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FAIRGAZE

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# SCHOOLASTIC NEWS

IMPACT-FOCUSED SCHOOL COMMUNITY MONTHLY MAGAZINE

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**Mahasanghikas:  
Spreading Buddhism**

**Tilting of Tungnath Shrine &  
Spiritual Connection**

**Nebulae: Connection With Stars**

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**DISCOVERING  
THE UNHEARD FACTS**

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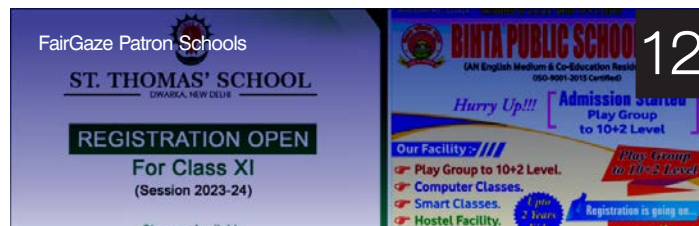
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# Editorial Lead

Welcome to the July edition of Schoolastic News magazine, celebrating the vibrant voices of talented students across the nation. We are thrilled to present an inspiring collection of articles that reflect the passion and creativity of our young writers.

As a platform dedicated to showcasing the skills and perspectives of students, we are constantly amazed by the depth of insight and ingenuity they bring to each issue. This edition is no exception, with captivating news stories, thought-provoking personal essays, and imaginative creative writing pieces that offer a fascinating window into the interests and aspirations of our young readers.

In this month's issue, we extend our heartfelt appreciation to Ms. Arpita Singh, Principal of Sunbeam School Ballia, for her enlightening article on "Integrating Tech Tools Helps Ignite Key S-E-L Skills." We are equally grateful to Ms. Nitya Narasimhan, FairGaze's esteemed mentor, Bharatanatyam Artist, Artistic Director, Prayukti Arts, California for her profound insights shared in the article titled "The Therapeutic Value of Bharatanatyam". Their contributions shed light on the importance of personal growth and self-healing in education, emphasizing the value of being a well-rounded student in all facets of life.

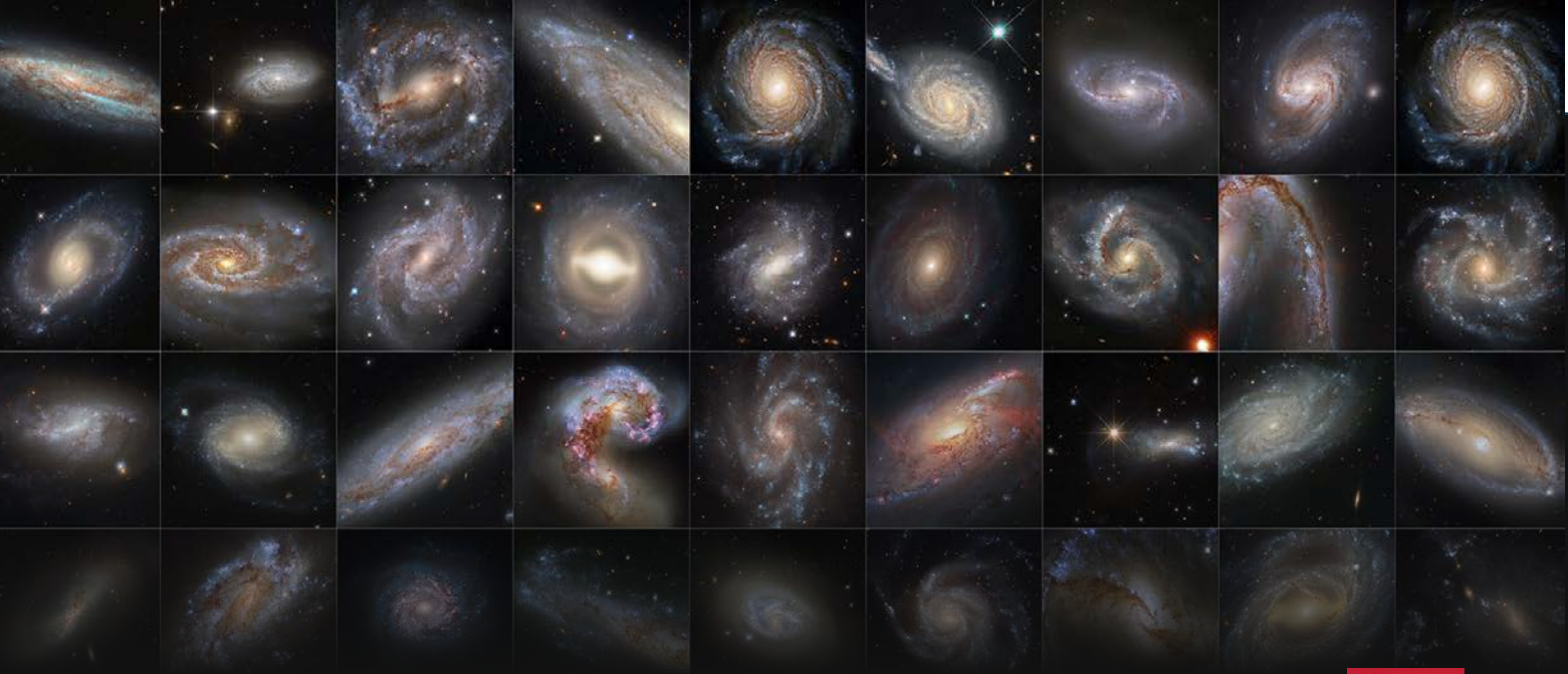
We would like to express our gratitude to our dedicated readers and talented contributors who continue to make Schoolastic News a thriving and dynamic community. It is our sincere hope that this month's edition will inform, inspire, and entertain you, igniting your intellectual curiosity and fostering a love for learning. Be sure to stay tuned for more exhilarating content in the months to come as we strive to bring you the very best of Schoolastic News.

