COMPREHENSIVE REPORT ON THE "BUILD AND BEHOLD" WORKSHOP SERIES

The Skilcraft and Innovation Centre and the Institution Innovation Council (IIC) of Sree Narayana College, Nattika, under the financial support of DBT STAR strengthening scheme, successfully conducted a three-day multidisciplinary workshop series titled **"Build and Behold"** from 11th to 13th November 2025. This initiative, organized in association with the Departments of Physics, Botany, and Zoology, aimed to provide a unique blend of scientific knowledge, hands-on skill-building, and an emphasis on sustainability.

The event also saw the active collaboration of two prominent organizations, the Breakthrough Science Society and the Green Museum, which contributed their expertise and innovative perspectives. The workshops were designed to cater to both higher secondary school students from neighbouring institutions and undergraduate (UG) students of Sree Narayana College, ensuring broad engagement across age groups and educational levels.

Event Theme and Objectives

"Build and Behold" as a theme encapsulated the essence of creation, exploration, and observation across various disciplines of science. The event had the following key objectives:

1. Skill Development: Empower participants with practical, hands-on experience in crafting innovative solutions and understanding scientific processes.

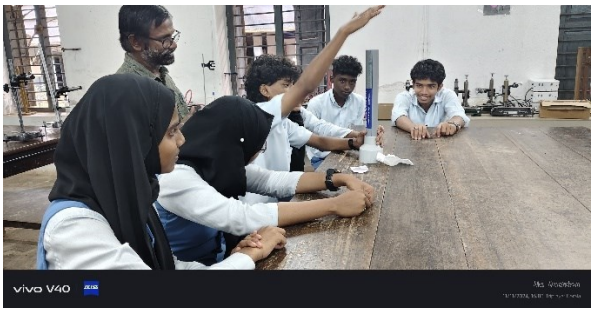
2. Scientific Exploration: Encourage participants to delve into the realms of astronomy, botany, and aquatic biology through guided experiments and activities.
3. Sustainability Advocacy: Promote eco-friendly practices and emphasize the role of science in achieving environmental sustainability.
4. Community Outreach: Extend the scope of the college's academic influence by involving local schools and fostering curiosity in young learners.
5. Interdisciplinary Collaboration: Demonstrate the interconnected nature of different scientific fields in solving real-world problems.

Detailed Workshop Breakdown

Day 1: Physics Department – Exploring the Cosmos

The Physics Department focused on sparking interest in astronomy and practical optics through two key workshops:

1. Sunspot Watching:
    - Participants were introduced to the phenomenon of sunspots and their significance in understanding solar activity.
    - Under expert guidance, students observed sunspots using safe solar filters and learned about the effects of solar activity on Earth, such as auroras and communication disruptions.
2. Telescope Making:
    - A hands-on session where students assembled working refractive telescopes using lenses and basic materials.
    - The workshop covered the principles of optics, magnification, and the role of telescopes in astronomical discoveries.



Impact:

These activities provided a practical understanding of physics concepts while inspiring students to explore the vast field of space science. The creative aspect of building telescopes added a layer of accomplishment for the participants.

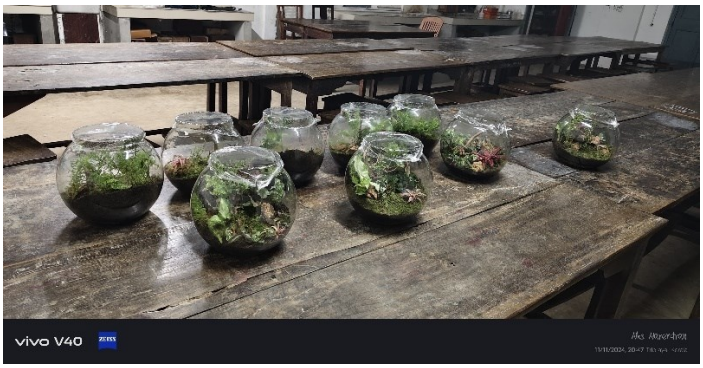
Day 2: Botany Department – Nurturing Green Innovations

The Botany Department emphasized ecological awareness and creative thinking through their Terrarium Making Workshop:

1. Terrarium Making:
    - Participants learned how to create self-sustaining miniature ecosystems within glass containers.
    - Sessions included selecting appropriate plants, layering soil and materials for drainage, and understanding the water cycle within a terrarium.
    - The ecological benefits of terrariums, such as improving indoor air quality and fostering plant biodiversity, were also discussed.

Focus Areas:

- Importance of micro-ecosystems in urban spaces.
- Practical applications of terrariums in educational and decorative settings.

