseen frontier with a playful challenge: "Why can't we write the entire 24 volumes of the Encyclopaedia Britannica on the head of a pin?"

He laid out an audacious vision where machines built smaller machines, manipulating matter atom by atom. Today, that radical dream is the booming reality of nanoscience and nanotechnology. Operating on an invisible scale of 1 to 100 nanometers, scientists arrange individual atoms to unlock astonishing new properties and devices. The progress of nanoscience and nanotechnology in different fields of science has expanded in different directions. In only a few decades, nanotechnology and nanoscience have become of fundamental importance to industrial and medical applications such as diagnostic biosensors and drug delivery systems, proving Feynman's visionary hypothesis right and cementing his legacy as the father of modern nanotechnology.



Did You Know?

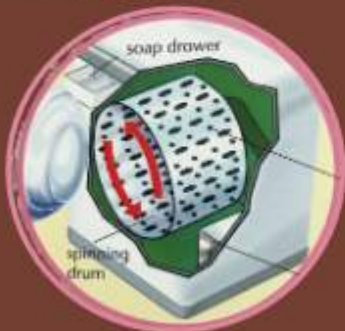
Norio Taniguchi, a Japanese Scientist was the first to use and define the term Nanotechnology in 1974

Resource: <https://pmc.ncbi.nlm.nih.gov/articles/PMC6982820/>

HOW & WHY?

How does a Washing Machine Work?

Washing Machines have made our life very easy, with a single button press our cloths gets washed as well as dried up.



Most washing machines work by tumbling dirty cloths, soap and water inside a moving drum. The tumbling drum applies frictional shear Force to loosens dirt from cloths. Then the drum spins very fast so that soap water comes out of the cloths, drains through the little holes in drum and flow away.

Resources: Science & Technology Encyclopedia



Did you Know?

The first washing machine was made in America in 1874. It consisted of a wooden tub with small wooden pegs inside that turned with a handle.

The first electric washing machine with a rotating drum was invented by Alva J. Fisher in USA.

When we think of rings in the Solar System, Saturn usually comes to mind. But Saturn is not the only object surrounded by rings. Astronomers made a remarkable discovery: 10199 Chariklo, a small icy body orbiting between the orbits of the giant planets Saturn and Uranus and has a system of rings.

10199 Chariklo is a ringed asteroid and centaur in the outer solar system. It is the largest known Centaur, with a diameter of about 250km. It orbits the Sun between Saturn and Uranus with an orbiting period of 62.5 years. It was discovered on 15 February 1997 by the University of Arizona's space watch project at Kitt Peak National Observatory. Its discovery showed that ring systems can exist around much smaller bodies than the giant planets.

A surprising discovery

Chariklo's rings were discovered when astronomers observed a stellar occultation. This happens when an object passes in front of a distant star, temporarily blocking its light. Researchers noticed several brief changes in the star's brightness before and after Chariklo itself blocked the star. These additional dips in brightness revealed the presence of two narrow rings around Chariklo. They were named Oiapque and Chui, with Oiapque being the outer ring.

What can Chariklo teach us?

Chariklo provides clues about how material behaves around small bodies in the Solar System. Its rings demonstrate that ring systems are not exclusive to giant planets.

What makes Chariklo's rings special?

Chariklo's ring system is remarkable because of its small size and location. The rings appear to be relatively narrow and dense. Their existence raises an important question: How can such a small object maintain rings? Scientists think that the rings may have formed from material produced by a collision or another disruptive event. The exact origin and long-term evolution of the rings remain subjects of scientific study.

Conclusion

Chariklo may be small compared with Saturn or Jupiter, but its rings have opened a fascinating new chapter in planetary science. Its discovery reminds us that the Solar System is far more diverse than it first appears. Even a small, distant world can hold clues to the enormous story of how our cosmic neighbourhood formed and evolved.



ROOTED IN THE CAMPUS

Areca Palm

Botanical name - *Areca catechu*

Konkani name - Supari

No. Of trees in the campus - 10

The areca nut palm is a slender, tropical evergreen tree native to southeast Asia and parts of East Africa. Reaching heights of up to 20 meters, it features a smooth, ringed trunk topped with a crown of feathery, bright green fronds.

