

**SRI SARADA COLLEGE FOR WOMEN (AUTONOMOUS),  
SALEM-636 016**

**SANSKRIT ASSOCIATION – 2022**

**SCIENCE IN SANSKRIT - EXHIBITION HELD ON 19.10.2022**

**FOCUSING INDIAN KNOWLEDGE SYSTEMS**

**Research of Indian Ancient Rishi Scientists**



The poster features the college logo, the Azadi Ka Amrit Mahotsav logo, and a portrait of a woman. The text on the poster reads: 'Sri Sarada College for Women (Autonomous), Salem-16 Reaccredited with "B++" Grade by NAAC (Affiliated to Periyar University) Sanskrit Association proudly marshals to exhibit on the theme धन्यास्मि भारतीयत्वात् Proud to be an Indian Science in Sanskrit Focusing Indian Knowledge Systems DATE: 19.10.2022 TIME: 10.30 ONWARDS VENUE: ROOM NO.38 ORGANIZER: Dr.Latha Sreedhar Assistant Professor of Sanskrit CONVENOR: Dr.R.Uma Rani Principal'.





The word '**Sanskrit**' means "*refined or perfect*". Sanskrit is the language of Indian Philosophers, Mathematicians, great Poets and Playwrights, Grammarians, Jurists, etc. and countless other Sanskrit works kept the light of learning ablaze in our country up to modern times. The Sanskrit Association of our College has organized an exhibit on the theme "**Science and Sanskrit**" on **19/10/2022**.



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## ARCHITECTURE



- A Hindu temple follows a geometrical design called Vastu-purusha-mandala.
- Vastu Shashtra has its roots from Rig Veda, one of the sacred books of Hinduism. The system describes how placements of house, doors, the arrangement of rooms, gardens and even the sitting of the town can be optimized when considering the influence of the sun, magnetic fields, gravitational forces and other phenomena.
- It is believed to be developed from 6000 – 3000 B.C.

**PRESENTERS: Nithyasri.S, Annanya.K, Jaya Roshini.K.L, Subiksha.M**

## ART AND CULTURE



- The Almighty created a fifth Veda called Natya Veda through inclusion of all four Veda's (Rig, Yajur, Sama, Atharva).
- Natya Shashtra means science of dance.
- The Natya Shashtra is a Sanskrit treatise on the performing arts.
- Bharata Muni was an ancient sage to whom the musical treatise Natya Shastra is traditionally attributed to.
- The work covers ancient Indian dramaturgy and histrionics, especially Sanskrit theatre. Bharata is considered the father of Indian theatrical art forms.

**PRESENTERS: Poojasri.K, Harini.C.V, Sasirekha.E**



## WARFARE



is

deals with  
bows and  
is wrong

- All types of  
weapon and  
techniques  
matter of



- Generally it  
thought that  
**Dhanurveda**  
science of  
arrows but this  
concept!  
fighting  
fighting  
are the subject  
Dhanurveda.

- Dhanurveda describes different types of weapons and missiles, process of manufacturing and procuring them, different steps on the practices.
- It is considered to be an Upaveda or sub branch of Yajurveda by learning which one can be proficient in fighting, in the use of arms, weapons and missiles and in the application of battle arrays and formations.

**PRESENTERS: Andrea Jones.A, Srimathi.R, Pavithra Shri.B, Arifa Banu.R**

## ASTRONOMY IN SANSKRIT

- *Moon is made up of water-Sun is made up of fire-And the earth is made up of soil.*

