अंक-14 वर्ष-05

मार्च - 2025

Theme of this issue is *"The Power of Medicinal Plants"*

नई उड़ान

त्रैमासिक विज्ञान पत्रिका

Editor's Choice

Living Laboratories:
Cultivating Curiosity and Care through Medicinal Plants

Mentor Intervention

"Scientia-
अवसरों से भरी एक नई दुनिया"

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From the Desk of the Director

Dear Readers,

It gives me immense pleasure to present to you the **March 2025** edition of **Nai Udaan**, a magazine that continues to be a vibrant reflection of student innovation, environmental consciousness and scientific curiosity.

This edition, themed **"The Power of Medicinal Plants,"** explores how nature and science beautifully intertwine to support health, sustainability and community engagement. From school herbal gardens to international collaborations and from student-led experiments to government-backed AI initiatives in Ayurveda, this issue captures a wide spectrum of inspiring stories and cutting-edge develoments.

You will find thoughtful articles like **"Living Laboratories",** which documents how students are learning hands-on science through nurturing medicinal plants. Features like **"The Herbalogue Chronicles"** and **"From Spark to Spotlight"** celebrate innovation and cross-cultural learning, while our career section guides aspiring scientists towards meaningful futures in ethnobotany and phytochemistry.

As you turn these pages, I hope you feel inspired by the ideas, efforts and commitment of our young minds and mentors alike. May this edition ignite your curiosity and reaffirm your faith in the healing power of both nature and knowledge.

Warm regards

Veditha Reddy, IAS
Director (Education)

नई उड़ान

त्रैमासिक विज्ञान पत्रिका

संरक्षक
वेदिता रेड्डी
निदेशक (शिक्षा विभाग)

प्रधान सम्पादक
डॉ. रीता शर्मा
अतिरिक्त शिक्षा निदेशक

उप प्रधान संपादक
डॉ सुधाकर भीमराव गायकवाड़
उप शिक्षा निदेशक
(विज्ञान शाखा)

सम्पादक-मण्डल
कुन्दन कुमार दुबे
(ओएसडी, विज्ञान शाखा)

भावना सावनानी
प्रवक्ता (जीव विज्ञान)
सर्वोदय कन्या विद्यालय, पटपड़गंज

डॉ. नील कमल मिश्र
(टी जी टी विज्ञान)
सर्वोदय बाल विद्यालय ,फतेहपुर बेरी

रविंद्र कुमार ,
(टी जी टी,विज्ञान)
GBSSS आदर्श नगर, नंबर -1

डिजाईन एवं ग्राफिक्स
नवीन कुमार श्रीवास्तव
(कला अध्यापक)
सर्वोदय बाल विद्यालय ,फतेहपुर बेरी

In a world constantly accelerating with technological advancements, we often overlook the quiet, time-tested remedies embedded in our own environment. This issue of **Nai Udaan** is a heartfelt tribute to nature's pharmacy—medicinal plants, a treasure trove of healing that often thrives unseen around us.

From the revered Tulsi in our courtyards to the potent Neem, turmeric, aloe vera, and ashwagandha, plants have been central to health traditions across all civilizations. Today, as the global community increasingly embraces holistic and sustainable living, the importance of these natural healers is being rediscovered, even validated by modern science. Their remarkable antimicrobial, anti-inflammatory, and immunity-boosting properties are gaining global recognition and are now being integrated into preventive healthcare and pharmaceutical research.

This edition of **Nai Udaan** is dedicated to encouraging students and educators to explore the fascinating connection between traditional knowledge and scientific inquiry. We feature inspiring student-led projects, innovative school initiatives, and insightful articles that highlight the intersection of biology, chemistry, environmental science, and cultural heritage. You'll discover a rich tapestry of experiences where local wisdom meets scientific validation, reminding us that true scientific understanding flourishes when it connects with our lived realities.

Our schools play a crucial role, not just in imparting knowledge, but in fostering environmental consciousness and scientific thinking. When students engage in herbal garden projects, conduct experiments with natural extracts, or document traditional remedies passed down through generations, they bridge invaluable knowledge gaps. These activities not only deepen their scientific understanding but also instill a profound sense of responsibility towards our biodiversity and cultural heritage. Such school-based initiatives are truly empowering our young minds to become ambassadors of health, sustainability, and innovation.

Nai Udaan remains a vibrant platform dedicated to nurturing scientific temperament, fostering creativity, and inspiring collaborative learning. We firmly believe that when learners connect with science through real-world relevance, such as understanding the medicinal value of plants, they don't just learn; they truly evolve.

Let us together cultivate curiosity, conserve this invaluable knowledge, and ensure its transmission to future generations. Let's make science not merely a subject, but a dynamic way of life.

Happy Reading!

'नई उड़ान' त्रैमासिक विज्ञान पत्रिका का प्रकाशन शिक्षा निदेशालय, दिल्ली सरकार द्वारा किया जाता है।
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CONTENTS

CONTENTS

Editor's Choice

Living Laboratories

Cultivating Curiosity and Care through *Medicinal Plants*

Need to know

Medicinal plants communicate through underground fungal networks called the **"Wood Wide Web"**, sharing nutrients and even warning each other of threats. Studies suggest herbs like Turmuric and Basil may produce stronger healing compounds when under stress. This hidden plant intelligence could unlock new paths in Natural Medicines.

Step into the eastern corridor of our school and you will notice a quiet revolution unfurling not in the classrooms, but in leaves and roots, in smell and soil. Our Herbal Heritage Garden—lovingly maintained by students of the Eco Club-is more than just a space for greenery.

It's a living classroom, a curated collection of healing, heritage, and hands-on learning. It is here that the power of medicinal plants truly takes root.

As a biology educator and the mentor of the Society for Global Sustainability, I have often asked myself: How do we teach students that science is not confined to textbooks or laboratories? How do we spark genuine curiosity about sustainability, wellness, and indigenous wisdom? The answer, have found, lies in the unassuming world of medicinal plants.

Nature as Healer, Nature as Teacher

From ancient Vedic scriptures to Charaka Samhita, from tribal remedies to grandmother's kitchens, India's relationship with medicinal plants has been a story of symbiosis. Plants like Tulsi (Ocimum sanctum), Neem (Azadirachta indica), Amla (Phyllanthus emblica), Ashwagandha (Withania somnifera), and Giloy (Tinospora cordifolia) have not only treated ailments but also nurtured immunity, mental well-being, and spiritual balance.

These plants represent an eco-centric wisdom that views health not in isolation but as a harmony of body, mind, and environment. Modern science is now catching up—with peer-reviewed research backing what ancient cultures practiced. From bioactive alkaloids in Ashwagandha to antimicrobial agents in Neem, these plants are gaining ground in integrative medicine globally.

At our school, we bring this wisdom into the curriculum and co-curricular life in creative ways. Students do not just learn about photosynthesis or plant reproduction—they learn how a neem leaf paste heals acne, how Tulsi water boosts respiratory health, and how Brahmi supports memory.

QR Code Storytelling: Blending Tech with Tradition

To deepen engagement, each plant in our garden is tagged with a QR code, which links to a student-researched microsite detailing the plant's common and scientific name, habitat, traditional and commercial uses, Ayurvedic significance, and even easy home remedies or recipes. For example, the Neem plant's page shares how its crushed leaves can be mixed with Tulsi and applied as a natural face mask to prevent acne—an idea submitted by a Class 8 student after interviewing her grandmother.

This initiative integrates digital literacy, research skills, intergenerational learning, and sustainability—all while making students feel like co-creators of knowledge.

Eco Club in Action: Nurturing Green Ambassadors

Our Eco Club operates under various verticals: Herbal Heritage (Classes 6–8), Green Brigade (Classes 9–10), and Society for Global Sustainability (Classes 11–12). Across these age groups, we treat our students as green ambassadors, and medicinal plants form a key pillar of their environmental journey.

We organize activities like:

- **Plant of the Month:** where students adopt and report on the growth and care of a specific medicinal plant.
- **Herbal Fridays:** where herbal teas and natural hand rubs are made in collaboration with the Home Science department.
- **Soil & Soul Sundays:** involving yoga and journaling sessions in the herbal garden.
- **Green Bulletin Board:** which displays weekly facts about medicinal plants, their history, and cultural significance.

Our SDG Monitors ensure students follow plant care routines, prepare compost from garden waste, and document medicinal benefits observed over time.

Pack Less, Protect More – and Heal Naturally

In our campaign **"Pack Less, Protect More,"** aimed at reducing packaging waste, we encouraged families to switch to plant-based balms, powders, and oils over chemically packaged alternatives. This not only reduced waste but sparked conversations about how Ayurveda and herbal wisdom can be part of climate action.

One student even created a reusable sachet filled with dried lavender, tulsi, and camphor to serve as a natural deodorizer—an initiative that won appreciation at our school science symposium

From Kitchen to Clinic: Plant Power in Daily Life

One of our projects involved students maintaining a "Herbal Diary" where they recorded at least five plant-based remedies used in their households. Some entries included:

- Haldi doodh (turmeric milk) for sore throat
- Giloy juice with honey for fever
- Lemongrass tea for digestion
- Tulsi-ginger kadha for seasonal flu
- Mint paste for insect bites

These diaries revealed not just botanical knowledge but also cultural richness—students from different communities shared unique uses of plants like Ajwain, Kalmegh, and Arjun bark. Some even brought dried samples and demonstrated usage techniques during the annual Skill Activity Club Exhibition.

Collaborations and Community Engagement

To further enrich this experiential learning, we collaborated with:

- AYUSH Ministry to host a session on Integrating Ayurveda in Everyday Living.
- DDA Parks to label medicinal plants in the community park we maintain.
- Green-O-Tech and Conscious Planet for sustainable gardening and soil health workshops.
- Local herbalists and elders, who shared traditional recipes for immunity, digestion, and skin care.

These initiatives created ripple effects-parents began setting up balcony herbal gardens, and our canteen switched to offering herbal sherbets during summer months.

