

SCIENCE CENTRE NEWS LETTER

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SCIENCE CENTRE

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WHAT'S NEW IN SCIENCE

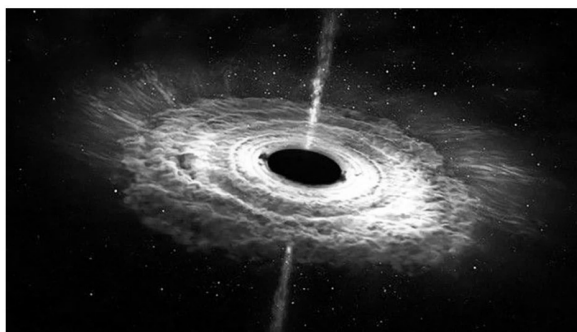
Black Hole

The Event Horizon Telescope a planet-scale array of eight ground based radio telescopes forged through international collaboration was designed to capture images of a black hole. In coordinated press conferences across the globe, EHT researchers revealed that they succeeded, unveiling the first direct visual evidence of the

super massive black hole in the centre of Messier 87 and its shadow. An international team of over 200 astronomers, including scientists from MIT's Haystack Observatory, has captured the first direct images of a black hole. They

accomplished this remarkable feat by coordinating the power of eight major radio observatories on four continents, to work together as a virtual, Earth-sized telescope. The team has revealed four images of the super massive black hole at the heart of Messier 87, a galaxy within the Virgo galaxy cluster, 55 million

light years from Earth. All four images show a central dark region surrounded by a ring of light that appears lopsided brighter on one side than the other. Based on the new images of M87, the scientists believe they are seeing a black hole's shadow for the first time, in the form of the dark region at the center of each image. From these



images, theorists and modelers on the team have determined that the black hole is about 6.5 billion times as massive as our sun. On any given day, each telescope operates independently, observing astrophysical objects that emit faint radio

waves. However, a black hole is infinitely smaller and darker than any other radio source in the sky. To see it clearly, astronomers need to use very short wavelengths, in this case 1.3 millimeters that can cut through the clouds of material between a black hole and the Earth.

Courtesy : Bhakt Kavi Shamal Primary School No.-107

SCIENTIST OF THE MONTH

Perdur Radhakantha Adiga

P. R. Adiga was born on 5 May 1935 at Barkur in Udupi district of the South Indian state of Karnataka. After earned a master's degree in biochemistry from the University of Kerala, he subsequently joined the Indian Institute of Science as a research associate.

Adiga's early researches were focused on the growth and intermediary metabolism of fungi and insects. His work on Lathyrus sativus, commonly known as grass pea, revealed that N-oxalyl-diaminopropionic acid, a neurotoxin present in the plant caused the neurological disorder of neurolathyrimism in humans. He was also credited with the discovery of Homoarginine, an amino acid derivative, found in Lathyrus sativus. He edited the book, Perspectives in Primate Reproductive Biology. Adiga died on

13 September 2006, at the age of 71.

Adiga won the Giri Memorial Medal of the Indian Institute of Science in 1963, for his PhD thesis. The Council of Scientific and Industrial Research awarded him Shanti Swarup Bhatnagar Prize in 1980. He received the Sanjay Gandhi Award for Science and Technology in 1982. The Society of Biological Chemists awarded him the Professor M. Srinivasayya Award in 1984.



Courtesy :

Bhakt Kavi Shamal Primary School No.-107



Timings

Tuesday to Friday
9.30 am to 4.30 pm

Saturday - Sunday
& Public Holidays
11.00 am to 6.30 pm

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SCIENCE FACTS MAY 2019

1st May	International Worker's Day.
3rd May	World Press Freedom Day. (By U.N.)
3rd May	International Energy Day.
5th May 1961	"Freedom 7" the first piloted Mercury space craft launched by America.
8th May	World Redcross Day.
11th May	National Technological Day.
11th May 1998	India conducted nuclear tests at the Pokhran range in Rajasthan Desert.
12th May	International Nurses Day
13th May 1857	Sir Ronald Ross (Inventor of medicine for Malaria) was born.
14th May 1686	Daniel Gabriel Fahrenheit (inventor of Thermometer) was born.
14th May 1796	Dr. Edward Jenner tested his hypothesis first time on a eight years old boy.
16th May 1831	David Edward Hughes (inventor of carbon microphone & teleprinter) was born.
17th May 1749	Sir Edward Anthony Jenner (Inventor of smallpox vaccine) was born.
18th May	World AIDS Vaccine Day.
18th May	International Museum Day.
19th May 1910	Halley's Comet brushes the Earth with its tail.
19th May 1971	Soviet Union had sent "Mars-2" for journey to Planet Mars which was crashed land of the Mars.
24th May 1844	First telegraphic message was sent by well-known Scientist Samuel Morse.
30h May 1971	America launched space craft "Mariner -9" to Planet Mars.
31t May	World No Tobacco Day (by U.N.).