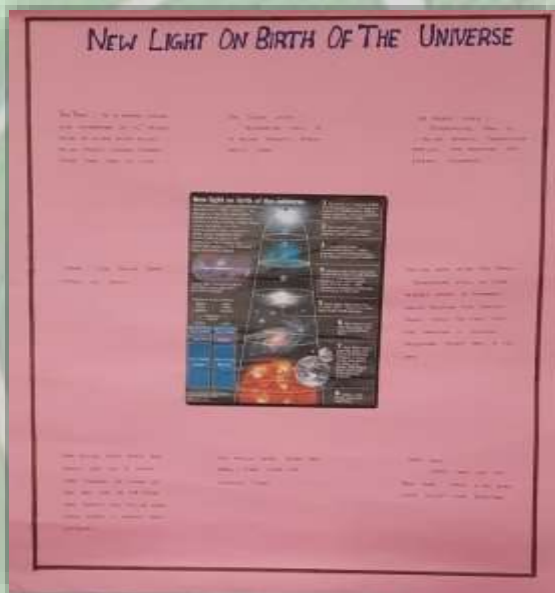
- The moon covers the sun and the great shadow of the Earth covers the Moon. This is cause of eclipse know as **Graganam**.
- Even though it was stated by Johannes Kepler in 1605, it was already written by Aryabhata Rishi, 499AD.

**PRESENTERS: Udhaya.K, Firdose.A**

**NEW LIGHT ON THE BIRTH OF THE UNIVERSE**

This presentation shows the direct evidence of cosmic inflation:

- i.** Big Bang
- ii.** Cosmic inflation
- iii.** 100 seconds later



- iv.** 380,000 years after Big Bang
- v.** Dark Ages
- vi.** 200 million years after Big Bang
- vii.** Nine billion years after Big Bang
- viii.** Today : 13.82 billion years after Big Bang

**PRESENTERS: Shanmugapriya.M, Madhumitha.R**

**LAWS OF MOTION**

*Vaishesika Sutras* were proposed many years before Newton three laws of motion:

***First law of motion***

By Sage Kanad - changes of motion is due to impressed force. (6th century B.C.)



By Newton - every object moves in a straight line unless acted upon by a force (16th century)

### ***Second law of motion***

By Sage Kanad - changes of motion are proportional to the impressed force and are in the direction of the force.

By Newton - the acceleration of an object is directly proportional to the net force exerted and inversely proportional to the objects mass.

### ***Third law of motion***

By Sage Kanad - action and reaction are equal and opposite.

By Newton - for every action there is an equal and opposite reaction.



**PRESENTERS: Keerthana.S, Leema Carolin.C**

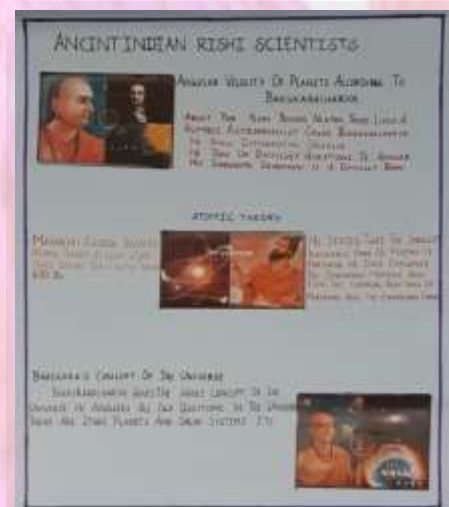
## **ANCIENT INDIAN RISHI SCIENTISTS**

- Angular velocity of planet according to **Bhaskaracharya**- about 700 years before Newton, there lived an Astrophysicist called **Bhaskaracharya**. He was well-versed in the differential calculus. He took up difficult question to answer. His *Siddhanta Siromani* is a difficult book.
- **Maharishi Kanada** invented atomic theory at least 2500 years before John Dalton before 600 B.C. He stated that the smallest indivisible from of matter is *parmanu*. He even explained the dimensions, motions and even the chemical reaction of *parmanu* and *iys* compound forms.
- **Bhaskara's** concept of the universe - Bhaskaracharya gives the whole concept of the universe. He answers all our questions. In the universe there are stars planets and solar system etc.