We must remember always that our task is to remain steadfast, knowing that we have acted with artistic integrity and given it our all. Embrace the stones hurled by critics and transform them into monuments of mastery, serving as testaments to our boundless creativity. We encourage all our readers to embrace the journey of education and explore the endless possibilities it offers.

Happy reading!

**Bhavna Sharma**  
Editorial Lead  
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SPACE TOUR

# KNOW ABOUT CEPHEID VARIABLE

CEPHEIDS ARE IMPORTANT COSMIC BENCHMARKS FOR SCALING GALACTIC AND EXTRAGALACTIC DISTANCES.

Cepheid variables are a type of star that undergoes periodic changes in brightness. These stars are important in astronomy because they can be used to determine distances to other galaxies, which is crucial in studying the structure and evolution of the universe. Furthermore, Cepheid variables are essential in mapping out the Milky Way as well as other nearby galaxies.

## History

Cepheid variables were first discovered by the American astronomer Henrietta Swan Leavitt in 1908. She found that the period of a Cepheid variable's brightness changes was directly related to its intrinsic luminosity. This relationship, known as the period-luminosity relationship, allows astronomers to determine the distance to a Cepheid variable by measuring its period of brightness variation.

## Classification Of Cepheid

Cepheid variables are classified as pulsating variable stars, which means that their brightness changes are due to periodic expansions and contractions of their outer layers. This pulsation is caused by the star's internal structure, which is

influenced by its mass, age, and composition.

Cepheid variables have been used to measure distances to galaxies beyond our own Milky Way. This was first done by the American astronomer Edwin Hubble in the 1920s, who used Cepheid variables to show that the Andromeda Galaxy was much farther away than previously thought. This discovery helped establish the concept of an expanding universe and paved the way for modern cosmology.

In addition to their importance in measuring distances, Cepheid variables are also interesting objects in their own right. They are relatively rare, with only a few thousand known in our Milky Way galaxy. They are also very luminous, with some Cepheid variables being up to 100,000 times more luminous than our Sun.

## Types Of Cepheid

Two Types of Cepheid Variables exist: the Classical Cepheids and the Type II Cepheids. Classical Cepheids are young stars, while Type II Cepheids are older stars. Both types are used to measure distances in the universe.

Type II Cepheids are also used to measure the age of stars in star clusters. Classical Cepheids are more luminous, allowing for more accurate distance measurements. These two types of Cepheid variables are key to understanding the structure of the universe. This helps us to determine the size and age of the universe, as well as to measure the expansion of the universe. By understanding these parameters, we can gain insight into how the universe works.

In conclusion, Cepheid variables are an important type of star that has played a significant role in advancing our understanding of the universe. Their periodic changes in brightness have allowed astronomers to measure distances to other galaxies and to study the properties of these fascinating objects in detail.

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Edited by: Thirukumaran Veleiyudham



## SPACE TOUR

NEBULAE:  
THE INTERSTELLAR  
CLOUDS

NEBULAE: MADE OF DUST &amp; GASES MOSTLY HYDROGEN &amp; HELIUM

**B**eauty in Darkness: Nebulae are captivating astronomical phenomena found throughout the vastness of space. These clouds of gas and cosmic dust hold vital clues to the birth and evolution of stars. Nebulae come in a variety of shapes and compositions, showcasing the extraordinary beauty and complexity of the cosmos.

**Types of Nebulae****• Emission Nebulae**

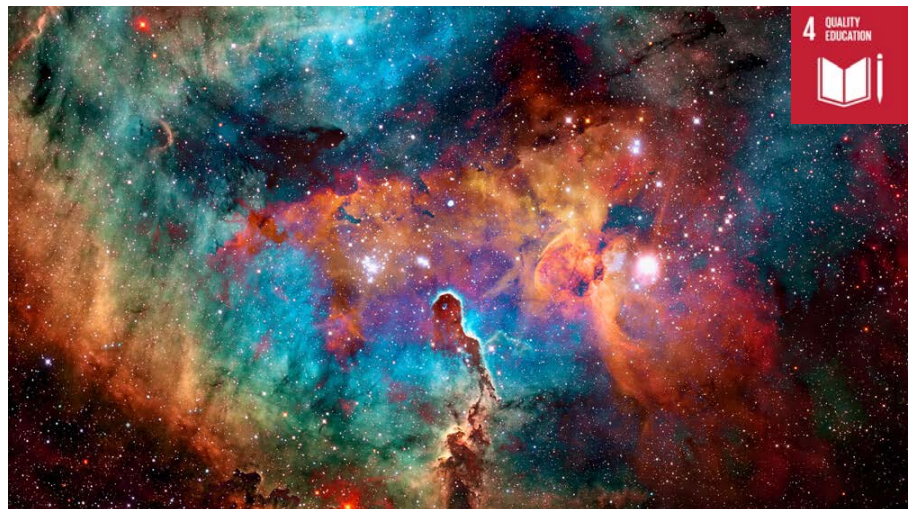
One of the most well-known types of nebulae is the emission nebula, which is composed of various ionized gases such as hydrogen and they emit their light in brilliant tints. The Orion Nebula is a prime example of an emission nebula, with its vibrant and swirling patterns serving as stellar nurseries where new stars are born from the collapse and condensation of the nebular material.