This tree is primarily cultivated for its seed, known as the areca nut or betel nut, which plays a major role in cultural traditions, social customs and traditional medicines across Asia.

Sliced or powdered areca nut is chewed alone or wrapped in betel leaves with slaked lime and spices as a stimulant. It is processed into commercial products like supari & pan masala. Extracts of Areca nut are used in veterinary practices to expel tapeworms and treat intestinal colic in animals.

It thrives in warm, humid climates with well-drained soils, making it an economically vital commercial crop in regions like Coastal India.



Indian Nobel Laureate **Sir C V Raman**

Sir Chandrasekhara Venkata Raman, popularly known as C. V. Raman, was one of India's greatest physicists. He was born on 7 November 1888 in Tiruchirappalli, Tamil Nadu. From an early age, he showed a strong interest in science and mathematics.

Raman made his most important discovery in the field of light scattering. In 1928, while studying how light behaves when it passes through different materials, he discovered that a small part of the scattered light changes its wavelength. This phenomenon was named the Raman Effect. It became an important tool for studying the molecular structure and properties of substances.

For this remarkable discovery, C. V. Raman received the Nobel Prize in Physics in 1930, becoming the first Asian scientist to receive a Nobel Prize in Physics. He was also awarded the Bharat Ratna in 1954, India's highest civilian honour.

28 February, the day on which the Raman Effect was discovered, is celebrated every year in India as National Science Day.

C. V. Raman's life demonstrates how curiosity, dedication and scientific thinking can lead to discoveries of global importance. His contributions continue to inspire generations of students and scientists.



Sci-Word Mix

How well do you know the **CONSTELLATIONS**

A	T	T	S	C	O	R	P	I	U	S	E
C	Q	A	B	U	Z	H	R	W	A	M	Y
A	T	U	R	S	A	M	A	J	O	R	O
N	B	R	A	R	R	W	C	J	R	L	V
C	W	U	R	R	B	G	E	M	I	N	I
E	N	S	I	U	I	A	T	A	O	U	R
R	Q	X	E	C	L	U	U	H	N	K	G
P	P	I	S	C	E	S	S	J	K	M	O
D	E	H	E	R	C	U	L	E	S	M	O

AQUARIUS
ARIES
CETUS
SCORPIUS
URSA MAJOR
ORION
GEMINI
VIRGO
CANCER
TAURUS
LIBRA
HERCULES
PISCES

IN THE LAST QUARTER

July



Valediction & Prize Distribution of World Environment Day Celebration



World Population Day Celebration



Moon Landing Day Celebration



launching of Motorized Human Gyro Exhibit



Science Demonstration lecture Series



Mobile Science Exhibition to Mormugao Taluka



IN THE LAST QUARTER

August



Exposure Visit to students from rural area of Goa by DST, Govt. of Goa



Har Ghar Tiranga Campaign



80th Independence Day celebration



SDL during Special Monsoon package



Sci- Birthday Celebration



National Space day Celebration



IN THE LAST QUARTER

September



Visit of Dr. V. Abarna, ISRO Scientist



Swachhata Pledge vowing by staff during Swachhata hi Sewa Campaign



Innovation Hub Activity



SDL during Special Monsoon package



Mobile Science Exhibition to Sattari Taluka



Hindi Pakhwada celebration



International Day of Scientific Culture



Chitari Heritage workshop for Homemakers as a part of World Tourism Day

Science Wonderland

Goa Science Centre is a constituent unit of National Council of Science Museums functioning under Ministry of Culture, Government of India. It is a place of edu-tainment in Science & Technology. Its Main objective is to inculcate a scientific temper & bring the excitement of science to the common public. It provides a perfect environment for exploring science through sci-fi exhibit.