**PRESENTERS: Shanmugapriya.M**

## **PLANETARY MOTION**

- The mean planets move on their orbits and the true planets in eccentric circle.
- All the planets whether moving their orbits or in eccentric circle move with their own motion, anti-clockwise from their



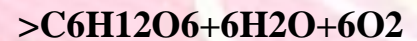
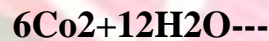


**PRESENTERS: Kalaiselvi.S, Thicksha.K, Sujasri.D, Abinaya.P**

## **PHOTOSYNTHESIS**



*Photosynthesis* (photo-light, synthesis -to build) is a process by which carbon dioxide combines with water in the presence of sunlight and chlorophyll to form carbohydrates. During this process oxygen is released as a byproduct.



**PRESENTERS: Abinaya.P, Sujasri.D**



## **CONTRIBUTION OF MATHEMATICIANS**

*Mathematicians like Paramesvara, Aryabhata, Bhaskaracharya, Pingala, Srinivasa Ramanujam, etc.*

- Their discoveries on various topics, those are currently named after modern scientists, used in various places are displayed in this chart.

**PRESENTER: Iswarya.B**



## **MATHEMATICS IN SAMSKRTAM**

The contribution of mathematicians and mathematics in Samskrtam

For instance we have:

- Pythagoras theorem by **Baudhayana**,
- Area of Triangle by **Aryabhata**,
- Square and Cube roots by **Aryabhata**.

**PRESENTER: Lavanya.P**

## **THE VALUE OF PI**



- *The value of pi* was introduced by Arryabhata.
- The value of pi has 31 decimals.
- The formula for calculating pi is,

$$Pi = \text{circumference}/$$

$$\text{diameter} = 3.14$$

- This sloka was arranged by Kattapayadi Samkiya in Vedic mathematics.

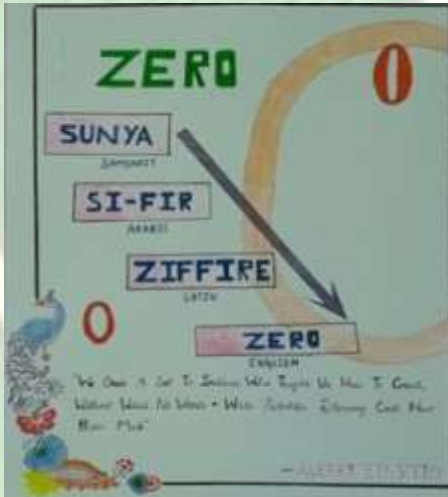
**PRESENTER: Iswarya.B**

## ZERO



- In Samskrutam *zero* was denoted as *Sunya* (after decimal) and *Pujya* (before decimal)
- *Pujya* means respectable True to its meaning , it is respecting if it comes in before decimal

**PRESENTERS: Archanasri.E.T, Prathika.B**



## TRIGONOMETRY

- Trikonmiti (Trigonometry) – An important gift to the world of mathematics.
- In Modern definition  
 $APM = PM = R \sin \hat{\theta}$  and  $AP = OM - R \cos \hat{\theta}$  is known as **Ardha Jya** and **Koti Jya** in

Sanskrit respectively.

- This Indian Ardha Jya and Koti Jya became sine and cos in European language.



**PRESENTER: Prathika.B**

### Snake and Ladders

## Snake and Ladder board using Sanskrit numbers

**PRESENTER: Archanasri.E.T**

### CLOCK

#### *Clock in Samskrutam order -*

- 1) Brahma
- 2) Ashwini Brothers
- 3) Characters or habits
- 4) Vedas
- 5) Praanas
- 6) Types of taste
- 7) Main sages or the Star Ursa called constellation



- 8) Attainments
- 9) Objectives
- 10) Direction

- 11) Form of Shiva
- 12) Form of Sun.

These were briefly interpreted in Samskrtaam only.