**• Reflection Nebulae**

In contrast to emission nebulae, reflection nebulae don't emit light but rather reflect the light of nearby stars. Dust particles within these nebulae scatter shorter wavelengths of light, giving them a bluish appearance. Their ethereal hues provide a captivating contrast against the backdrop of the cosmos.

**• Dark Nebulae**

Dark nebulae, also known as absorption nebulae, are dense clouds of gas and dust that obscure the light from background stars. These regions appear as dark patches against the glow of surrounding stars and



nebulae. The Horsehead Nebula is a wonderful example. Despite their darkness, they play a crucial role in the formation of new stars as their gravitational forces can trigger the collapse of nearby gas and dust.

**• Planetary Nebulae**

Planetary nebulae, despite their misleading name, have nothing to do with planets. These objects are shells of gas and dust expelled by aging stars in the later stages of their evolution. The ejected material forms intricate and often symmetrical structures around the central star, creating stunning displays of heavenly art.

Supernova remnants are nebulae formed from the remnants of massive stars that end their lives in spectacular supernova explosions. These remnants display complex structures resulting from the shockwaves produced by the explosion. The Crab Nebula, a remnant

of a supernova observed in 1054 AD, is an iconic example.

Nebulae are observed and studied at different wavelengths of light. Observations in these various ranges reveal different aspects of their composition, temperature, and dynamics, providing astronomers with valuable insights into the underlying physical processes.

Nebulae, with their breathtaking beauty and profound scientific significance, continue to captivate our imagination, enchanting us with their colors and elegant designs.

By:  
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MAGNIFICENT INDIA

# MAHASANGHIKAS: EXPLORING THE VAST REALM OF BUDDHISM

MAHASANGHIKA SCHOOL IS SHEDDING LIGHT ON ITS DISTINCTIVE CHARACTERISTICS.

Within the rich tapestry of Buddhist history and tradition, the Mahasanghikas emerges as a fascinating and significant school. Originating in ancient India during the early centuries of Buddhism, the Mahasanghikas played a pivotal role in shaping and spreading the teachings of the Buddha.

## Origins and Evolution

The Mahasanghikas, meaning "the Great Assembly," was one of the earliest Buddhist schools that emerged after the passing of Gautama Buddha around the 5th century BCE. It is believed that the Mahasanghika tradition originated from the First Buddhist Council held at Rajgir shortly after the Buddha's parinirvana. The council aimed to preserve and transmit the Buddha's teachings accurately.

While the exact circumstances leading to the emergence of the Mahasanghikas remain debated among scholars, it is widely recognized that this school played a pivotal role in the early development of Buddhism. The Mahasanghikas presented a distinct perspective, emphasizing a more inclusive and flexible approach to Buddhist teachings.

## Teachings and Philosophical Standpoints

The Mahasanghikas held several unique viewpoints that set them apart from other Buddhist schools of their time. One of their prominent doctrines was the concept of "Mahayana" or the "Great Vehicle," which focused on the idea of universal compassion and the aspiration for all beings to attain Buddhahood. This emphasis on the liberation of all sentient beings marked a significant departure from the earlier, more individualistic approaches to enlightenment.



Additionally, the Mahasanghikas introduced the belief in numerous Buddhas and Bodhisattvas, extending the concept beyond the historical Buddha, Siddhartha Gautama. They recognized that countless other enlightened beings had existed in the past and would continue to arise in the future. This notion paved the way for the development of a pantheon of celestial figures within Mahayana Buddhism.

## Impact and Influence

The Mahasanghikas left an indelible mark on the evolution of Buddhist thought and practice. Their teachings and philosophical perspectives played a vital role in the development of Mahayana Buddhism, which eventually became one of the largest branches of Buddhism. By emphasizing compassion and the potential for enlightenment for all beings, the Mahasanghikas helped shape the compassionate and inclusive ethos that is central to Mahayana Buddhism.

The Mahasanghikas occupy a significant place in the annals of Buddhist history. Their teachings and philosophical standpoints laid the groundwork for the emergence of Mahayana Buddhism, which has had a profound impact on the lives of countless individuals around the world. By advocating for universal compassion and inclusivity, the Mahasanghikas expanded the boundaries of Buddhist thought and practice, emphasizing the potential for all beings to attain enlightenment. Their legacy continues to resonate within the greater world of Buddhism, reminding us of the diverse and profound paths toward spiritual awakening.

By:  
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MAGNIFICENT INDIA

# THE ANCIENT PORT CITY OF POOMPUHAR

POOMPUHAR STANDS AS A TESTAMENT TO  
THE RICH MARITIME HISTORY AND CULTURAL HERITAGE OF THE REGION.



## Rediscovery and Conservation

Over the centuries, Poompuhar slipped into obscurity, with its existence fading into the annals of history. However, archaeological excavations in the 20th century unearthed remnants of the ancient city, shedding light on its glorious past. The artifacts, sculptures, and structural remains discovered during these excavations provided invaluable insights into the maritime trade and cultural richness of the region.