Medicinal Plants in Environmental Campaigns

During our Anti-Firecracker Campaign (Green Diwali, Eco Swasth Diwali), we distributed Tulsi saplings instead of sweets, encouraging families to "Breathe Tulsi, not Smoke." Parents were asked to write pledges on seed paper, and we displayed visual testimonials showing the role of plants in lung and skin health. These campaigns embedded science with activism, compassion, and creativity.

The Green Curriculum: Biology Beyond Textbooks

As a biology teacher, I have redesigned certain modules to incorporate medicinal plant knowledge. For instance:

- ***Cell structure lessons*** now include viewing cross-sections of turmeric and ginger under the microscope.
- In the chapter on ***'The World of the Living'***, we discuss biopiracy, sustainable harvesting, and bioprospecting.
- In ***evolution lessons,*** we explore how plants developed chemical defenses, which became our medicines.

These enrich the syllabus while making students see ecology and ethnobotany as living sciences.

Conclusion: Roots of Resilience, Seeds of Change

Medicinal plants are not just about healing the body—they are about **healing our relationship** with nature. In nurturing them, our students develop respect for biodiversity, scientific curiosity, and empathy for traditional wisdom. They learn that solutions do not always come from labs—they also come from leaves, rituals, and conversations with elders.

As we look to a future of climate uncertainty, lifestyle diseases, and mental health challenges, medicinal plants offer a grounded, green response. The goal is not to romanticize the past but to integrate its sustainable practices into today's world—with the rigor of science and the care of community.

Shilpi Bhattacharya

Tagore International School, East of Kailash

In our school garden, every leaf tells a story. And in every student, we are planting not just knowledge—**but the instinct to protect, preserve, and pass on the power of nature's healing touch.**

Student Innovation

From Spark to Spotlight

My Journey of Scientific Innovation

Need to know

Solar energy systems generate electricity without producing greenhouse gases or harmful pollutants during operation, helping to combat climate change and improve air quality.

Every innovation begins with a question, a spark of curiosity, and the courage to say, "I'll try."

For me, it all started on an ordinary day in Class 10, when my science teacher, Mr. Kuldeep, walked into the classroom and asked, "Dev, would you like to make a science project?" I replied honestly, "Sir, I don't have much knowledge, but I will try my best." That simple conversation changed the course of my life.

I started exploring environmental issues and was deeply moved by the alarming impact of global warming and the excessive use of non-renewable resources. Determined to contribute in my own way, I began working on a project titled "Utilization of Solar Energy." With encouragement from my teachers and unconditional support from my parents, I built a model of a smart city powered entirely by solar energy.

My project was selected at the school level, and soon I found myself presenting it at the zonal level, where I secured 3rd position. Though I couldn't qualify for the central level that year, the appreciation I received sparked a fire within me to keep going.

What truly sustained this journey was the unwavering guidance and faith of my mentors. Teachers like Mr. Kuldeep, Mr. Pradeep Pal, and Mr. Vinod Meena stood by me at every step, offering not only technical advice but the motivation to keep improving.

Science knows no country, because knowledge belongs to humanity, and is the torch which illuminates the world."
— Louis Pasteur

Above all, my principal, Mr. K.M. Tiwari, played a crucial role in my journey. His words of appreciation and consistent encouragement gave me the strength to dream big and inspired others to believe in me too.

Over the years, my concept evolved — from the initial solar city to a solar-powered highway connecting Delhi to Mumbai, and later, to a vision where solar energy would run schools, colleges, and hospitals. Every model I built carried a part of my hope for a greener, smarter India.

With each competition came new lessons. I experienced the thrill of victory and the sting of defeat. I won 3rd place at the zonal level again, and eventually reached 2nd place at the central level. In my final school year, I poured everything into my model and secured 1st place at the zonal level competition and 2nd place again at the central level exhibition.

Although I couldn't make it to the top at the state level, I was deeply honoured when Worthy Director Education Ms. Veditha Reddy appreciated my project and described it "truly innovative."

At the state-level exhibition, I delivered my final speech:

"For the past two years, I've tried to win this competition but couldn't. This was my last attempt. Though I didn't win, I'm proud of my journey. I urge you all — serve your nation with dedication, and the nation will reward you beyond your imagination."

The auditorium echoed with applause, and in that moment, I felt that my journey had made an impact. Many students visited my project, appreciated my work, and said they felt inspired to begin their own journeys of innovation.

This journey has taught me that science is not just about formulas and models — it's about purpose, passion, and perseverance. It's about daring to imagine a better world and taking that first step to build it.

To every dreamer reading this:

You don't need to be perfect. You just need to start. Keep asking questions, keep creating, and never stop believing in your ability to innovate. The world needs your ideas — and your courage to make them real.

Dev Gandhi
Gandhi Memorial GSBV, GT Road, Shahdara

Science Simplified

The Herbalogue Chronicles

Students Bridging Cultures Through **Nature**

Need to know

Turmeric (Curcuma longa), containing the active compound curcumin ($C_{21}H_{20}O_6$), is globally recognized for its potent anti-inflammatory and antioxidant properties. Ashwagandha (Withania somnifera) is a celebrated adaptogen that helps the body manage stress and enhances vitality.

Learning in schools can be made easy and effective only through experiential learning methodology. The content taught to the students must be true to life and true to the child to make the desired impression on the students mind and create a positive impact in his surroundings. Our school and teachers provide ample opportunities to the students in this direction. One such endeavour was our collaborative sustainability projects with international partners.

This international collaborative project was started to explore the herbal wealth of India and Germany which was initiated in the year 2017 with the beginning of my school's (Bal Bharati Public School, Rohini) collaboration with Gymnasium Marienberg, Saxony, Germany. From times immemorial, nature has been healing the inhabitants of the earth by its amazing methods. One of nature's healing balm happens to be the plethora of medicinal plants found in different parts of the world.

India and Germany being two countries with immense herbal wealth were very suitable partner countries for this wonderful educative project. Man, from the initial stages of hunting and gathering has been exploring the immense possibilities of the power of healing in plants.

The project was aimed at exploring and comparing the medicinal plants found in India and Germany thereby making the students aware of the immense possibility of going organic and reducing dependence on synthetic drugs and medicines not only for the cure of common ailments but also to make them understand how beneficial it could be to include herbs in one's diet as a step towards sustainability by consuming locally grown products. Thus promoting Green Meals. This also enables students understand how they could wean themselves of unhealthy packaged foods which again is a sustainable act.

Under the project the students from collaborating school, Gymnasium Marienberg , Saxony, Germany , collected various medicinal plants and herbs found in their native land and prepared beautiful catalogues listing the vernacular names, scientific names, medicinal use, economic use and other important information about each of the plants collected.
The compilation was called HERBALOGUE as it could be used as a catalogue for all relevant information about the plants.

Likewise, the Indian counterparts also collected various medicinal plants found in northern India and compiled them into magnificent Herbalogues. The participant students also wrote blogs to make their efforts public. The students were also encouraged to be a part of student exchange programme with Gymnasium Marienberg, Germany.

The Indian students went to Germany in 2019 and got to engage themselves in field trips and visits to botanical gardens wherein they could actually acquaint themselves physically with the properties of the medicinal plants they had researched on.

These plants included Lamium album, Lamium purpureum,Hieracium aurantiacum, Trifolium repens, Hypochaeris radiata, Trifolium pratense, Archilles millefolium etc. During their stay in Germany, they also consumed some herbs as salads and could actually consume Green Meals.

Likewise the German students joined a trip to TERI gram where they got the opportunity of understanding the medicinal properties of various Indian herbs. The amazing condiments and plant based flavours added in Indian foods to increase the nutrient value and taste of food amazed the students immensely.

The German students were amazed to learn about Myrica esculenta, Terminalia bellirica, Aegle marmelos, Ficus benghalensis, Ficus religiosa, juniperus communis Cynodon dactylus ,Azadirachta indica etc. They also created posters showing the importance of medicinal plants and displayed them across the school to create awareness and promote their use in their households.

The students in the school were also engaged in another hands on activity Donate A Herb. Under this the students from standards 6-8 were asked to grow a herb in their respective homes and donate them to the school's herbal garden later. The activity was a huge success and created a mind-set where students turned to green meals and sustainable practices for a better future of humans on mother Earth. During the project work, students learned botanical and vernacular names of the plants studied by them.

The significance of scientific nomenclature and basis of this nomenclature was understood by them. At the same time students also developed a love for biological science and appreciated the techniques used to study these. The over-whelming response and enthusiastic participation of each students remains as a sweet memory in my heart and motivates me to inspire them more and work in this direction with even greater zeal.

The work of the students in the form of Herbalogues and posters are still a proud possession of our school reminding us to keep infusing this feeling of appreciation for Mother Earth and her blessings for each one of us.

Pooja Sharma

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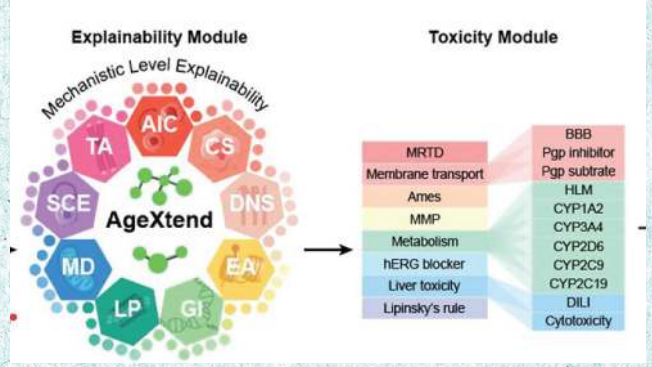
Trending News

Modern Medicine and Ayurveda

01 India's First AI-Herbal Drug Discovery Program



In a major development that bridges traditional medicine with cutting-edge technology, the Government of India has launched the AI-Herbal Discovery Initiative under the Ministry of AYUSH and the Department of Science and Technology. The action aims to accelerate the discovery of medicinal compounds from indigenous plants like Ashwagandha, Giloy, and Brahmi using AI. By combining traditional knowledge with AI models which are trained on thousands of preexisting research papers and molecular databases, this program is expected to accelerate identification of plant-based compounds which may be effective against chronic diseases like cancer, diabetes and autoimmune conditions.