U. N. : United Nations

Ans:- 1. c 2. b 3. c 4. c 5. c

KNOW THE EXHIBIT AT FUN SCIENCE GALLERY

Floating Ball

Strum the strings with your hand. The strings vibrate emitting sound, but the nature of their vibration is not visible. Now spin the large horizontal drum and observe that the white lines engraved in the black cylinder scan the strings as they vibrate and appear as wavy lines. Each of the guitar strings displays a different wave pattern according to its frequency. Use your foot on the pedal to increase the tension of the strings and observe the corresponding increase in the frequency of the displayed wave forms. The black strings can be seen only when the white stripes are behind them. Each passing white stripe displays the profile of a small segment of a string at the instant in which the white stripe is behind that segment. The next passing white stripe profiles the same segment an instant later. Since the string has moved slightly sideways by that time, the persisting image is perceived as a solid wavy line. A sinusoidal wave pattern appears as the white string scan the length of the strings.



SCIENTIFIC QUESTION

When do birds migrate?

Mass movement of animals and birds is called migration. They migrate in order to find food or due to the climatic changes or to breed. For example, every year in autumn, large flocks of swallows migrate to Africa. Swallows, swifts and martins



migrate to Africa to escape the cold weather because it becomes too cold for them to catch their prey, i.e. insects. Some migrations are daily, some seasonal and some are permanent. Migration occurs generally when they escape to avoid local food shortages. This generally occurs when the food is no longer available as seasons change. Food that was available in the summer will not be available for a longer time in the

autumn and the birds fly towards the equator where food is more available.

They often breed in the summer. The term migration describes periodic, large-scale movements of populations of animals. One way to look at

migration is to consider the distances travelled.

- Permanent residents do not migrate. They are able to find adequate supplies of food year-round.

- Short distance migrants move only a

short distance, as from higher to lower elevations on a mountainside.

- Medium distance migrants cover distances that span from one to several states.

- Long distance migrants typically move from breeding ranges in the United States and Canada to wintering grounds in Central and South America.



Courtesy :

Bhakt Kavi Shamal Primary School No.-107

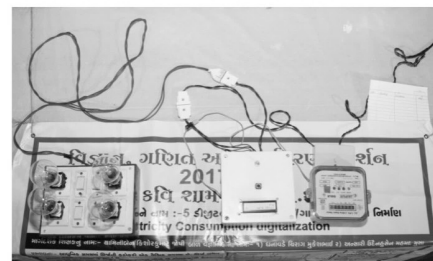
SCIENCE QUIZ

- Which instrument is used to measure pressure?
a. Sacchrimeter b. Ammeter c. Manometer d. Lactometer
- Light year is related to what?
a. Energy b. Distance c. Speed d. Intensity
- How many Dynes are there in one gram weight?
a. 900 b. 375 c. 981 d. 250
- Who invented type writer?
a. Shockly b. Pascal c. Sholes d. Waterman
- Who proposed the chemical evolution of life?
a. Darwin b. Lammarck c. Oparin d. Haechel

SCIENCE PROJECT

Surat Municipal Corporation had organized 'Science Fair' at Ground Floor, Art Gallery, Science Centre, Surat on 03rd and 04th August 2018. Bhakt Kavi Shamal Primary School No.-107 had presented their project on 'Electricity Consumption Digitalization'. The aim of this project is to save the electricity and modernization. In modern times, energy crisis is the global problem. Energy saving is important. Today, we get electricity from the coal. If we use electricity untimely, soon the energy source like coal will be lost. So, it is important to save electricity. So that we can use energy sources like coal for a longer time.

This project is work on $P = VI$ principle. Where, $P =$ Power, $V =$ Voltage and $I =$ Electric Current. Meter is connected to the main transmission line. Meter produced pulse of power usage. Calculating the pulse by micro controller, we can calculate electricity and money. It can be seen on LCD Screen. By using this project, the electric appliances which we set on timer switch off automatically according to time and we can see the computation of used electricity and money on LCD Screen. The advantage of this project is that we can save electricity because electric appliances can switch off automatically and we can see the calculation of electricity and money. So that we can control the usage of electricity. We can know, which electric appliances consume more electricity.



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 Planetarium, Fun Science Gallery and Power of Play Gallery and second floor of Science Centre showcases Diamond Gallery, whereas Entering into Space, Cosmos Gallery under development.

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

		Planetarium	
		Tuesday to Friday	Saturday, Sunday & Public Holidays
09:30 to 10:20	English	11:30 to 12:20	Gujarati
10:30 to 11:20	Gujarati	12:30 to 01:20	English
11:30 to 12:20	Gujarati	01:30 to 02:20	Hindi
12:30 to 01:20	English	02:30 to 03:20	Hindi
01:30 to 02:20	Hindi	03:30 to 04:20	Gujarati
02:30 to 03:20	Hindi	04:30 to 05:20	English
03:30 to 04:20	Gujarati	05:30 to 06:20	Gujarati