Efforts have been made to preserve and showcase the archaeological findings, including the establishment of a museum that houses the recovered artifacts. These endeavors serve as a reminder of the city's significance and offer visitors a glimpse into its majestic past.

Poompuhar, the ancient port city of Tamil Nadu, stands as a testament to the rich historical and cultural heritage of the region. From its prosperous maritime trade to its architectural marvels and cultural exchange, Poompuhar thrived as a vibrant hub of civilization. Though ravaged by natural calamity, the city's remnants bear witness to its glorious past, ensuring that its legacy remains alive for generations to come. Poompuhar serves as a poignant reminder of the indomitable spirit of human endeavor and the enduring allure of ancient civilizations.

Poompuhar, also known as Kaveripoompattinam, flourished as a prominent port city during the Sangam period, which spanned from the 3rd century BCE to the 3rd century CE. It served as the capital of the early Chola dynasty and played a crucial role in maritime trade with various countries, including ancient Greece and Rome. The city's strategic location on the banks of the river Kaveri made it an ideal center for commerce and cultural exchange.

## Architectural Marvels

Poompuhar was renowned for its architectural grandeur, with numerous magnificent structures that adorned its landscape. One of the most notable landmarks was the famous "Kaveri Palam," an intricately designed bridge constructed across the river Kaveri. This architectural marvel not only facilitated trade but also served as a symbol of the city's engineering prowess.

The city also boasted stunning temples dedicated to Hindu deities, including the

renowned Thiruppaal avaneeswaram adaiyar Temple, which stood as a testament to the rich religious and cultural heritage of the region. These temples showcased intricate carvings and sculptures, reflecting the artistic prowess of the craftsmen of that era.

## Trade and Cultural Exchange

Poompuhar thrived as a vibrant trading hub, attracting merchants from distant lands. The city's strategic location facilitated trade with various regions, contributing to its economic prosperity. It became a hub for maritime commerce, where ships laden with goods from across the seas docked at its port.

The city's cosmopolitan nature fostered cultural exchange, leading to the amalgamation of various customs, traditions, and artistic styles. The Sangam literature, composed during this period, reflects the diverse influences that shaped the cultural fabric of Poompuhar.

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Edited by: Thirukumaran Velejudham

# ◀ INTEGRATING TECH TOOLS HELPS IGNITE KEY S-E-L SKILLS ▶

(ED-TECH CAN SUPPORT THE DEVELOPMENT OF SOCIAL AND EMOTIONAL SKILLS IN STUDENTS)

BY: Ms. ARPITA SINGH (PRINCIPAL) SUNBEAM SCHOOL BALLIA



As numerous preceptors know, there is always some new form of pedagogy to apply in tutoring to ameliorate literacy issues for scholars. In my final times as a preceptor in Sunbeam Ballia, our faculty learned a whole lot about social-emotional literacy, which numerous in the education world now relate to simply as SEL. I discovered this pedagogy to be extremely important for me while educating different sets of scholars. While scholars learn numerous intellectual chops in the classroom, that impact can table without a strong social-emotional core.

- **SEL and Technology help students build greater connections.**
- **There are many different ways Ed Tech can add to SEL experiences.**
- **Technology can help close developmental and social gaps in kids.**
- **In social-emotional learning, Ed Tech offers students more than 'here and now'.**

Technology can help scholars be more comfortable participating in their gests. For illustration, our scholars can produce

a videotape journal to document their diurnal conditioning and reflect on their feelings and responses to different situations. Using tools similar to Flip to record a reflection, or landing ideas using Canva or Adobe Creative, or Cloud Express to produce visual representations of their feelings or design a timeline of their progress and set pretensions, can help. Digital tools similar to Kahoot, Quizizz, and Google Forms help create tone-assessment quizzes for scholars. With these tools, scholars can tone-assess their knowledge, chops, and stations and admit authentic, meaningful, and timely feedback on their performance.

Creating digital portfolios with tools like Spaces EDU, Book Creator, and other analogous tools allows scholars to explore the substantiation of the work they've done. This shifts their focus to the process of learning itself. Eventually, substantiated literacy plans through choice boards, class playlists, or HyperDocs lead to increased pupil engagement, bettered tone-mindfulness, and lesser metacognition, and give scholars more control over their literacy.

There are numerous benefits of social-emotional literacy, including helping scholars learn to work as part of a platoon, helping them manage their feelings in the classroom, and helping them make stronger connections to their academy work among others.

With SEL practices come openings for scholars to learn some of the most important social-emotional chops, like tone- mindfulness, thing setting, social mindfulness, and more. And, when adding educational technologies in the academy, they can unleash new sets of



benefits and expand the power of SEL.

### Expressing feelings in a social setting

The connection between SEL and technology, when you suppose about it, is fairly logical bone. This is because scholars can produce further authentic literacy when they use tech tools in a real way. Linking educational content to both their feelings and using technology helps make the content much more real. It also generally results in scholars showing lesser quantities of interest and passion.