"We're not just preserving heritage, we're enhancing it with science," said Dr. S. Raghavan, Head of the Drug Research Division, IIT Delhi.

Published by: THE HINDU, March 2025
Source: pypi.org/project/AgeXtend/

02 Tulsi-Based Nasal Spray Found Effective in Reducing Viral Load in Mild Respiratory Infections

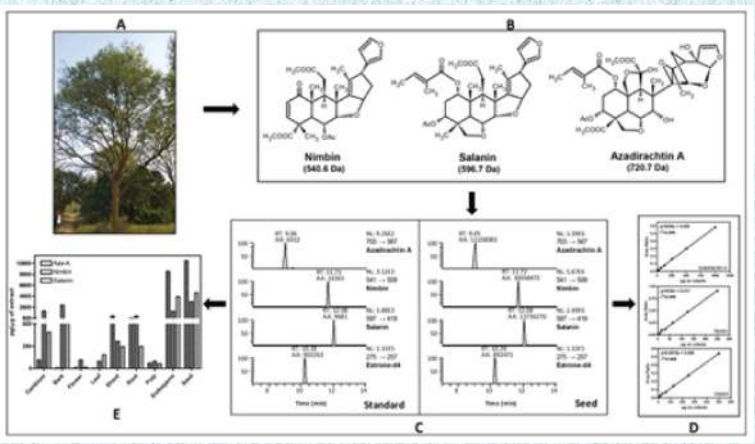
A research collaboration between Banaras Hindu University and AIIMS-Delhi has brought an encouraging result for a nasal spray developed from extracts of Ocimum sanctum (commonly known as Tulsi). This solution showed a major decrease in the viral load in patients suffering from upper respiratory infections like cold and mild flu.

Tulsi's anti-inflammatory properties were enhanced through nano-formulation (Tiny particles used to deliver medicines more effectively and safely) allowing for faster absorption. Clinical trial on 800 patients displayed improvement in their oxygen saturation level and faster recovery times.

This nasal spray is expected to come into the Indian market by late 2025.

Source: Indian Journal of Pharmacology, February 2025

03 NEEM Genome Sequenced Fully- Revealing Secrets of Natural Immunity



Researchers for the National Botanical Research Institute in association with CSIR, have effectively sequenced the entire genome of Azadirachta indica (Neem). This scientific breakthrough paves the way for finding the exact gene basis behind Neem's strong antibacterial and antifungal properties.

The researchers have already found 43 gene clusters responsible for production of compounds like nimbidin and azadirachtin both proven to combat microbial infections.

"It's like opening nature's medicine cabinet at the molecular level," said Dr. Meera Joshi, Lead Geneticist at NBRI.

Source: Nature India, January 2025

04 WHO Adds Amla to Its Global List of Essential Herbal Medicines

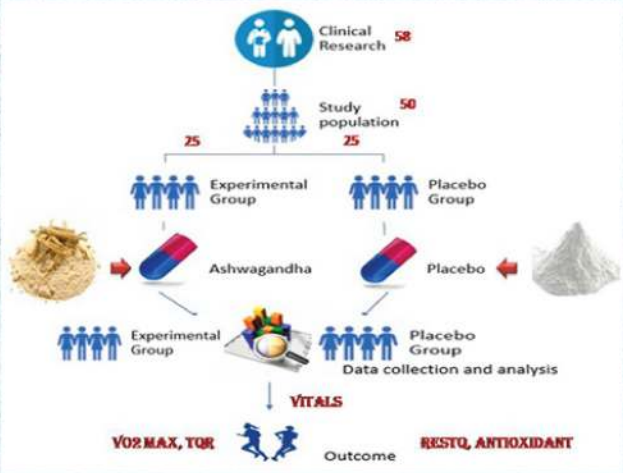
Recently the World Health Organization has added Emblica officinalis (Amla) in its global list of Essential Herbal Medicines. Recognized for antioxidant properties and vitamin C content, Amla has shown to support liver health, immunity, and metabolism

This addition is part of WHO's strategy to support evidence-based traditional medicine across Asia, Africa, and South America. The decision came after studies from India, South Korea, and the US showed its role in reducing oxidative stress, blood sugar levels, and cholesterol.

This puts Indian ayurvedic medicine on the world map and increases the credibility of ayurveda in modern medicine

Source: World Health Organization, December 2024

05 Ashwagandha Studied as a Potential Mental Health Support Agent



Recent research at NIH(USA) and IIT Bombay has indicated that Withania somnifera (Ashwagandha) could be the answer to managing the symptoms of anxiety, depression and ADHD. In over 1200 clinical trials, an Ashwagandha extract was as effective as low doses of SSRIs(antidepressants) with no reported side effects.

The extract controls GABAergic transmission, thereby assisting in regulating mood and response to stress. The finding can revolutionize natural mental health care treatments worldwide.

Source: Journal of Neuropharmacology, January 2025

Conclusion: A Green Future Rooted in Ancient Wisdom

These are just some of the headlines that are part of a trend. The world is focusing on combining nature and Morden medicine together. India, with its diversity and ancient knowledge, is leading the initiative. From biotech companies and AI-drug discovery and medicinal plants are no longer just part of heritage, they're part of our future. As science continues to prove and expand their uses, we are closer to a more sustainable and inclusive healthcare system.

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Book Review

Back to Our Roots

Rediscovering the Healing Power of Medicinal Plants

The Power of Medicinal Plants: Nature's Healing Touch

Nature's pharmacy at our doorstep:
Medicinal plants that have healed generations.

In an age where we rely on tablets over turmeric and chemicals over chamomile, The Power of Medicinal Plants: Nature's Healing Touch brings us gently back to a world where healing was rooted in leaves, roots, and love. This remarkable book is not just a collection of botanical insights—it's a vibrant journey through time, tradition, and science that reawakens our connection with the green world around us.

"Nature itself is the best physician." — Hippocrates

With the charm of a grandmother's remedy box and the precision of modern science, the book weaves together folklore, evidence-based research, and heartwarming stories to show how medicinal plants continue to be a lifeline—both for our health and for our planet.

A Journey Rooted in Tradition

The narrative begins with a rich tapestry of medicinal traditions spanning continents—from the ancient Ayurvedic wisdom of India to the age-old practices of Chinese healers and Amazonian shamans. These traditions come alive through stories set in temple courtyards, village markets, and lush forests where plants like Tulsi, Ashwagandha, Neem, and Amla were not only remedies but revered members of the household. For me, this section felt like a trip back to my childhood—when my grandmother would crush Tulsi leaves with honey to soothe a cough, or brew Neem for a skin rash. These weren't just cures; they were rituals steeped in care, passed lovingly through generations.

"The art of healing comes from nature, not from the physician." —Paracelsus

Science Meets Sacred

What sets this book apart is its seamless integration of ancient knowledge with modern research. Each plant is explored not just for its cultural significance but also for its chemical composition, therapeutic properties, and clinical relevance.

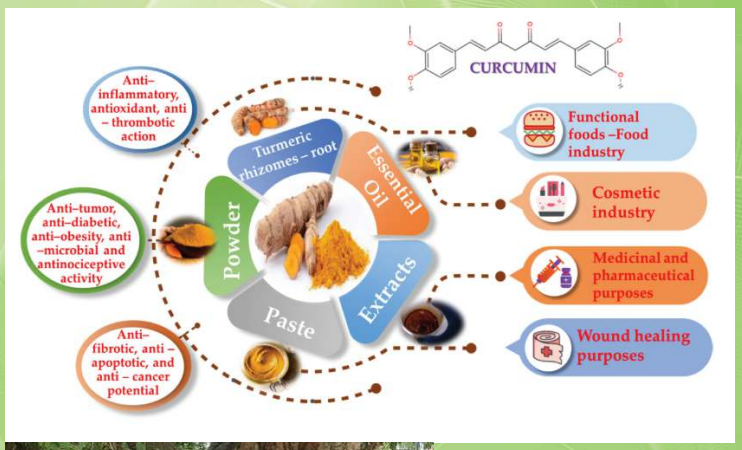
"Let food be thy medicine and medicine be thy food."
—Hippocrates

Turmeric, for instance, is unpacked through its active compound curcumin, now widely recognized for its anti-inflammatory and antioxidant effects.

Neem's antibacterial magic, **Ashwagandha's** stress-relieving powers, and **Amla's** immunity-boosting benefits are all backed by science and explained with clarity.

Importantly, the book shines a spotlight on sustainability. A dedicated chapter on endangered medicinal plants urges readers to protect biodiversity (SDG 15 – Life on Land), echoing the call to preserve our green heritage for future generations.

A Healing Touch of Memories



Reading this book is like sitting under the shade of a neem tree, cradling a cup of Tulsi tea, and listening to the whisper of leaves. It stirred memories of my childhood—the soothing hands of my grandfather preparing a herbal paste, my mother boiling herbs in the kitchen. These plants were more than medicine; they were symbols of love, care and trust.

One particularly moving story in the book recounts the journey of a cancer survivor who turned to Ayurveda and medicinal plants. Her healing was not just physical—it was emotional and spiritual. Her testimony reflects the heart of this book: that healing comes in many forms and often from the most humble leaves.

Learning by Seeing

Richly illustrated, the book delights the eyes and deepens understanding.

- Botanical sketches
- Close-up images of leaves, roots, and flowers
- Microscopic views of cellular structures
- Traditional artwork showing historical uses

A vibrant image of turmeric root, glowing golden, is paired with a detailed chart of its compounds. Every image doesn't just add beauty—it builds clarity, helping even young learners and nature lovers absorb knowledge visually.