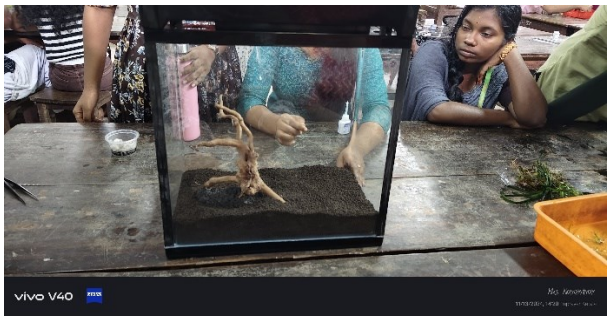


Impact:

Participants gained valuable skills in sustainable design and developed a deeper appreciation for plant diversity and conservation. The workshop also encouraged creativity and fostered mindfulness about the environment.

Day 3: Zoology Department – Aquatic Ecosystems in Focus

The Zoology Department brought attention to aquatic biodiversity and ecosystem design with their Aquascaping Workshop:



1. Aqua scaping:
    - Participants were taught how to design and maintain aesthetically pleasing and ecologically balanced aquariums.
    - The session covered key aspects such as substrate selection, aquatic plant species, compatible fish populations, and the role of filtration and lighting.
    - The ecological importance of maintaining aquatic habitats was emphasized, particularly in urban settings.

Focus Areas:

- Integration of biology and art in creating sustainable aquatic ecosystems.
- Importance of aquatic plants in oxygenation and water quality management.

Impact:

This workshop allowed participants to blend creativity with biology, sparking interest in sustainable hobbyist practices and careers in marine biology and environmental conservation.

Collaborations and Contributions

1. Breakthrough Science Society:

The science organization *Breakthrough Science Society* (BSS) was established in the year 1995 as a platform to create a new science movement in the country. The BSS is a non-profit social welfare organization registered under the West Bengal Societies Registration Act, 1961 with the Registration No. S/86180 of 1996-97.

- Played a pivotal role in providing technical expertise and resources.
- Organized informative sessions to inspire participants to think innovatively and integrate modern scientific principles into their projects.

2. Green Museum:

Green Museum is an entrepreneurship located in Wayanad. They are specialised in creating terrariums, aquariums, paludariums and natural landscapes using plants &natural materials by mimicking nature and educating students about the importance of native floral conservation. Green museum is trying to do ex-situ conservation of both aquatic and terrestrial plants endemic to western ghats through nature aquariums and terrariums. They are equipping the students to become entrepreneurs and teaching them a step-by-step process of both terrariums making and aqua scaping along with its maintenance requirements.

- Shared sustainable practices and eco-friendly innovations, aligning with the theme of environmental stewardship.

- Showcased practical applications of green technologies to encourage participants to adopt a more environmentally conscious approach in their scientific endeavours.

Participation and Outreach

- The event witnessed active participation from over 200 students, including higher secondary students from local schools and undergraduate students from the college.
- The diverse group of attendees created a vibrant learning environment, fostering collaboration and knowledge exchange.

Key Outcomes and Achievements

1. Enhanced Practical Skills:
    - Participants acquired practical knowledge in building scientific tools (e.g., telescopes) and designing ecosystems (terrariums and aquascapes).
2. Sustainability Awareness:
    - The workshops emphasized eco-conscious practices, inspiring students to think critically about their environmental impact.
3. Community Engagement:
    - By involving nearby school students, the event extended the college's influence and encouraged young learners to pursue science-related fields.
4. Interdisciplinary Learning:
    - The collaboration between the Physics, Botany, and Zoology departments highlighted the interconnectedness of scientific disciplines, broadening participants' perspectives.
5. Participant Feedback:

- Attendees expressed enthusiasm for the hands-on approach and the relevance of workshops to real-world challenges, signaling a successful execution of the program's objectives.

Conclusion

The "Build and Behold" workshop series was a resounding success, combining innovation, creativity, and sustainability in a comprehensive learning experience. The collaboration between the departments and external organizations ensured the event was dynamic, impactful, and well-received by the participants.

This initiative not only enhanced participants' scientific knowledge and skills but also promoted a deeper commitment to sustainability and interdisciplinary learning. The event has set a benchmark for future workshops and reinforced Sree Narayana College, Nattika's position as a hub for academic excellence and innovation

For detailed reports of each department click on the corresponding names given below.

- **Department of Physics**
- **Department of Botany**
- **Department of Zoology**

SIC Convenor: Dr. Siji Narendran N K (Asst. Professor, Dept. of Physics)

IIC Convenor: Sri. Praveen V Prasad (Asst. Professor, Dept. of Botany)

----------0----------