

SCIENCE CENTRE NEWS LETTER

June 2015
Volume 2



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SCIENCE CENTER

Volume 1, Issue 2

WHAT'S NEW IN SCIENCE

All 5 of Pluto's known Moons Spied by NASA probe (Photo)

NASA's New Horizons spacecraft has snapped its first-ever family portrait of the pluto system, capturing dwarf planet and all five of its known moons.

New Horizons, which is speeding toward a historic flyby of pluto on July 14, took a series of images from April 25 through May 1 using its Long Range Reconnaissance Imager (LORRI) camera. The shots mark the first time New Horizons has managed to resolve the extremely faint pluto Moons Kerberos and styx detecting these tiny moons from a distance of more than 55 million miles (88.5 million Kilometers).

Pluto's five known satellites are:

- Charon
- Hydra
- Nix
- Kerberos
- Styx

At 648 miles (1043 k.m.) in diameter, charon is nearly half as wide as pluto itself, kerberos is 4 to 13 miles (7 to 21 k.m.) wide and styx is 6 to 20 miles (10 to 32 k.m.) wide.

The four tiny moons are visible individually in the new images, while charon melds with pluto in a much brighter blur at the centre of the other satellites orbits.

SCIENTIST OF THE MONTH



T. C. Anand Kumar

Anand Kumar was born on June 18, 1936 at Bangalore, Karnataka. He did his B.sc and M.sc from the central college, Bangalore. He did his Doctorate from Rajasthan University in 1964 and post doctoral research from the University Of Birmingham, U.K. in 1964.

Dr. Anand Kumar was the first to report the occurrence of steroids in cerebrospinal fluid and to identify pineal and the epithalmus as additional sites regulating reproductive processes. In terms of practical application, this led to the development of the intranasal drug delivery system for contraceptive as well as therapeutic purposes. He also showed that insulin could be administered by the nasal route to lower blood glucose level. He also studied how the brain and endocrine system interact in rhesus monkeys to regulate reproductive phenomenon, which led to the development of the scientific know- how leading to the birth of India's first test- tube baby. He published several research articles in many reputed international journals. He died on January 26, 2010 at the age of 74.

Anand Kumar received shanti swarup Bhatnagar Prize and The sanjay Gandhi National Award. He was fellow of Indian Academy of Science, National Academy of medical Science and the Gonville and caius College, Cambridge.



Timings

Tuesday to Friday
9.30 am to 4.30 pm

Saturday - Sunday
& Public Holidays
9.30 am to 6.30 pm

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SCIENCE FACTS JUNE 2015

1 st June	:	International Children's Day
5 th June	:	World Environment Day
5 th June 1783	:	Discovery and first launching of primary Balloon
6 th June 2012	:	The astronomical event "Transit of Venus" happened on this day
7 th June 1811	:	Mr. James Young Simpson (who invented Chloroform) was born on this day
7 th June 1979	:	India Launched first low orbit Earth observation Satellite - "Bhaskar" into the Space
8 th June	:	World Brain Tumour day
8 th June	:	World Ocean day
8 th June 1936	:	Indian state Broadcasting Service (ISBS) was renamed as "All India Radio" (AIR) on this day
10 th June	:	Ballpoint Pen Day
11 th June 1963	:	First Lady Astronomer "Valentina " came back from journey to Space
12 th June	:	World Day against child labour
12 th June 1872	:	Railway train started in Japan
14 th June	:	World Blood Donor Day (WHO)
15 th June 1752	:	Well-known Scientist Mr. Benjamin Franklin had done experiment of kite on this day
19 th June	:	World Sickle cell Anaemia Awareness Day
21 st June 2015	:	The third Sunday of June is celebrated as "International father's Day"
21 st June 2015	:	World Yoga Day
21 st June 1948	:	It is the longest day of the year in Northern Hemisphere and longest night of the year in Southern Hemisphere because Sun's rays strikes normally in Northern Hemisphere
22 nd June 1973	:	Successful landing of the astronomer of Skylab in Pacific Ocean after revolving around the earth for 28 days
23 rd June	:	United Nations Public Service Day (UN)
24 th June 1961	:	Successful launching of first Indian "Super Sonic Fighter A. A"
30 th June 1880	:	Longest total Solar Eclipse of millennium

U. N. : United Nations
WHO : World Health Organization

KNOW THE EXHIBITS AT FUN SCIENCE GALLERY

Aerodynamic Drag

Press the left switch to direct air at the flat plate. The plate moves backward.

Press the right switch to direct air at the aerofoil. Notice that the aerofoil moves back very little.

why this Happens ?

Drag is the force that tries to hold the airplane from moving forward. It is produced by the air molecules, or particles hitting against the airplane surface as it moves forward. It is generated by every part of the airplane. To reduce drag, engineers design airplanes which are streamlined. So that they can move easily and smoothly with the least possible resistance.

Drag is an aerodynamic force acting on an object parallel to the direction of flow of air. To overcome drag, we must have an opposing force called, thrust, which must be great enough to overcome the force of drag, aerofoil offers the least drag.



SUMMER CAMP -2015

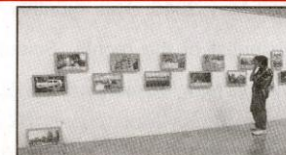
Science Centre Surat has organised Summer Camp -2015 at Art Gallery from 1st May to 10th May 2015. It was organised for two age groups. Group - A having age limit from 7 to 12 years and Group -B having age limit from 13 to 17 years. Both groups were taught different activities like for Group -A were taught Art and Craft activities. Group -B were taught Basic Astronomy, Science and Model making activities were taught. The programme of Night Sky Gazing was arranged for all groups. Free visit to Science Centre were arranged for Students of summer camp.