Practical Plant Wisdom

"Healing is a matter of time, but it is sometimes also a matter of opportunity."
—Hippocrates

The book also equips readers with easy-to-follow recipes using medicinal plants for day-to-day health care. Want to try?

- Make a Tulsi-honey syrup for sore throats
- Apply a turmeric-chickpea face mask for glowing skin
- Brew a mint-coriander detox tea after a heavy meal

These are not only natural alternatives but also an invitation to slow down, observe, and appreciate the healing power of nature.

A Call for Conservation

The final chapters are a powerful call to action. As medicinal plants face extinction due to over-harvesting and habitat loss, the author emphasizes community gardens, home herbal kits, and eco-conscious choices. Growing even a single medicinal plant in our homes can be a small yet meaningful step toward healing the planet and ourselves.

Final Thoughts: A Book That Truly Heals

The Power of Medicinal Plants is a celebration of life, love, and leaves. It invites readers—young and old, urban and rural—to rekindle their bond with nature and trust in the timeless treasures of the earth.

In an era where modern science races ahead, this book reminds us to pause and look back—not in nostalgia, but in reverence. It is both a personal memoir and a scientific guide, making it a delightful read for students, educators, environmentalists, and health enthusiasts alike.

Poonam Arora
TGT, Modern Public School
Shalimar Bagh

-"Perhaps in our quest for modern medicine, we've overlooked the simplest, most profound solutions—growing quietly under our very feet."
-Let us return to our roots, for in them lies the future of our well-being.
-Let nature be our first pharmacy.

"Scientia- अवसरों से भरी एक नई दुनिया"

"अगर ग्यारहवीं कक्षा में विज्ञान विषय लिया, तो क्या बनोगे?"

इस सवाल के जवाब में अधिकतर विद्यार्थियों के पास बस दो ही विकल्प होते थे – डॉक्टर या इंजीनियर।

"और अगर एंट्रेंस परीक्षा पास नहीं कर पाए तो?"

अक्सर इस प्रश्न का कोई जवाब नहीं मिलता था और अगर मिलता भी था तो यही कि अगर डॉक्टर इंजीनियर नहीं बन पाए तो विज्ञान जैसे कठिन विषय को पढ़ने का क्या फायदा ?
जब भी मैं दसवीं कक्षा के छात्रों से बातचीत करती थी छात्रों की ऐसी प्रतिक्रियाएँ सुनकर सोचने लगती थी।

क्या सचमुच विज्ञान जैसा जीवंत विषय डॉक्टर व इंजीनियर बनने तक ही सीमित है ? कहीं ऐसा तो नहीं है कि विद्यार्थियों के पास विज्ञान विषय को पढ़ने के बाद उपलब्ध अवसरों के विषय में पर्याप्त जानकारी का अभाव है ? और अगर यह सच है तो मैं एक विज्ञान शिक्षिका के रूप में इन विद्यार्थियों की मदद कैसे कर सकती हूँ? मैंने एक गूगल फॉर्म तैयार किया और विभिन्न विद्यालयों में साझा किया ताकि यह जान सकूँ कि छात्रों की विज्ञान विषय के प्रति उदासीनता के क्या कारण हैं।

गूगल फॉर्म के माध्यम से प्राप्त आँकड़े कई पहलुओं की तरफ ध्यान आकर्षित कर रहे थे। विद्यार्थियों ने विज्ञान विषय को न चुनने के पीछे कई कारण बताए – जैसे विषय में रुचि की कमी, महंगी पढ़ाई, विषय की कठिनता, साथियों या माता-पिता का दबाव, संसाधनों की उपल. ब्धता और विद्यालय में विज्ञान स्ट्रीम का न होना। परंतु सबसे अधिक चौकाने वाला कारण था कि विद्यार्थियों को लगता है कि विज्ञान में डॉक्टर और इंजीनियर के अलावा कोई करियर विकल्प नहीं है।

इस समस्या का समाधान निकालने हेतु "Scientia -Igniting Young Mind" नामक पहल की शुरूआत हुई। यह नवाचार दो प्रमुख बिंदुओं पर केंद्रित था। सबसे पहले शिक्षाकों को नवीन विज्ञान शिक्षाण पद्ध. तियों के विषय में जानकारी प्रदान करना ताकि विज्ञान विषय कक्षा में रूचिकर तरीके से पढ़ाया जा सके और छात्रों को विज्ञान में करियर विकल्प के विषय में विस्तृत जानकारी उपलब्ध करवाई जाए।

यह विचार मेरे मन में तब आया जब मैं Fulbright कार्यक्रम से अमेरिका से लौटकर आई थी। मैंने इस परियोजना को Fulbright Grant के रूप में प्रस्तुत किया, और यह दुनिया के 160 देशों में से चयनित होकर अमेरिकी सरकार द्वारा वित्तपोषित परियोजना बनी। हालांकि, अमेरिका द्वारा आर्थिक सहायता में कटौती के चलते यह अनुदान बाद में समाप्त कर दिया गया।

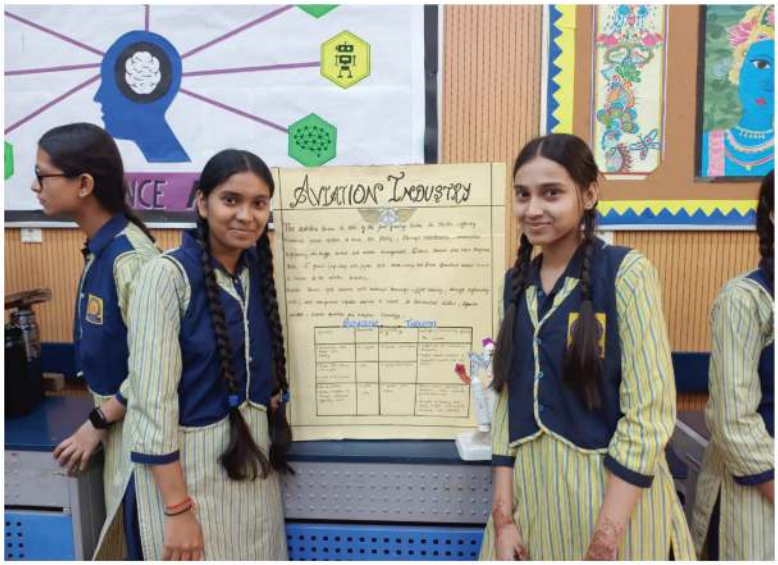
इसके बावजूद मैं बहुत उत्साहित थी और इस परियोजना को कार्यान्वित करने की तैयारी में लग गई। सबसे पहले मैंने सक्षम अधिकारियों से अनुमति प्राप्त की।इसके बाद, विज्ञान मेंटर शिक्षाकों के लिए तीन दिवसीय कार्यशाला आयोजित की गई, जिसमें नवाचारी शिक्षाण पद्धतियों पर चर्चा हुई। AIIMS, NPL, IARI जैसे प्रतिष्ठित संस्थानों से वक्ताओं को आमंत्रित किया गया, जिन्होंने कम लागत में किए जा सकने वाले और रोजगार दिलाने वाले विज्ञान पाठ्यक्रमों की जानकारी दी।

विभिन्न स्रोतों से जानकारी इकट्ठा कर एक ब्रॉशर तैयार किया गया। शिक्षाकों को Canva जैसे डिजिटल टूल्स की ट्रेनिंग भी दी गई ताकि वे पैम्फलेट स्वयं बना सकें।

इसके साथ ही 15 जिलों से 30 स्कूलों (प्रत्येक जिले से 2) की सूची तैयार की गई।

EVGCs के साथ एक कार्यशाला भी आयोजित की गई, जिसमें कार्य योजना तैयार की गई और प्रत्येक विद्यालय को छुट्टियों से पहले विज्ञान करियर मेला आयोजित करने के लिए कहा गया।

हालांकि अमेरिकी अनुदान रद्द हो गया था, लेकिन हमने हार नहीं मानी। विद्यालयों को स्वायत्तता दी गई कि वे अपने पूर्व विद्यार्थियों, अतिथि वक्ताओं को बुला सकते हैं और विज्ञान को रोचक बनाने वाली गति. विधियाँ जोड़ सकते हैं।



हर स्कूल ने अपनी रचनात्मकता का उपयोग कर के विज्ञान करियर मेले का आयोजन किया। इसमें विभिन्न क्षेत्रों पर आधारित काउंटर शामिल थे।

जैसे कृषि, जैव प्रौद्योगिकी, एविएशन, फॉरेंसिक विज्ञान, अंतरिक्ष और खगोलशास्त्र, योग, रक्षा, विज्ञान संचार, सूचना प्रौद्योगिकी, टूल एंड डाई टेक्नोलॉजी, और ITI।

सभी EVGCs और विज्ञान शिक्षकों ने बढ़-चढ़कर भाग लिया। कुछ विद्यालयों में क्विज़ आयोजित हुए, कुछ में रोल-प्ले, तो कुछ में विज्ञान प्रयोगों का प्रदर्शन। पूर्व छात्रों की वार्ताएँ इस मेले की विशेष आकर्षण रहीं।

NCERT,IIT दिल्ली से आए अतिथि वक्ताओं ने छात्रों का गहन मार्गदर्शन किया। मेले में 3000 से अधिक छात्रों और अभिभावकों ने भाग लिया।

विद्यालयों को DDE जिला, DDE ज़ोन, DDE विज्ञान शाखा, DDE स्कूल शाखा और अन्य वरिष्ठ अधिकारियों से मार्गदर्शन और आशीर्वाद भी प्राप्त हुआ।

अभिभावकों और छात्रों ने बताया कि वे विज्ञान में इतने विकल्पों से अनभिज्ञ थे। उन्होंने ऐसे पाठ्यक्रमों में आवेदन करने की इच्छा भी जताई। कई छात्रों ने आग्रह किया कि यह मेला दो दिन का होना चाहिए और फिर से आयोजित किया जाए।