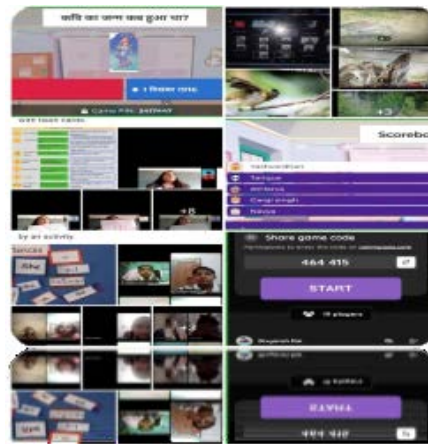
### Tech Enhance Social- Emotional Learning

Though not generally associated with social-emotional literacy and social and emotional chops, scholars can learn other applicable chops through SEL gestic. These include chops like continuity, rehearsing empathy, problem-working, and redesigning trials to overcome former failed attempts. Particularly when educational technology comes into play, the capability to persist through failures can take a lot of different routes. Besides this, technology can align with SEL in many different ways. scholars may start to connect more deeply with academic content and develop further meaningful intrapersonal and interpersonal connections. Not only is there implicit for EdTech objectification to make SEL more meaningful, but there is also implicit for it to help scholars learn crucial 21st-century chops in the process.

Preceptors can use colorful tools to understand how scholars are doing with SEL skill development and their overall mindsets. They can try constructive assessments or prisoner other forms of data to show scholars how they can ameliorate. This is especially useful if they parade negative gestic at any point (but preceptors can also track positive gestic).

### Surprising SEL tools for the classroom

Other forms of technology can also help scholars manage their feelings throughout the day. bias like smart watches, for illustration, can track their stress by measuring crucial physiological



pointers and relay that feedback to preceptors. They can also use that information to offer an indispensable option for those scholars. Technologies like virtual and stoked reality are also feasible in situations like this. However, stressed out, or anxious, If preceptors smell a pupil is frustrated. AR or VR can immerse scholars in deep breathing exercises, for illustration, turning their entire focus until they're okay. It all comes back to making sure scholars are performing at a high position socially and emotionally. also, they can get the most out of learning with help from technology.

Scholars can use digital platforms, like Flipgrid or Wakelet, to partake in their studies or new effects they've learned on important motifs. By venting real feelings, they can more connect with the content, their peers, and themselves - the main pretensions of SEL.

### The social-emotional literacy foundation in different subjects



One way to bring technology into social-emotional literacy is when tutoring public speaking. numerous children (and grown-ups) get nervous about public speaking, so preceptors can use this as an occasion to help scholars manage those feelings. One illustration is preceptors using a microphone in class and handing it to scholars when they have a question. This helps them feel more comfortable in class conversations or when answering questions. And, this added real-world applicability can help them overcome fears of speaking in front of followership. Another way to help is by making time for scholars to tone-reflect. numerous social-emotional chops have to do with tone enhancement and effects scholars can do on their own. Reflecting on, feting, and recording exemplifications of positive gestic can help them make what they did right.

### Using robotics for education and SEL

Eventually, educational robotics has shown promising results as a technology that helps with social-emotional development in kiddies. Particularly when scholars have social or language diseases, they can use colourful educational robotics tools to communicate by programming the robot to say certain dispatches or execute certain conduct that indicates how they're feeling.

## FAIRGAZE OFFERINGS

# School Membership Program

The School Membership Program helps the school instill experiential learning, holistic development, skill building and financial literacy in children further preparing them for their life after school.

available as a standalone engagement activity

### 1. ONLINE WORKSHOPS

Conducted by professional mentors for students, teachers and parents focused on knowledge and skill building.



available as a standalone engagement activity

### 3. COUNSELLING SESSIONS

Organized for school children with expert counsellors to highlight and destigmatize important mental health issues



available as a standalone engagement activity

### 2. FAIRTALKS

Panel discussion organized on integral subjects around the education of India, covers ideas and perspectives from eminent panel of educationists.



available as a standalone engagement activity

### 4. SUSTAINABLE DEVELOPMENT GOAL CAMPAIGNS

Led by eminent educationists and esteemed judges. Intricately designed to promote and implement UN SDGs in the school community.



### 5. CUSTOMIZED ONLINE SCHOOL NEWSLETTER

Covers all school activities, events and achievements of the school, engages children to fetch stories/content of the school further furnished and designed by FairGaze.



### 6. MODEL UNITED NATIONS & VARIOUS EVENTS & CONTESTS

FairGaze organizes MUN for students of member school who role-play as UN delegates and simulate a session.

Children get opportunities to show case their talent in various creative contests by FairGaze.



available as a standalone engagement activity

### 7. STUDENTS' JOURNALISM TRAINING & SCHOLARSHIP PROGRAM

FairGaze trains students on journalistic skills, hosting webinars, hosting MUN, audience management etc.



### 8. SCHOOL'S MEDIA COVERAGE & PRPOMOTIONS

FairGaze brings the schools' activities, events highlights, mission and vision of the school leaders outside to the entire K-12 fraternity.



### 9. BRAND EXPOSURE

FairGaze has partnered with Dabur, Decathlon, Fortis, etc to bring sponsorships and organize students' focused engagement activities & contests.





## Upcoming FairGaze Engagements



FairGaze has partnered with UNESCO MGIEP as the School Implementation Partner to introduce a range of courses in schools. The primary objective of these courses is to cultivate responsible citizenship among students and provide them with the opportunity to earn certificates issued by UNESCO MGIEP. The courses available for enrollment are as follows:

Global Citizenship  
Climate Change  
Biodiversity and Human Wellbeing  
Games of Learning

These courses are open to students in grades 6 to 12 throughout India. By enrolling in these courses, students will acquire valuable knowledge and skills that will contribute to their development as responsible global citizens.