RANGOLI AND PHOTOGRAPHY EXHIBITION

Surat Municipal Corporation had celebrated 164th "Surat Sudharai Sthapana Diwas" on 15th May 2015. As a part of it Rangoli and Photography Exhibition was organised at Art Gallery, Science Centre Surat from 15 to 24 May 2015. There were 17 Rangoli prepared by 11 rangoli artists from the city. These rangoli showcased different aspects of Surat city. This exhibition was exhibited at the ground floor of the Art Gallery.

On the first floor of Art Gallery, photography exhibition was organised based on the theme "Aa che Surat". In this exhibition 164 photographs showing different moods and specialties of Surat. Along with photographs there were paintings made by students were also displayed.



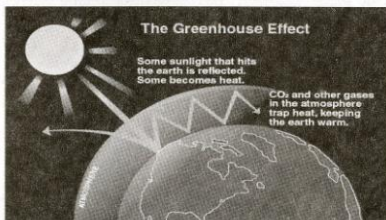
SCIENTIFIC QUESTION

What is Green House Effect ?

History :

The existence of the green house effect was argued for by Joseph Fourier in 1824 and it was further strengthened by Claude Pouillet in 1827 and 1833 and reasoned from experimental observations by John Tyndall in 1859 and more fully by Svante Arrhenius in 1896.

Green house Effect :



The green house effect is a natural process that warms Earth's surface. When the sun's energy reaches the Earth's atmosphere, some of it is reflected back to space and the rest is absorbed and re-radiated by greenhouse gases.

Green house gases include water vapor, carbon dioxide, methane, nitrous oxide, ozone and some artificial chemicals such as chlorofluorocarbons (CFCs).

The absorbed energy warms the atmosphere and the surface of the Earth. This process maintains the Earth's temperature at around 33 degrees Celsius warmer than it would otherwise be allowing life on Earth to exist.

Enhanced green house Effect :

The problem we now face is that human activities particularly burning fossil fuels (coal, oil and natural gas). Agriculture and land clearing are increasing the concentrations of green house gases. This is the enhanced green house effect, which is contributing to warming of the Earth, causing global warming.

SCIENCE QUIZ

- Where atmospheric pressure is maximum?
A) At the sea level B) At the Earth Surface C) in Air D) in Space(vacuum)
- Bernoulli's Principle is based on-
A) Velocity B) Mass C) Pressure D) Length
- The biggest asteroid known is :
A) Vesta B) Icarus C) Ceres D) Eros
- Rounded to the nearest day, the Mercurian year is equal to :
A) 111 days B) 88 days C) 50 days D) 25 days
- Which of the following Saturnian satellites is known to possess an atmosphere?
A) Tethys B) Titan C) Dione D) Mimas
- The atmosphere of Venus contains mostly
A) oxygen B) carbon dioxide C) nitrogen D) water

Answers: (1)A (2)C (3)C (4)B (5)B (6)B

RELEASE OF SCIENCE CENTRE NEWS LETTER

A monthly News Letter was release by Mayor, Shri Niranjan Zanzmera on 15th May 2015. This monthly News Letter showcases information about Scientist of the month, Scientific Question of the month, Science Quiz, What's New in Science Facts, Exhibition of the month etc.



SCIENCE CENTRE

Science Centre forms the main part of the entire complex; it displays thematic galleries in the field of Science and Technology. The ground floor of Science Centre showcases 3D Theatre and Souvenir Shop. The first floor of Science Centre showcases Fun Science Exhibits and Second floor of Science Centre showcases Diamond Gallery where as Entering into space, Textile Gallery, Power of Play Gallery, Cosmos Gallery and Polar Science Gallery are under development.

3D Show	Tuesday to Friday (Time)	Saturday, Sunday & Holidays (Time)			
English	09:15, 11:20, 12:00, 02:40, 04:00	09:15, 11:20, 12:00, 02:40, 04:00			
Hindi	10:00, 10:40, 12:40, 01:20, 02:00, 03:20	10:00, 10:40, 12:40, 01:20, 02:00, 03:20, 04:40, 05:20, 06:00			
Science Centre + Planetarium + Museum + Diamond Gallery		Planetarium			
Above 18 Years	Rs. 100	Tuesday to Friday Saturday, Sunday & Public Holidays			
3 Years to 18 Years	Rs. 65				
Science Centre + Museum + Diamond Gallery		09:30 to 10:20	English	09:30 to 10:20	English
Above 18 Years	Rs. 60	10:30 to 11:20	Gujarati	10:30 to 11:20	Gujarati
3 Years to 18 Years	Rs. 40	11:30 to 12:20	Gujarati	11:30 to 12:20	Gujarati
Science Centre + Planetarium + Museum + Diamond Gallery + 3D Show		12:30 to 01:20	English	12:30 to 01:20	English
Above 18 Years	Rs. 120	01:30 to 02:20	Hindi	01:30 to 02:20	Hindi
3 Years to 18 Years	Rs. 80	02:30 to 03:20	Hindi	02:30 to 03:20	Hindi
Planetarium		03:30 to 04:20	Gujarati	03:30 to 04:20	Gujarati
Above 18 Years	Rs. 50			04:30 to 05:20	English
3 Years to 18 Years	Rs. 40			05:30 to 06:20	Gujarati
3D Show					
Above 18 Years	Rs. 60				
3 Years to 18 Years	Rs. 40				