मैं सभी अधिकारियों, अपने मेंटोर शिक्षक साथियों और EVGC मित्रों की हृदय से आभारी हूँ, जिनके सहयोग और परिश्रम से यह कार्य संभव हो सका। विद्यालयों के प्रधानाचार्य और जिला समन्वयकों का नेतृत्व और मार्गदर्शन इस परियोजना की रीढ़ रहा।

"Scientia – Igniting Young Minds" केवल एक विज्ञान मेला नहीं था, यह एक प्रयास था छात्रों की सोच बदलने का – यह दिखाने का कि विज्ञान केवल डॉक्टर या इंजीनियर बनने का माध्यम नहीं, बल्कि अनंत संभावनाओं का क्षेत्र है।

Bhavna Sawnani
PGT Biology
RSKV
Patparganj

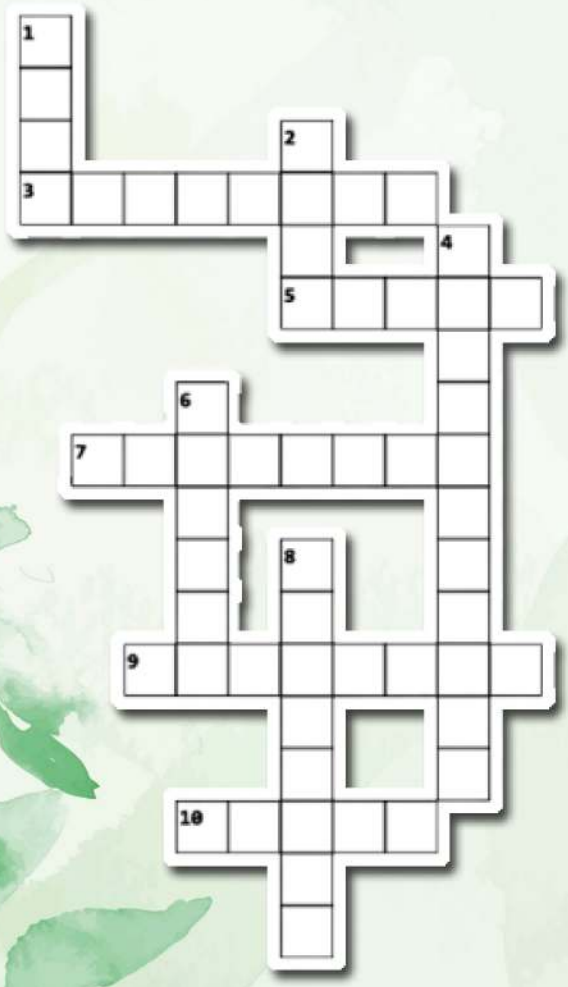
Brain Mapping

The power of Medicinal Plants: Nature's Healing Touch

Medicinal plants are plants that have natural healing properties. They contain special chemicals that help treat or prevent diseases. Long ago, before modern medicine people turned to nature for healing and used them for thousands of years in traditional medicine. Even today many medicines are made using natural plant extracts. These green wonders are not just remedies they are nature's way of caring for us.

Mission

Plants are more than just green, they heal, protect and care for us in amazing ways! Your mission is to solve this crossword puzzle and uncover the hidden powers of medicinal plants.



Questions

1.A bitter plant with strong antibacterial and antifungal properties and is used in soaps.
2.Green leafy plant used as salad and tea.
3.A drug used in treating illness.
4.An Indian herb also called Indian ginseng that helps reduce stress.
5.Other name of Holy Indian Basil.
6.Scientific study of plants.
7.A Cactus like plant that grows in hot dry climates.
8.The traditional yellow coloured root belonging to the family of Ginger.
9.Traditional Indian medical system.
10.Short plants with soft, green and delicate stems that are non woody.

Kareena Tulera
Student, XII
SSLT Gujrat School

In the world full of technologies and modernization, nature holds a special secret to heal – medicinal plants.it support health and open doors for some exciting career opportunities align with SDG 15 (focusing more on protecting, restoring and promoting sustainable use of terrestrial ecosystem).

People nowadays are studying more about medicinal plants to discover new medicines and products that can be used instead of chemical-based things.

Exploring Career

The medicinal plant research is a mix of biology, chemistry, environmental studies and medicine.

Confused!!! How to begin your career? Here are few tips to begin with….

Participating in various environmental clubs	Stay curious
Explore the surroundings and the subjects	Look for good colleges and internships

Some great career opportunities are as follows-

- Ethnobotanist- It is a study of how people of particular region and culture use indigenous plants.
- Phytochemistry- It is the study to analyses chemical compound of plants to discover new medicines.
- Herbal or ayurvedic product developer- It is a study to develop new herbal and ayurvedic products.
- Conservation biologist- It is a study focusing on prevention of endangered medicinal plants species and their ecosystem.
- Agricultural scientist- It is a study which promotes sustainable farming of medicinal herbs to support rural economies and biodiversity.

Now, how to apply?

Courses and Duration	*How to apply?*	*Where?*
Ethnobotanist BSc (Botany)- 3 yrs MSc – 2 yrs	To start with a degree in botany, environmental science or anthropology Entrance- CUET,BHU,UET/PET	University of Delhi Jawaharlal Nehru University, Banaras Hindu Univ., NEHU Shillong
Phytochemistry BPharm- 4 yrs MPharm-2 yrs PhD-3-5 Yrs	To start a BSc. In chemistry or biochemistry followed by MSc. Or PhD Entrance-GPAT, NIPER JEE	NIPERs-Jamia Hamdard Manipal College of Pharmacy, Bombay College of Pharmacy
Herbal or ayurvedic product developer BAMS- 5.5 yrs (1 YR INTERNSHIP) BPharm- 4 yrs MSc- 2 yrs	To study traditional medicine systems like BAMS or herbal formulation Entrance- NEET (for BAMS), institute level entrance	Gujarat Ayurved, BHU,Tilak Ayurved Mahavidyalaya , Sri Sri Ayurveda College
Conservation Biologist MSc- 2 yrs PhD- 3-5 yrs	To study environmental science or ecology, followed by conservation based post-graduation courses, Entrance-GATE (IISc), institute level entrance	IISc Bangalore,TISS, Mumbai, Wildlife Institute of India TERI school of advanced studies
Agricultural scientist BSc(agri/horticulture/ MAPs)- 4 yrs, MSc in agronomy/ medicinal / aromatic- 2 yrs, PhD- 3-5 yrs	To start with BSc agriculture or horticulture, specialize in medicinal plant agronomy Entrance- ICAR, AIEEA, state level agri tests	IARI, New Delhi TNAU, Coimbatore Dr. YSR Hoticultural University

What about the placements???

- Ethnobotanist –

- Research positions in ICMR, CSIR-NBRI, FRLHT
- NGOs and government projects working on rural healthcare and biodiversity.
- Teaching and academic career after PhD.

- Phytochemistry

- R&D departments in pharma companies
- Herbal product start-ups
- Government drug research labs

-Herbal or ayurvedic product developer

- Ayurvedic hospitals, herbal clinics
- Research labs in AYUSH, ICMR or private herbal companies
- Herbal cosmetic industry

-Conservation biologist

- Conservation NGOs.
- Environmental research roles in government and corporate sustainability department
- Forest department
- Biodiversity boards

-Agricultural scientist

- Agricultural consultancy and extension services
- Medicinal plant farming projects by NMPB
- Organic farming venture

Bhumika Munjal
PRT
Modern Public School

References:

- All colleges official sites.
- Ministry of AYUSH- www. Ayush.gov.in
- NMPB- nmpb.nic.in
- CSIR- www.csir.res.in
- FRLHT- www.frlht.org
- ALL INDIA ENTRANCE EXAMS

आसमान की ओर एक नई उड़ान

रात के खूबसूरत आसमान को निहारते हुए हम सभी ने चांद और सितारे तो बहुत देखे होंगे। लेकिन 26 जनवरी से 26 फरवरी के समय हमारे आसमान में एक अद्भुत खगोलीय घटना घटित हो रही थी, जिसमें हम 6 ग्रहों को आसानी से एक लाइन में देख सकते थे और 28 फरवरी को 7 ग्रह(बुध ,शुक्र ,मंगल, बृहस्पति ,शनि, यूरेनस और नेपच्यून) को एक साथ आसमान में देखना हम सभी के लिए एक रोमांचक घटना थी।

"इस प्लेनेट परेड को देखना हम सभी के लिए इतना रोमांचक थाए अगर बच्चों को भी यह दिखाया जा सके तो उनको कितना रोमांचक लगेगा", यह विचार था हमारे विद्यालय राजकीय बालिका उच्च माध्यमिक विद्यालय हरकेश नगर की प्रधानाचार्या सुश्री शीतल का। प्रधानाचार्या जी के भरसक प्रयत्न व एयरटेल भारती फाउंडेशन के सहयोग से यह सपना साकार हुआ और विद्यालय में उच्च गुणवत्ता वाले टेलिस्कोप से युक्त क्लब अंतरिक्ष एस्ट्रोनॉमी क्लब की शुरुआत हुई।

इस क्लब का उद्घाटन आदरणीय उप शिक्षा निदेशक जिला दक्षिण पूर्व श्री एस सी मीणा जी के हाथों संपन्न हुआ। उन्होंने इस पहल की सराहना करते हुए कहा, यही वह पहल है जो वैज्ञानिक सोच की नींव रखती है। इस विद्यालय का भविष्य उज्ज्वल है।

इस क्लब के उद्घाटन में छात्राओं व उनके अभिभावकों ने भाग लिया और इस अंतरिक्षीय यात्रा के क्रम में क्लब के शुभारंभ के साक्षी बने।