**PRESENTER: Saktipriya.B.J**

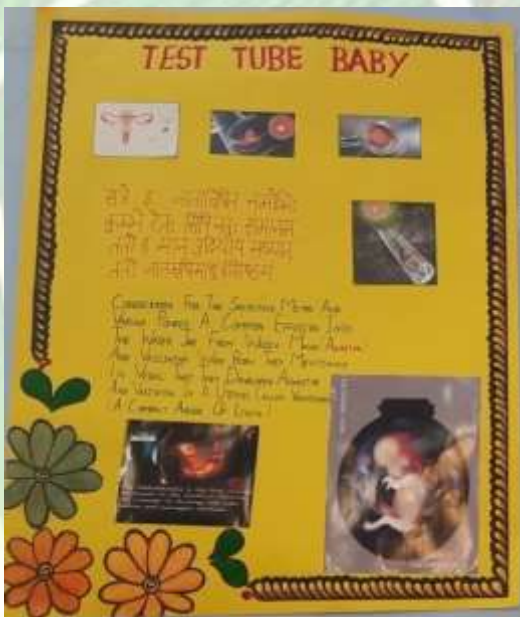


**TEST TUBE BABY**

- Among the four Vedas, Rig Veda has details about test tube baby.
- The **first test babies** are *Vashistha and Agastya*.

- The Kauravas of Mahabharata are born in this method.

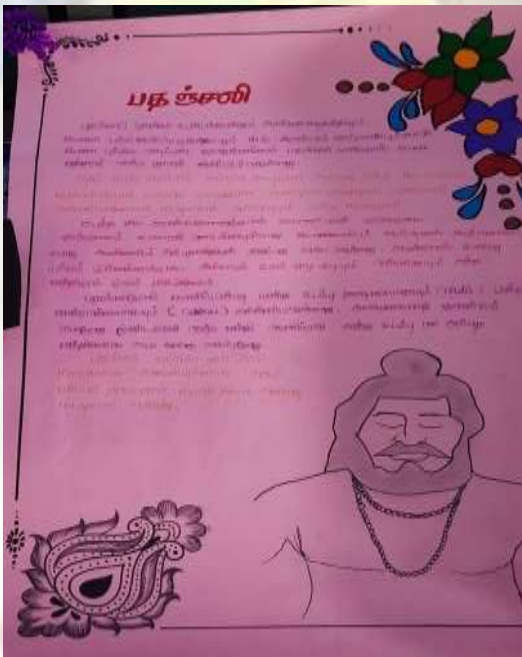
**PRESENTERS: Mahadevi. A, Gokulavani.K**



**PLASTIC SURGERY**

- **Susruta** was an ancient Indian surgeon and also known as *The Father of Plastic surgery*.
- In his book *Susruta Samhita* he had given the procedure for rhinoplasty (plastic surgery of nose), because people will get punished by cutting their nose.

**PRESENTER :Gopika.B & P.Priya**



## **BHAGAVAD GITA**

- **Bhagavad Gita** is part of The Great Epic Mahabharata.
- The Bhagavad-Gita deals essentially with the spiritual foundation of human existence. It is a call of action to meet the obligations and duties of life; yet keeping in view the spiritual nature and grander purpose of the universe.

**PRESENTER :Subhasri.P**

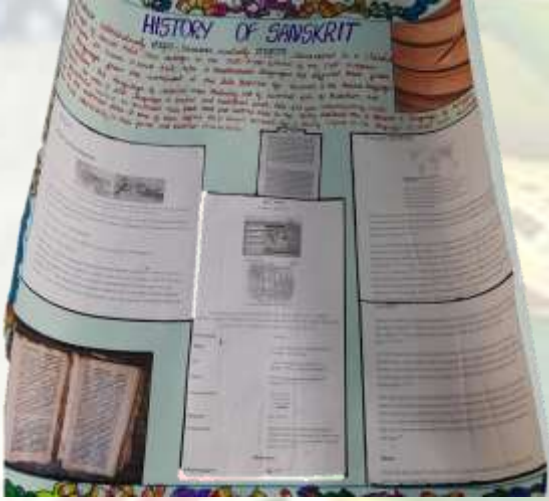


## **PATANJALI**

- Although there is a mention of yoga in the Upanishads and the Vedas, in the second century B.C.,
- The basic nuances of yoga are mentioned in the book *Yoga Sutra* that one can survive through yoga even without food and air.