Galleries



- Fun Science
- Science of Ocean
- Mirror Magic



Science Park



Pre-historic Animal Park



Digital Planetarium



3D Show



Science Show



Sky Observation Program



Upcoming Events

October 2026

- Swachhata Special Campaign 6.0
- State Level Drama Competition
- Mobile Science Exhibition

November 2026

- Creative Science Workshop
- International Science Centre & Science Museum Day
- Children's Day Celebration

December 2026

- National Energy Conservation Day
- Silver Jubilee Celebration of the Centre

General Information

Entry Fee Per Visitor to Science Centre

Particulars	Amount
Entry Ticket to Science Centre Only	
◇ General Visitors	Rs.50/-
◇ Group of Visitors (15 or more)	Rs.30/-
◇ Students in Organized Group with Authority Letter	Rs.10/-
◇ Students from Govt./Municipal School with Authority Letter	Rs.5/-
Planetarium/Taramandal Shows	
◇ General Visitors	Rs.50/-
◇ Group Visitors (15 or more)	Rs.40/-
◇ Students in Organized Group with Authority Letter	Rs.15/-
◇ Students from Govt./Municipal School with Authority Letter	Rs.10/-
3D Science Show	
◇ General Visitors	Rs.40/-
◇ Group Visitors (15 or more)	Rs.30/-
◇ Students in Organized Group with Authority Letter	Rs.10/-
◇ Students from Govt./Municipal School with Authority Letter	Rs.5/-
Science Film Show	Rs.20/-
Science show	Rs.20/-
Special Packages	
Package Ticket to Science Centre, Planetarium & 3D Show	
◇ General Visitors	Rs.120/-
◇ Group of Visitors (15 or more)	Rs.80/-
◇ Students in Organized Group with Authority Letter	Rs.30/-
◇ Students from Govt./Municipal School with Authority Letter	Rs.20/-
Package Ticket to Science Centre & Planetarium	
◇ General Visitors	Rs.90/-
◇ Group of Visitors (15 or more)	Rs.60/-
◇ Students in Organized Group with Authority Letter	Rs.25/-
◇ Students from Govt./Municipal School with Authority Letter	Rs.15/-
Package Ticket to Science Centre& 3D Show	
◇ General Visitors	Rs.80/-
◇ Group of Visitors (15 or more)	Rs.50/-
◇ Students in Organized Group with Authority Letter	Rs.20/-
◇ Students from Govt./Municipal School with Authority Letter	Rs.10/-
Family Packages	
Science Centre, Plantenarium, 3DShow	
◇ Family of 4 Members	Rs.350/-
◇ Family of 6 Members	Rs.500/-

Membership Program

Innovation Hub Membership

- **Eligibility:** Students of class 5th & above
- **Benefits:** Access to the innovation hub for one year, can work on own innovative projects under the guidance of experts, free entry to the galleries, invitation to education programmes and activities.
- **Annual Membership Fee:** Rs.1000/-

Science Centre Membership

- **Eligibility:** Individuals above 3 years of age
- **Benefits:** Free entry to the galleries, invitation to education programmes and activities.
- **Annual Membership Fee:**
Rs.200/- for students
Rs.400/- for Teachers
Rs.500/- for other individuals

To avail membership please contact Education section GSCP.