आज जब अंतरिक्ष विज्ञान में वैश्विक रुचि दिन प्रतिदिन बढ़ रही है और भारतीय मूल की अंतरिक्ष यात्री सुनीता विलियम्स व कल्पना चावला जैसे प्रेरणास्पद उदाहरण सामने है, ऐसे समय में यह क्लब एक शुरुआत है, छात्राओ के सपनों और सोच को एक नई उड़ान देने की। यह एक ऐसा संकल्प है जो छात्राओ को पुस्तकों की सीमाओं से परे ले जाकर उन्हें ब्रह्मांड की असीम गहराइयों की ओर देखने की प्रेरणा देता है।

प्रधानाचार्या सुश्री शीतल के कुशल नेतृत्व में विद्यालय ने न केवल अकादमी क्षेत्रों में उत्कृष्टता प्राप्त की है बल्कि छात्राओं में नवाचार और वैज्ञानिक दृष्टिकोण को भी दृढ़ता से विकसित किया है। छात्राओं में उच्च स्तर पर वैज्ञानिक दृष्टिकोण को और अधिक विकसित करने के क्रम में विद्यालय ने कई कदम उठाए जिनके उदाहरण निम्न प्रकार हैं-

- 2023-24 में विद्यालय में उच्च स्तर पर साइंस स्ट्रीम को शामिल किया गया।

- वर्ष 2023-24 में पहली बार हमारे विद्यालय की तीन छात्राओं ने NMMS जैसी राष्ट्रीय स्तर की छात्रवृत्ति परीक्षा में अपनी जगह बनाई, अगले ही वर्ष राष्ट्रीय स्तर की इस छात्रवृत्ति में आठ बच्चों ने अपना स्थान बनाया। इस छात्रवृत्ति में प्रत्येक विद्यार्थी को 48,000 रुपए प्राप्त होते हैं।

-इन्स्पायर मानक जैसे प्रतिष्ठित पुरस्कार में विद्यालय की 2 छात्राओं द्वारा प्रत्येक को 10,000 की राशि से पुरस्कृत किया जा रहा है।
- इसके अतिरिक्त MPVV जैसी परीक्षा में भी स्थान प्राप्त किया गया।

- विद्यालय में समय-समय पर विशेष सत्र आयोजित किए जाते हैं।जिनमें सम्मा. नित अतिथियों को साक्षात्कार और चर्चा- परिचर्चा के लिए आमंत्रित किया जाता है। इस कड़ी में इसरो के वैज्ञानिक श्री श्रवण कुमार ठाकुर व पर्यावरण वन और जलवायु परिवर्तन मंत्रालय के वैज्ञानिक श्री सी.आर. मगेश को आमंत्रित किया गया। जिसमें बच्चों ने इसरो व पर्यावरण मंत्रालय में अपने भविष्य ,प्लैनेट्स ,सेटेलाइ. ट्स आदि में अपनी जिज्ञासाओं से भरे हुए प्रश्नों को पूछा। ऐसे सत्र छात्राओं को विज्ञान के क्षेत्र में विभिन्न क्षेत्रों में अपार संभावनाएं देखने के अवसर प्रदान करेंगे।

- इन सभी विद्यार्थियों को भी अंतरिक्ष क्लब के उद्घाटन के अवसर पर आदरणीय एस सी मीणा जी तथा आदरणीय प्रधानाचार्य द्वारा सम्मानित किया गया।

अब जब छात्राओं को मिला है आसमान तो वह सितारों को छूने से पीछे नहीं हटेंगी। 'अंतरिक्ष' की यात्रा की अभी तो यह बस एक शुरुआत है। आशा ही नहीं पूरा विश्वास है ये क्लब और विद्यालय की अन्य नवोन्मेषी पहल छात्राओं के जीवन में एक सकारात्मक बदलाव लाने के उद्देश्य में सफल होंगी। इन छात्राओं के उज्ज्वल भविष्य की शुभ कामना के साथ।

अनुकृति
टीजीटी विज्ञान
रा.उ.मा. कन्या विद्यालय
हरकेश नगर

Our Env, our responsibility

औषधीय पौधे प्रकृति की अनमोल देन

प्रकृति से जुड़ना केवल वातावरण को बचाने की बात नहीं है, बल्कि यह एक जीवनशैली है — स्वस्थ, संतुलित और संवेदनशील जीवन जीने का तरीक़ा। जब हम बच्चों को प्रकृति के साथ संवाद करना सिखाते हैं, तो हम उनमें जिम्मेदारी, सहानुभूति और आत्मनिर्भरता जैसे गुण भी विकसित करते हैं। प्रकृति और पेड़ पौधों से जुड़ा मेरा यह प्रयास इसी सोच का विस्तार है — कि हम अपने बच्चों को न केवल पाठ्य पुस्तकों से, बल्कि प्रकृति के माध्यम से भी शिक्षा दें। इस विचार की जड़ो ने बचपन से ही मेरे अन्दर पनपना शुरू कर दिया था।

मुझे याद है कि मेरी माँ सिर्फ मेरी जननी नहीं, बल्कि मेरी पहली शिक्षिका भी थीं। जब कभी मैं बीमार होता था, तब मेरी माँ तुलसी, अदरक, हल्दी या नीम जैसी घरेलू चीज़ों से दवा बनाया करती थीं, जिसे पीकर मैं ठीक हो जाता था। माँ कहा करती थीं — "प्रकृति हमारी सबसे बड़ी वैद्य है।" उन्होंने घर के आँगन में गिलोय, आंवला, एलोवेरा जैसे पौधे लगाए और मुझे उनका महत्व समझाया। माँ की इस सीख ने मेरे मन में एक गहरी छाप छोड़ी कि हमारे आसपास ही जीवनदायिनी वनस्पतियाँ मौजूद हैं, बस हमें उन्हें पहचानने की जरूरत है।

माँ की इन्हीं बातों से प्रेरणा लेकर मैंने अपने विद्यालय में विद्यार्थियों को औषधीय पौधों के महत्व से अवगत कराने का संकल्प लिया। मैंने विद्यार्थियों को साथ लेकर स्कूल में एक औषधीय उद्यान (Herbal Park) की नींव रखी। बच्चों ने उत्साह से तुलसी, गिलोय, नीम, आंवला, ब्राह्मी जैसे पौधे लगाए। हमने कुछ फलदार वृक्ष भी जोड़े — आम, जामुन, पपीता आदि। धीरे-धीरे विद्यालय के प्रांगण में स्थित यह स्थान केवल कुछ पौधों का संग्रहालय नहीं रहा, बल्कि यह विद्यार्थियों के लिए एक जीवंत प्रयोगशाला बन गया।

अब बच्चे पौधों को केवल किताबों में नहीं पढ़ते, वे उन्हें छूते हैं, सींचते हैं, उनके गुणों को समझते हैं और उनका उपयोग करना सीखते हैं। औषधीय पौधों की पहचान, उनका रोपण, उनका संरक्षण और उनके औषधीय उपयोग — यह सब कुछ विद्यार्थियों ने स्वयं किया। इससे उनमें न केवल वैज्ञानिक दृष्टिकोण विकसित हुआ, बल्कि वे अपनी संस्कृति, परंपरा और स्वास्थ्य के प्रति सजग भी हुए हैं।

औषधीय पौधे, जिन्हें 'हर्ब्स' भी कहा जाता है, मानव सभ्यता के प्रारंभ से ही चिकित्सा के लिए उपयोग में लाए जाते रहे हैं। ये पौधे अनेक जैव-रासायनिक यौगिकों का उत्पादन करते हैं, जो न केवल पौधों की रक्षा करते हैं, बल्कि मानव शरीर पर भी औषधीय प्रभाव डालते हैं। वैज्ञानिकों को आज तक 12,000 से अधिक सक्रिय यौगिक पौधों में ज्ञात हो चुके हैं।

भारतवर्ष में औषधीय पौधों की परंपरा हजारों वर्षों से चली आ रही है। हमारे आयुर्वेद, सिद्ध, और यूनानी चिकित्सा पद्धति में इन पौधों का विशेष स्थान है। ये पौधे न केवल बीमारियों का इलाज करते हैं, बल्कि शरीर की प्रतिरोधक क्षमता को भी बढ़ाते हैं।

आज जब पूरा विश्व प्राकृतिक चिकित्सा की ओर लौट रहा है, ऐसे में विद्यार्थियों के लिए औषधीय पौधों के बारे में जानना अत्यंत आवश्यक हो गया है।

तुलसी, नीम, गिलोय, हल्दी, आंवला, एलोवेरा, ब्राह्मी, अश्वगंधा जैसे पौधों के गुण जानकर छात्र यह महसूस करते हैं कि हमारे आसपास कितनी अनमोल वनस्पतियाँ हैं, जिन्हें हम नजरअंदाज कर रहे हैं। छात्रों की यह उत्सुकता केवल विद्यालय तक ही सीमित नहीं रहती है बल्कि कई छात्र ऐसे पौधों को अपने स्कूल गार्डन या घर में भी लगा कर उनका संरक्षण करते हैं।

विद्यालय में समय समय पर औषधीय पौधों की पहचान और उनके फायदों पर कार्यशालाएँ, प्रदर्शनियाँ और वृक्षारोपण अभियान भी आयोजित किए जाते है। जब विद्यार्थी स्वयं पौधों को उगाकर उनका प्रयोग करते हैं, तो यह न केवल उन्हें प्रकृति के करीब लाता है, बल्कि उनमें स्वास्थ्य के प्रति जागरूकता और जिम्मेदारी की भावना भी पैदा करता है।

हमारे विद्यालय के औषधीय उद्यान में ऐसे कई पौधे लगाए गए हैं जो सिर्फ वातावरण को हराभरा नहीं करते, बल्कि शरीर को भी स्वस्थ रखते हैं। इन पौधों का उपयोग हमारे पारंपरिक ज्ञान और अनुभवों पर आधारित है, जो पीढ़ियों से हमें रोगों से लड़ना सिखाता आया है।

मकोय (Black Nightshade)