- There are eight stages in yoga. The eighth stage is the samadhi stage, i.e., the knowledge of God. By doing yoga, we can know God.



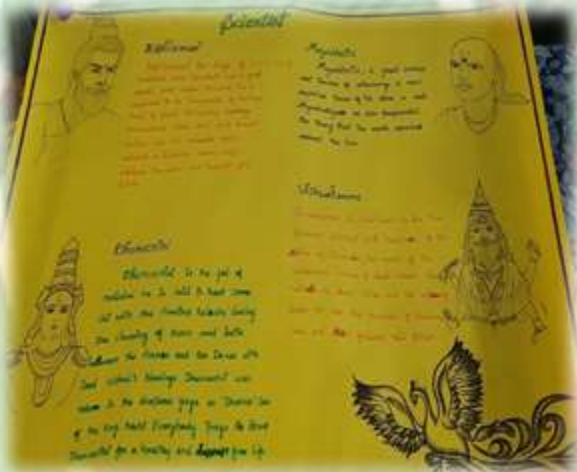
**PRESENTER :Jeevitha.J**

**SCIENTIST**

A Description on the 4 famous ancient Scientist:

- *Kapilamani*
- *Aryabhatta*
- *Dhanvantri*
- *Viswakarma*

**PRESENTERS :Harini.T, Saranya.V , Shobika.K**



**HISTORY OF SANSKRIT**

-Sanskrit belongs to the Indo-European family of Language.

-It is one of the three earliest ancient documented languages that arose from a common root language now referred to as Proto-Indo-European language: Vedic Sanskrit (1500-500BCE), Mycenaean Greek (1450BCE) and ancient Greek (750-400BCE).

**PRESENTER :Harini.T**

**ANIMALS AND BIRDS**



**PRESENTERS: Harini.T, Saranya.V, Shobika.K, Jeevitha.J**

**AROMATICS AND COSMETICS**



- In

Mahabharata, there was a chapter namely **Shanthi Parva**, the importance of Aromatics and Cosmetics are explained in this chapter.

- The poet “Virahamihira” - one of the nine gems of Vikramadhityan court. He too told about the importance of Aromatics.

**PRESENTERS: Jeeva.P, Kiruthiga.B, Sowmithra.V.K, Naveena.K, Ruhila.A**

## PHONETICS



- The letters of Samskrutam also came from the Lord Nataraja drum then it transmitted to four Kumaras in ancient times.

**PRESENTER: Sowmithra.V.K**

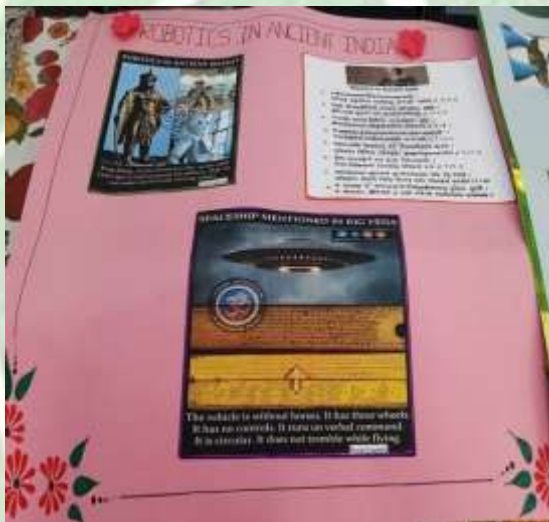
## SOIL TESTING

**Soil testing** process is done according to its shape, taste, smell, colour, sound and touch.



**PRESENTERS: Rubila.A**

## ROBOTICS IN ANCIENT TIMES



- King Bhoja, of the paramara clan wrote 1000 years ago in his **Samarangana suthradhara**.
- That we can make mechanically moving robots.

**PRESENTERS: Annapoorani.S**

## ANCIENT INDIAN CHEMISTRY

### 1. FLAME TEST:

Flame test is a qualitative analysis and are used to identify metal or metalloid ions in the sample.