Sci-Birthday

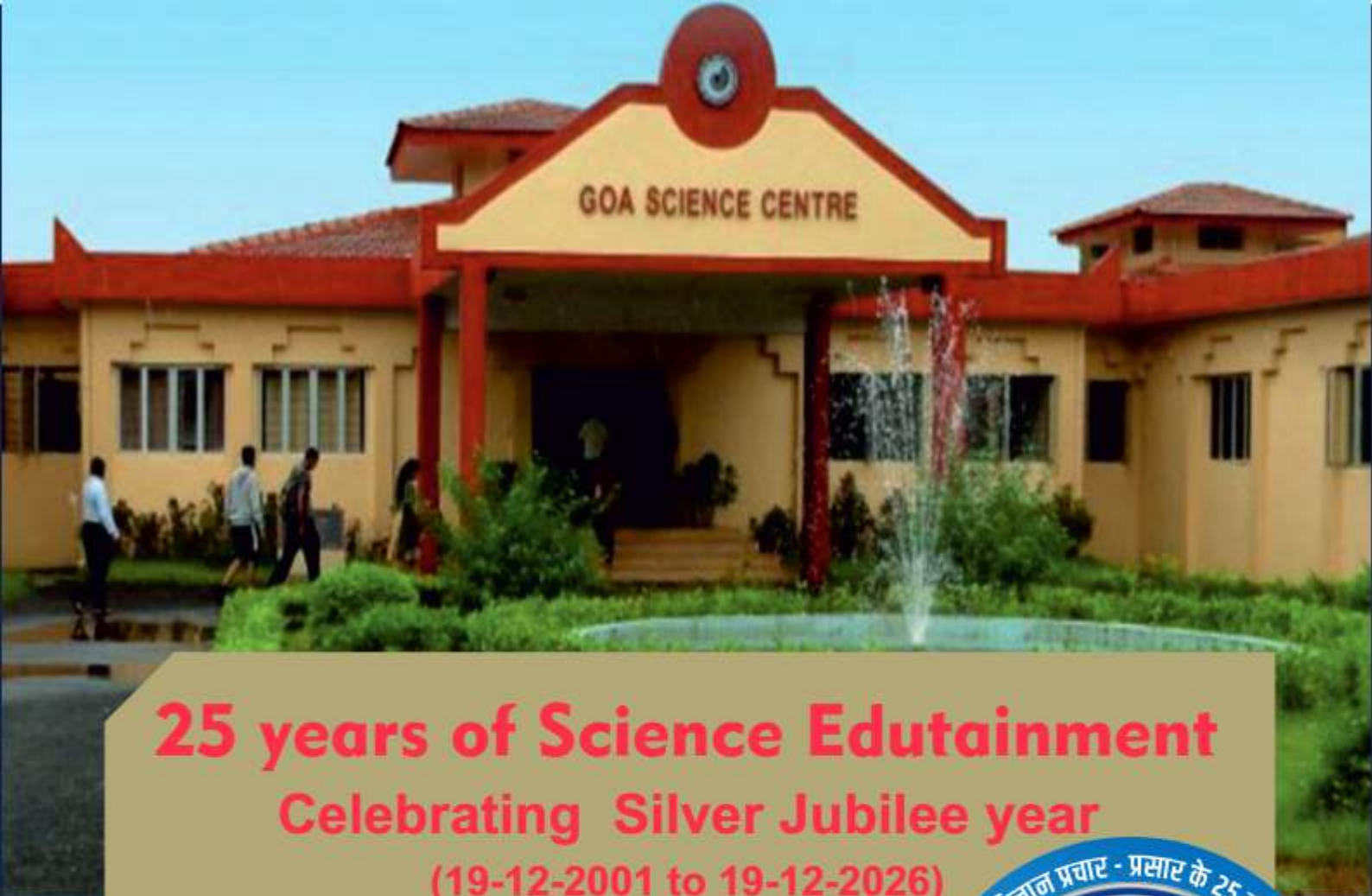
- Celebrate your birthday at Goa Science Centre in a sci-fun way!!
- Package includes guided gallery tour, 3D show, planetarium show and hand-on activities with full-on edutainment.
- The contents is designed as per the age group.
- Air-conditioned activity room.
- Prior booking necessary

Package Rates: (Children & adult included)
up to 25 people -Rs.5000/-
up-to 50 people- Rs.7500/-

To booking please contact Education section GSCP.

Goa Science Centre is open to public every day including Sundays & public Holidays throughout the year except on Holi & Diwali

Opening Hours
9.30am to 6.00pm
Ticket Counter Timing
9.30am to 5.30pm



25 years of Science Edutainment Celebrating Silver Jubilee year (19-12-2001 to 19-12-2026)

As we complete 25 years of wonders, we want to hear your stories. Whether it was your first school trip in 2001, a family afternoon in the Science Park, or the moment you first gazed at the stars in our Planetarium, your memories are our history. Please share your photos, stories, and messages with us at gscsilverjubilee@gmail.com



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