पेट की समस्याओं, लीवर रोगों और त्वचा संबंधी रोगों में लाभकारी।

एवोकाडो

हृदय के लिए लाभदायक, कोलेस्ट्रॉल नियंत्रित करने वाला और त्वचा को पोषण देने वाला फल।

अदरक

सर्दी, खाँसी, मतली और पाचन विकारों में उपयोगी; प्राकृतिक एंटी-इंफ्लेमेटरी।

अरण्य तुलसी

रोग प्रतिरोधक क्षमता बढ़ाती है; सर्दी-खाँसी और त्वचा रोगों में लाभकारी।

अश्वगंधा

तनाव कम करने, स्मरण शक्ति बढ़ाने और शरीर की ऊर्जा बढ़ाने के लिए प्रसिद्ध।

आँवला

विटामिन C का प्रचुर स्रोत; पाचन, बालों और प्रतिरोधक क्षमता के लिए उपयोगी।

इमली

पाचन में सहायक; खट्टे-मीठे स्वाद वाली यह पाचन क्रिया को बेहतर बनाती है।

नीम

एंटीबैक्टीरियल गुणों से भरपूर; त्वचा रोग, रक्त शुद्धि और मौखिक स्वच्छता में उपयोगी।

पपीता

पाचन में सहायक, प्लेटलेट्स बढ़ाने में सहायक और यकृत के लिए लाभकारी

गिलोय

इम्यूनिटी बढ़ाने वाला सर्वश्रेष्ठ पौधा; बुखार, डेंगू और वायरल संक्रमण में कारगर।

इंसुलिन प्लांट (Costus igneus)

मधुमेह नियंत्रण में सहायक; प्राकृतिक तरीके से शुगर लेवल संतुलित करता है।

हरसिंगार (पारिजात)

जोड़ो में दर्द , बुखार और हड्डियों के दर्द में उपयोगी।

लटजीरा (Chota Dhatura)

जोड़ों के दर्द और सूजन में उपयोगी; सीमित मात्रा में सावधानीपूर्वक प्रयोग।

भूमि आँवला

लीवर विकार, पीलिया और त्वचा रोगों के लिए प्रसिद्ध आयुर्वेदिक पौधा।

ये पौधे हमारे जीवन के ऐसे सहायक है जो न केवल रोगों से लड़ने की क्षमता देते है, बल्कि हमें प्रकृति के साथ सामंजस्यपूर्ण जीवन जीने का रास्ता भी दिखाते है।
विद्यालयों में ऐसे प्रयास बच्चों को स्वावलंबी, पर्यावरण के प्रति संवेदनशील और जीवन-कौशल में दक्ष बनाते है।

डॉ लक्ष्मण सिंह
S.CO.ED.SSS
मुनीरिका विलेज

Journey of a Scientist

“औषधीय पौधों की शक्ति: प्रकृति का उपचारात्मक स्पर्श”

प्रकृति ने मानव जीवन के लिए न केवल सौंदर्य रचा है, बल्कि उसे स्वस्थ रखने के लिए असंख्य औषधीय संसाधनों का भंडार भी दिया है। भारतवर्ष, अपनी समृद्ध जैव-विविधता के साथ, सदियों से औषधीय पौधों की धरोहर का पालक रहा है। इन्हीं प्राकृतिक खजानों की खोज और उनके चिकित्सीय गुणों को विज्ञान की कसौटी पर परखने का कार्य कुछ समर्पित वैज्ञानिकों ने किया, जिनमें एक नाम स्वर्णाक्षरों में अंकित है: डॉ. असीमा चटर्जी।

डॉ. चटर्जी ने यह सिद्ध किया कि आयुर्वेद और आधुनिक विज्ञान जब मिलते हैं, तो मानवता के लिए चमत्कारी समाधान जन्म लेते हैं। उन्होंने न केवल मलेरिया और मिर्गी जैसी गंभीर बीमारियों के इलाज के लिए दवाएं विकसित कीं, बल्कि यह भी प्रमाणित किया कि भारत की पारंपरिक वनस्पति चिकित्सा आधुनिक विज्ञान में भी कितनी प्रासंगिक है।

डॉ. असीमा चटर्जी ने औषधीय पौधों के गुणों का गहन अध्ययन किया और मलेरिया व मिर्गी जैसी बीमारियों के उपचार के लिए प्रभावी दवाओं का विकास किया। वे एक प्रसिद्ध रसायनज्ञ थीं, जिन्हें कार्बनिक रसायन विज्ञान और फाइटोमेडिसिन के क्षेत्र में उनके योगदान के लिए जाना जाता है।

उनके प्रमुख कार्यों में विंका एल्कलॉइड्स पर शोध, एंटी-एपिलेप्टिक (मिर्गी रोधी) दवाओं का विकास और एंटी-मलेरिया दवाओं की खोज शामिल हैं।

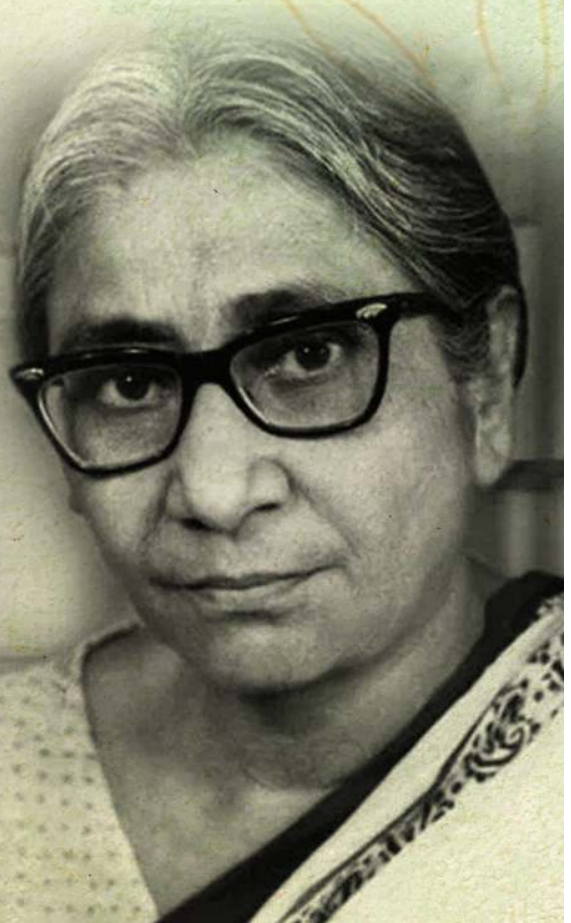
उन्होंने भारतीय उपमहाद्वीप में पाए जाने वाले औषधीय पौधों पर भी गहन अनुसंधान किया। वे किसी भारतीय विश्वविद्यालय से विज्ञान में डॉक्टरेट (D.Sc.) प्राप्त करने वाली पहली महिला थीं।

डॉ. असीमा चटर्जी का जन्म 23 सितंबर 1917 को कोलकाता के एक मध्यमवर्गीय परिवार में हुआ था। उस समय महिलाओं की उच्च शिक्षा अत्यंत दुर्लभ थी, फिर भी उन्होंने विज्ञान को अपना जीवन-व्रत बनाया। वे अपने परिवार की सबसे बड़ी संतान थीं और उनका एक छोटा भाई भी था।

उनके पिता इंद्र नारायण मुखर्जी, एक डॉक्टर थे। वे अपनी संतानों की शिक्षा को लेकर अत्यंत सजग थे, जो उस समय एक असाधारण बात थी। उनके पिता का वनस्पति विज्ञान की ओर झुकाव था, जिसने असीमा जी के मन में औषधीय पौधों और उनके उपचारात्मक गुणों के प्रति जिज्ञासा जगाई।

उन्होंने 1936 में स्कॉटिश चर्च कॉलेज, कलकत्ता विश्वविद्यालय से रसायन विज्ञान में स्नातक की डिग्री प्राप्त की। इसके बाद, 1938 में उन्होंने कार्बनिक रसायन विज्ञान में स्नातकोत्तर की पढ़ाई पूरी की और आगे चलकर डी.एससी. (D.Sc.) की उपाधि भी प्राप्त की।

1945 में उन्होंने भौतिक-रसायनज्ञ बरदानंद चटर्जी से विवाह किया। जिससे उनकी एक पुत्री भी हुई, जिसका नाम जूली था।



डॉ. असीमा चटर्जी ने अपने शोध के माध्यम से यह सिद्ध किया कि औषधीय पौधों से प्राप्त यौगिक गंभीर बीमारियों के इलाज में कितने प्रभावी हो सकते हैं। उन्होंने आयुर्वेदिक ज्ञान को वैज्ञानिक आधार पर सिद्ध कर आधुनिक चिकित्सा विज्ञान को समृद्ध किया।

उन्होंने जैविक संश्लेषण के बारे में शोध करते हुए सिंथेटिक ऑर्गेनिक केमिस्ट्री में भी योगदान दिया और औषधीय पौधों में पाए जाने वाले जैविक रूप से सक्रिय यौगिकों की प्रकृति पर अपना शोध जारी रखा। एंटी-एपिलेप्टिक दवा **आयुष-56** जिसे उन्होंने मार्सिलिया मिनुटा से विकसित किया, का व्यावसायिक रूप से भी उपयोग किया जाता है।

विभिन्न प्रकार के पौधों से उन्होंने अपनी टीम के साथ मलेरिया-रोधी दवाएँ विकसित कीं। उन्होंने कैंसर और कैंसर-रोधी दवाओं पर शोध करने के लिए अपने जीवन के 40 साल समर्पित किए। उन्होंने एल्कलॉइड का अध्ययन किया, जिसका कैंसर रोगियों के लिए कीमोथेरेपी में प्रभावी रूप से उपयोग किया गया।
उन्होंने कलकत्ता विश्वविद्यालय के लेडी ब्रेबोर्न कॉलेज में रसायन विज्ञान विभाग भी शुरू किया था।