To find out more about the courses and to register, kindly visit the following link: <https://fairgaze.com/unesco-mgiep-course-registration.html>



FairGaze returns with its annual contest "India as I See," aiming to foster a sense of patriotism among students while unlocking their creative potential through activities such as painting and creative writing. The contest provides a national platform for students to showcase their work and creativity. To encourage students of all grades, the competition is divided into three categories based on the guidelines of the National Education Policy 2020:

1. Paint India: Open to students from grades 3rd to 12th, divided into three subcategories: 3rd-5th, 5th-8th, and 9th-12th.
2. Power of The Pen: Open to students from grades 3rd to 12th, divided into three subcategories: 3rd-5th, 5th-8th, and 9th-12th.
3. Sacred Freedom: Open to students from grades 3rd to 12th, divided into three subcategories: 3rd-5th, 5th-8th, and 9th-12th.



## FAIRGAZE PATRON SCHOOLS



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# ◀ THERAPEUTIC VALUE OF BHARATANATYAM ▶

BY: NITYA NARASIMHAN,  
BHARATANATYAM ARTIST  
ARTISTIC DIRECTOR, PRAYUKTI ARTS, CALIFORNIA





Dance has long been recognized as a powerful form of expression, but its benefits extend far beyond mere entertainment. One particular dance form that holds immense therapeutic value, especially for practitioners, is Bharatanatyam. With deep roots in the history and culture of India, Bharatanatyam combines intricate footwork, expressive gestures, and emotive storytelling. This ancient art form not only promotes physical fitness and artistic skills but also offers numerous psychological and emotional advantages. From enhancing self-confidence to reducing stress, Bharatanatyam has proven to be a remarkable therapeutic tool for students.

The practice of Bharatanatyam demands discipline and dedication, which contributes to the development of a strong work ethic. Students are required to practice regularly, learn complex choreography, and master intricate movements. This process fosters discipline, perseverance, and a sense of responsibility, all of which are invaluable life skills. By committing themselves to the art form, students learn the importance of consistency, patience, and setting achievable goals. These qualities translate beyond the dance studio, benefitting them in academic pursuits and personal endeavors as well.

In addition to discipline, Bharatanatyam cultivates self-confidence in students. The dance form encourages students to express themselves through facial expressions, hand gestures, and body movements, helping them develop a strong stage presence. As students gain mastery over their physicality and expressiveness, they become more self-assured and comfortable in their skin. This confidence carries over to other areas of life, enabling students to present themselves with poise and grace, whether it's during public speaking engagements or social interactions. The performance aspect of



Bharatanatyam allows students to showcase their abilities, receive positive feedback, and build their self-esteem.

The rhythmic and repetitive nature of Bharatanatyam movements has a calming effect on the mind, making it an effective stress reliever for students. Engaging in the dance form requires deep concentration and focus, diverting attention from everyday worries and anxieties. As students immerse themselves in graceful movements and music, they experience a sense of flow and harmony. The rhythmic patterns and controlled breathing synchronize the mind and body, inducing a state of relaxation and mental clarity. Bharatanatyam serves as a therapeutic outlet, enabling students to channel their emotions and constructively release stress.

Furthermore, Bharatanatyam encourages emotional expression and storytelling, allowing students to explore a wide range of emotions. Through the dance, students learn to portray various characters and narratives, experiencing empathy and understanding different perspectives. This process enhances emotional intelligence and empathy, enabling students to connect with their own emotions and those of others. The ability to express emotions authentically is an invaluable life skill that fosters

healthy relationships, effective communication, and a deeper understanding of oneself.

In recent years, Bharatanatyam has gained recognition as a form of dance therapy, being utilized to address various psychological and emotional issues. It has been found effective in enhancing body image, promoting self-acceptance, and boosting overall well-being. Bharatanatyam's focus on body movements and expressions helps students develop a positive relationship with their bodies, improving body awareness and self-perception. The dance form's therapeutic benefits extend to individuals with mental health conditions such as anxiety and depression, providing them with a creative outlet for emotional expression and a means of connecting with others in a supportive community.

In conclusion, Bharatanatyam offers a plethora of therapeutic advantages for students. It instills discipline, cultivates self-confidence, reduces stress, and promotes emotional expression and empathy. By engaging in this deep-rooted dance form, students not only develop their physical and artistic abilities but also gain valuable life skills and a deeper understanding of themselves.

CURRENT AFFAIRS

# ARJUN RAM MEGHWAL: MINISTER OF LAW AND JUSTICE IN INDIA

HE IS A PROMINENT FIGURE IN INDIAN POLITICS WHO  
HAS MADE SIGNIFICANT CONTRIBUTIONS AS THE MINISTER OF LAW AND JUSTICE.



With a distinguished career spanning several years, Meghwal has been instrumental in shaping India's legal landscape and ensuring the fair administration of justice. His commitment to upholding the rule of law and his relentless pursuit of justice has earned him respect and admiration across the country.