**PRESENTERS: Kaviya.J**

### 2. TYPES OF SALT:

Different types of salts are there. Each salt have a names in Sanskrit which was said by ancient Indian author Vanabatta thousands of years ago.



**PRESENTERS: Lathasree.K**

### 3. SILVER TREE:

Silver Tree Redox Reaction: A copper wire coil in a Christmas tree shape is allowed to sit in a solution of silver nitrate. Within an hour silver metal needles form on the wire.



**PRESENTERS: Kaviya.J, Vettriselvi.T**

### 4. PREPARATION OF CAUSTIC ALKALI:

We use many systematic methods to prepare alkali. But thousands of years ago, the ancient Indian author said salts are also prepared by organic method using ginger.

**PRESENTERS: Elamathi.M, Srilathika.S**



## BEST LANGUAGES FOR COMPUTERS

- Scholars believe that the grammar of Sanskrit is the most appropriate to write algorithms,  
**-President Ram Nath Kovind, 2018.**
- NASA believes Sanskrit is the most scientific language for programming.
- So that's why Sanskrit is adopted by NASA. Sanskrit is helpful for programming language.



**PRESENTERS: Sowmithra.G, Sreemathi.S, Varsha.B.M**

## A.I., NLP



- Early Indian mathematics and science were conducted in Sanskrit, which has a long history.
- Sanskrit's rule-based, formula-based, and logical syntax makes it an excellent choice for writing algorithms.
- Sanskrit's grammar also makes it appropriate for artificial intelligence and machine learning.

**PRESENTERS: Sangeetha.K**

## AYURVEDA



- *Ayurveda* is one of the ancient sciences of the world, so Sanskrit is the most ancient language of world.
- All most all the texts of Ayurveda written by ancient philosophers and risk like Sushruta, Charka of vagbhata are Sanskrit language.
- Sanskrit is the key to Ayurveda. One wants to excel in Ayurveda inevitably to learn Sanskrit.

**PRESENTERS: Nivetha.J, Mena's, Swetha.M**

## TAXATION

- Our tax policy should be people friendly,
- People should want to pay their taxes.

**-CHANAKYA**

**PRESENTERS: Mythili.S**



## ARTERIES

- There are 24 major arteries that carry blood throughout the body.
- It is said in the book *SANGITA RATNAKARA*.



**PRESENTERS: Bhawaani.S.S, Gopika.B, Mahadevi.A, Swetha.M**

## PHOTO GALLERY







*“We owe a lot to the ancient Indians, teaching us how to count. Without which most modern scientific discoveries would have been impossible”*

**-Albert Einstein**

Indian civilization has accorded immense importance to knowledge — its amazingly vast body of intellectual texts, the world’s largest collection of manuscripts, its attested tradition of texts, thinkers, and schools in so many domains of knowledge. In Srimad Bhagavad Gita, Lord Krishna tells Arjuna that knowledge is the great purifier and liberator of the self. India’s knowledge tradition is ancient and uninterrupted like the flow of the river Ganga. Sanskrit is one such field which helps in this healthy flow. Through this exhibition, the students of Sanskrit got enlightened and made everyone to admire on how today’s education had their very root in the ancient system. The earlier texts of Sanskrit by the famous scholars explain how the language is related to Architecture, Art and Culture, Mathematics, Cosmetics, Aromatics, Human Anatomy and even in the field of A.I., Sanskrit is now closely related with Computers, through which the researchers, readers, and students of Sanskrit were benefited. This is a positive approach in the direction that Sanskrit learning which is now more widened and easily obtainable through these modern devices.

Prime Minister Pt. Jawahar Lal Nehru, had a positive approach towards this (Sanskrit) language. He has said:

*“The past has gone and the present is with us and we work for the future. But I have no doubt that whatever shape that future may take, one of the biggest, the strongest and the most powerful and the most valued of our legacies will be the Sanskrit language.”*

**धन्यास्मि भारतीयत्वात्**

**PROUD TO BE AN INDIAN**