Arjun Ram Meghwal was born on December 7, 1954, in Kishangarh, Rajasthan, India. He hails from a humble background and has consistently demonstrated determination and dedication throughout his life. Meghwal pursued his education with great fervor, earning a master's degree in arts and a master's degree in business administration. His academic achievements laid the foundation for his future success as a prominent politician and legal expert.

Meghwal embarked on his political

journey by joining the Bharatiya Janata Party (BJP), one of India's major political parties. He quickly emerged as a promising leader, displaying exceptional qualities of leadership and a deep understanding of the legal system. In recognition of his exceptional abilities, he was elected to the Lok Sabha, the lower house of the Indian Parliament, representing the Bikaner constituency in Rajasthan.

As the Minister of Law and Justice, Meghwal has been at the forefront of legal reforms and policymaking. He has played a pivotal role in the implementation of crucial legislative measures aimed at improving the legal system and ensuring access to justice for all citizens. Meghwal has actively participated in the framing and amendment of key laws, including the Criminal Law Amendment Act and the Arbitration and Conciliation (Amendment) Act.

One of Meghwal's notable contributions has been his efforts to enhance the efficiency and transparency of the Indian judicial system. He has championed the use of technology in courts, advocating for the digitization of legal processes to expedite proceedings and reduce delays. Meghwal has also been a strong advocate for legal literacy, working towards creating awareness about legal rights and empowering individuals to navigate the legal system with confidence.

Beyond his responsibilities as Minister of Law and Justice, Meghwal has been

actively involved in various social and developmental initiatives. He has consistently worked toward the welfare of marginalized communities, focusing on education, healthcare, and empowerment. Meghwal's dedication to social causes reflects his commitment to creating a more inclusive and equitable society.

Arjun Ram Meghwal's tenure as the Minister of Law and Justice has been marked by his unwavering commitment to justice, integrity, and the rule of law. His vision for a robust and accessible legal system has set the stage for transformative changes in India's legal landscape. Meghwal's leadership, coupled with his vast legal expertise, continues to shape the country's legal framework, ensuring that justice prevails, and the rights of all citizens are protected.

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## CURRENT AFFAIRS

THE TILTING OF  
TUNGNATH SHRINE

LOCATED IN THE MAJESTIC GARHWAL HIMALAYAS OF UTTARAKHAND, INDIA,  
THE TUNGNATH SHRINE STANDS AS AN ARCHITECTURAL MARVEL.

This ancient temple, dedicated to Lord Shiva, is not only revered for its spiritual significance but also for its unique characteristic—the noticeable tilt of its structure. This article explores the captivating tale of Tungnath Shrine's tilting phenomenon, its historical background, and the profound impact it has on devotees and visitors alike.

**A Sanctuary of Spiritual Devotion**

Tungnath Temple, situated at an altitude of approximately 3,680 meters (12,073 feet), holds immense religious importance as the highest Shiva temple in the world. It is one of the Panch Kedar shrines, the five sacred sites associated with Lord Shiva's divine form and attracts thousands of devotees each year. The serene atmosphere and breathtaking mountain vistas surrounding the shrine offer a spiritual haven, where pilgrims seek solace and divine blessings.

**The Mysterious Tilting Phenomenon**

One of the notable features that distinguish the Tungnath Shrine is the evident tilt of its structure. Over the centuries, the temple has gradually leaned towards the northwest, creating a visible inclination. This fascinating architectural anomaly has puzzled historians, archaeologists, and scientists alike, sparking various theories about its cause.

**Historical Significance and Mythological Connections**

The origins of Tungnath Temple can be traced back to ancient Hindu mythology and the great Hindu epic, the Mahabharata. According to popular belief, this hallowed ground is believed to be the spot where the arms of Lord Shiva, in the form of Nandi the bull,



appeared after the epic war of Kurukshetra. The Pandavas, heroes of the Mahabharata, constructed the temple to honor Lord Shiva's divine presence and seek redemption for their sins.

**Pilgrimage and Tourism**

The Tungnath Shrine's unique tilting characteristic has attracted not only religious pilgrims but also tourists and adventure enthusiasts from around the world. The surrounding region offers breathtaking trekking trails, where visitors can immerse themselves in the stunning natural beauty of the Himalayas while exploring the spiritual significance of the shrine.

**Preserving the Sacred Legacy**

Efforts are being made to preserve and protect the Tungnath Shrine for future generations. The Archaeological Survey of India and local authorities actively engage in maintenance and restoration projects to ensure the temple's structural

integrity. Simultaneously, measures are taken to promote sustainable tourism practices that minimize the environmental impact on the fragile Himalayan ecosystem.

The tilting of Tungnath Shrine stands as a remarkable testament to the intersection of spirituality, mythology, and nature's ever-evolving forces. This sacred sanctuary continues to inspire awe and devotion among pilgrims while attracting visitors from around the world who seek solace in its serene ambiance and embrace the thrill of its unique architectural quirk.

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ENVIRONMENTAL SUSTAINABILITY

# THE TECHNIQUE OF WOLBACHIA

## WOLBACHIA: A TINY BACTERIUM WITH A PROFOUND IMPACT



**W**olbachia is an intracellular bacterium that infects a wide range of arthropods, including mosquitoes, flies, and ticks. What sets Wolbachia apart is its unique ability to manipulate the reproductive system of its hosts. It can induce reproductive abnormalities, such as cytoplasmic incompatibility (CI), male killing, feminization, and parthenogenesis, leading to altered insect populations.

### Vector Control and Disease Prevention

Vector-borne diseases, such as dengue, Zika, malaria, and chikungunya, pose significant threats to human health worldwide. Traditional control measures, such as insecticides and bed nets, have limitations in terms of effectiveness and sustainability. Wolbachia offers an innovative approach to disease control by targeting the insect vectors themselves.

The principle behind Wolbachia-based strategies is to introduce Wolbachia-infected mosquitoes into wild populations. The bacterium is naturally transmitted vertically from mother to

offspring, ensuring its spread through subsequent generations. By introducing Wolbachia-infected male mosquitoes, which cannot produce viable offspring with uninfected females due to CI, the technique leads to a reduction in the overall mosquito population.

### Impressive Results and Expanded Applications

Field trials and experimental studies have demonstrated the remarkable potential of Wolbachia in disease control. In regions where Wolbachia-infected mosquitoes have been released, substantial reductions in the incidence of dengue and other mosquito-borne diseases have been observed. The technique has also shown promise in curbing the transmission of other diseases carried by insects, including filariasis and African trypanosomiasis.

Moreover, the technique of Wolbachia can be applied beyond mosquitoes. Researchers are exploring its potential in controlling other disease-carrying insects like ticks, which transmit Lyme disease,

and tsetse flies, which spread African trypanosomiasis. By leveraging the natural symbiotic relationship between Wolbachia and insects, scientists are uncovering new avenues for combating a range of vector-borne diseases.

### Collaborative Efforts and Future Prospects

The technique of Wolbachia represents a remarkable collaboration between researchers, public health organizations, and local communities. Collaborative efforts have been instrumental in conducting field trials, monitoring outcomes, and ensuring the ethical and responsible use of this technique.

The potential of Wolbachia-based strategies extends beyond disease control. Researchers are investigating its applications in other areas, such as agricultural pest management and conservation biology. The versatile nature of Wolbachia opens doors to innovative solutions for various challenges posed by insect populations.

Wolbachia's technique has revolutionized disease control strategies by harnessing the power of this natural bacterium to manipulate insect populations. With its potential to curb the transmission of devastating vector-borne diseases, Wolbachia offers a promising avenue for public health interventions. Continued research, collaboration, and careful implementation are key to realizing the full potential of this groundbreaking technique and improving global health outcomes in the face of vector-borne diseases.

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## ENVIRONMENTAL SUSTAINABILITY

# BIOFILTERS IN RECIRCULATING AQUACULTURE SYSTEM

BIOFILTERS ARE A CORNERSTONE OF RECIRCULATING AQUACULTURE SYSTEMS.

As the demand for seafood continues to rise, the aquaculture industry plays a crucial role in meeting global protein needs. However, the environmental impact of traditional aquaculture practices necessitates more sustainable solutions. Enter recirculating aquaculture systems (RAS), an innovative approach that minimizes water usage and reduces pollution. At the heart of these systems lies the biofilter, a vital component that helps maintain water quality and promotes the overall sustainability of RAS.

## The Basics of Recirculating Aquaculture Systems

Recirculating aquaculture systems represent a modern and efficient method of fish and shellfish production. Unlike traditional open-loop systems, RAS recirculates and filters water, minimizing the need for continuous freshwater input and reducing waste discharge into the environment. The key to the success of RAS lies in its ability to maintain optimal water quality parameters for aquatic organisms through various filtration methods, with the biofilter playing a crucial role.

## Understanding Biofilters

Biofilters, also known as biological filters or nitrifying filters, are an integral part of recirculating aquaculture systems. They provide a habitat for beneficial bacteria that help convert harmful ammonia, released as waste by the fish, into less toxic compounds such as nitrites and nitrates. These bacteria, collectively known as nitrifying bacteria, play a pivotal role in the nitrogen cycle by facilitating the conversion of ammonia to less harmful forms, thus preventing ammonia toxicity and maintaining water quality.

## Advantages of Biofilters in RAS

- Water Quality Management: Biofilters



play a vital role in maintaining optimal water quality parameters in recirculating aquaculture systems. By efficiently converting toxic ammonia into less harmful forms, they reduce the risk of ammonia toxicity, ensuring a healthier environment for aquatic organisms.

- Waste Reduction: The inclusion of biofilters in RAS enables the reutilization of water, reducing the need for constant freshwater input and minimizing waste discharge into natural water bodies. This helps conserve water resources and mitigates the environmental impact of aquaculture operations.
- Enhanced Sustainability: Biofilters contribute to the overall sustainability of aquaculture by minimizing the ecological footprint associated with traditional aquaculture practices. They promote resource efficiency, reduce pollution, and support the responsible management of aquatic ecosystems.
- Disease Prevention: Maintaining optimal water quality through biofiltration aids in disease prevention

within recirculating aquaculture systems. Clean and well-filtered water reduces the risk of pathogen transmission and provides a healthier environment for fish and shellfish, thereby reducing the need for antibiotics or other disease treatments.

Biofilter plays a crucial role in maintaining water quality and promoting sustainable aquaculture practices. By effectively converting toxic ammonia into less harmful forms, biofilters support the growth and well-being of fish and shellfish while reducing the environmental impact of aquaculture operations. As the demand for sustainable protein sources grows, the integration of biofilters in recirculating aquaculture systems holds great promise in achieving a more environmentally friendly and economically viable approach to seafood production.

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