सम्मान और उपलब्धियाँ

इन्हे अपने जीवन काल में शोध कार्यों और अनुसंधानों के लिए विभिन्न सम्मान और पुरस्कार प्राप्त हुए।

(क) भारत की पहली महिला वैज्ञानिक, जिन्हें भारतीय विश्वविद्यालय से डी.एससी. की उपाधि प्राप्त हुई।

(ख) भारतीय राष्ट्रीय विज्ञान अकादमी (1960) की फेलो चुनी गईं।

(ग) शांति स्वरूप भटनागर पुरस्कार (1961) प्राप्त करने वाली प्रथम महिला।

(घ) 1975 में इन्हें पद्म भूषण से सम्मानित किया गया।

(ङ) भारतीय विज्ञान कांग्रेस की महासचिव चुनी जाने वाली प्रथम महिला वैज्ञानिक

(च) 1982 से 1990 तक भारत के राष्ट्रपति द्वारा इन्हें राज्यसभा सदस्य के रूप में नामित किया गया।

(छ) सी.वी. रमन, पी.सी. रे, और एस.एस. भटनागर पुरस्कार से सम्मानित

डॉ. असीमा चटर्जी का जीवन समर्पण, साहस, वैज्ञानिक सोच और देशभक्ति की मिसाल है। एक ऐसा समय जब महिलाओं के लिए उच्च शिक्षा के द्वार भी संकुचित थे, उन्होंने विज्ञान को अपना साधन और सेवा को अपना लक्ष्य बनाया।

उनका निधन 22 नवंबर 2006 को 89 वर्ष की आयु में कोलकाता में हुआ, लेकिन उनका योगदान आज भी देश की वैज्ञानिक चेतना में जीवित है। वे न केवल एक वैज्ञानिक थीं, बल्कि एक प्रेरणा स्रोत भी हैं, विशेष रूप से उन युवाओं के लिए जो विज्ञान को समाज सेवा का माध्यम बनाना चाहते हैं।

भारत भूषण
राजकीय उच्चतर माध्यमिक
बाल विद्यालय न 2
डी- ब्लाक जनकपुरी

Biotechnology

A promising career in the world of medicinal plants

Introduction :

Biotechnology is a fascinating field that combines biology and technology to create innovate solutions for health,agriculture and the environment. In recent years , it has played an important role in developing medicines from natural sources, especially medicinal plants. With growing interest in herbal remedies and sustainable healthcare, biotechnology offers a rewarding career for science students.

What is biotechnology?

Biotechnology is the application for biological systems and organisms to develop useful products. In the context of medical plants, biotechnologists work to improve plant yield, extract active medicinal compounds and create plant based medicines using genetic research and lab techniques.

Eligibility and how to apply:

To pursue a career in biotechnology, students must:
- complete 10+2 with physics,chemistry and mathematics/ bio
- Appear for entrance exams like CUET,JEE (for B.tech biotechnology) or state level entrance exams.

Top courses and duration:

-Bsc. In biotechnology - 3 years
-B.tech in biotechnology - 4 years
-M.sc./ M. tech in biotechnology - 2 years (after UG)
- Ph.d. in biotechnology for research / academic careers

Top Colleges Iin india

-Indian institute of technology (IITs)
- Delhi university
-Jawaharlal nehru university (JNU)
-Amity university
-Vellore institute of technology (VIT)
- Anna university

Career Opportunities:

Graduates in biotechnology can work in :
-Pharmaceutical companies
-Herbal medicines industry
-Research labs (ICMR,CSIR,DBT)
-Agriculture & Environmental biotech firms
-Hospital and diagnostics labs

Job roles included:

-Biotechnologists
-Research scientists
-Lab technician
-Bioinformatics analyst
-Quality control informers

Salary ang growth:

The starting salary in this field is Rs. 3-6 lakhs per years. With higher education and experience, it can rise to Rs. 10-20 lakhs per years or more, especially in research and international rules.

Why choose biotechnology?

If you love science and nature, biotechnology is a great career, it helps in creating new medicines from medicinal plants and solving real life problems using natural methods.

Conclusion:

Biotechnology is not just a career- It's a way to contribute to the future of medicines and health, with the strong connection to nature and modern science, it offers exciting opportunities for young minds.

References:
-WWW.dbtindia.gov.in
-WWW.biotechinstitute.edu
-WWW.nature.com

Priya Kumari
XII-A
S.K.V Mayur Vihar
PH-1 Pocket-4

Fun facts

The power of Medicinal Plants

In a world rushing behind modern science and advanced technology, it's easy to forget that some of the most powerful remedies lie silently in our gardens, forests, and even kitchens. These natural healers are none other than medicinal plants—the green guardians of health, used since ancient times to heal, soothe, and restore.

From Ayurveda in India to Traditional Chinese Medicine, the use of plants for healing is as old as civilization itself. But even today, with all our modern advancements, nearly 80% of the world's population still relies on medicinal plants for primary healthcare needs. That's not just tradition—it's the power of nature in action.

A Trip Through Time: Plants in Ancient Medicine
Let's rewind the clock. Thousands of years ago, before the invention of pills and vaccines, our ancestors turned to nature for cures.
The ancient Egyptians used aloe vera to treat burns and wounds.
In India, the Charaka Samhita (written over 2000 years ago) listed more than 340 plants with medicinal properties.

In China, the herb Ginseng was called the 'root of life' for its ability to boost energy and immunity.

Fun Fact:

Did you know that the famous Greek physician Hippocrates, known as the "Father of Medicine," used willow bark to relieve pain? Modern scientists later discovered that it contains salicylic acid—the main ingredient in aspirin!
Superstar Medicinal Plants and Their Powers Let's meet some of the heroes of the plant world:

1.Tulsi (Holy Basil) – The Queen of Herbs

Revered in Indian homes, tulsi is known for its powerful anti-bacterial, anti-viral, and anti-inflammatory properties. A cup of tulsi tea can ease cough, cold, and even reduce stress.
Fun Fact: Tulsi releases oxygen even at night—a rare superpower among plants!

2. Neem – The Village Pharmacy

Every part of the neem tree is medicinal—leaves, bark, seeds, and oil. It treats skin diseases, boosts immunity, and is even used in toothpaste.

Fun Fact: Neem leaves are bitter but are often consumed during festivals like Ugadi to symbolize the balance of life—both sweet and bitter.

3. Amla (Indian Gooseberry) – Vitamin C Bomb

Just one amla contains as much Vitamin C as 20 oranges! It enhances digestion, purifies the blood, and strengthens hair.

Fun Fact: In ancient India, warriors ate amla before battles to keep their stamina high!

4. Turmeric (Haldi) – The Golden Healer

Turmeric's active compound, curcumin, has powerful anti-inflammatory and antioxidant effects.
It helps in healing wounds, boosting immunity, and even fighting cancer.

Fun Fact: NASA scientists are studying curcumin to help astronauts maintain muscle health in space

5. Peppermint – The Natural Coolant

Great for digestion and headaches, peppermint is also used in cosmetics and aromatherapy.

Fun Fact: The cooling sensation you feel from peppermint is due to a compound called menthol, which tricks your brain into feeling cold!

Plants Vs. Pills: Why Nature Wins

While pharmaceutical drugs often come with side effects, medicinal plants offer gentle healing. They're cost-effective, sustainable, and support overall well-being.

Fun Fact: Around 25% of modern medicines are derived from plant compounds—proof that nature knows best!

Nature in Your Backyard: Easy-to-Grow Medicinal Plants

You don't need a jungle to find these green miracles. Here are 5 medicinal plants you can grow in pots at home:

1. Aloe Vera – For skin burns and digestion

2. Mint – For indigestion and headaches

3.Lemongrass – Great for detox tea

4.Coriander – Helps with bloating and cholesterol

5. Brahmi–Enhances memory and reduces anxiety

Fun Fact:
NASA recommends growing aloe vera indoors because it cleans the air of toxins like formaldehyde and benzene.

The Global Buzz: How the World is Embracing Herbal Healing

From turmeric lattes in London cafés to neem soaps in American supermarkets, the world is waking up to the ancient wisdom of plants. In fact, the global herbal medicine market is expected to hit USD 550 billion by 2030!

Even celebrities are hooked!

Oprah Winfrey swears by aloe vera juice.

Gwyneth Paltrow promotes turmeric and ashwagandha through her wellness brand.

Indian Prime Minister Narendra Modi often talks about the value of Ayurveda and herbs in his speeches.

Preserve, Protect, and Pass It On
As powerful as medicinal plants are, they're also vulnerable. Urbanization, pollution, and deforestation are threatening many plant species. It's our duty to:
1-Plant and protect herbal gardens
2-Learn about local medicinal plants
3-Say no to chemical-laden alternatives when possible
4-Support eco-friendly and organic farming

Fun Fact:
The Indian government has set up over 8,000 medicinal plant conservation areas across the country to protect our herbal heritage.

Conclusion:

Green is the New Gold

Medicinal plants are not just green leaves—they're living libraries of healing knowledge. They connect us to nature, to our roots, and to a lifestyle that is more balanced, peaceful, and holistic.
Let's not wait for sickness to discover their power. Let's invite them into our homes, our diets, and our hearts.
Because the future of medicine isn't in a lab—it's in a leaf.

Manshi Thakur
VII A,
GGSS
Lado sarai

You have achieved

Case study NMMS Classes

This project was started in GSKV Nithari-1412093 in the month of April, session 2024-25, under the supervision of our respected HOS ma'am, with the aim to increase the critical thinking amongst the students and to promote their enthusiasm to participate and excel in the competitive examinations such as NMMS (National means cum merit scholarship).

In the NMMS Exam for session 2023-24, there were 30 participants, out of which only one student could succeed, which pushed us to work on this and think out of the box to help these students.

In the month of April 2024, we introduced our students of 8th class about the scholarship exam, its eligibility criteria, exam pattern, benefits of the scholarship.

We conducted a screening test for 8th class on 7th May, 2024 (Based on their knowledge of 7th class), to filter the passionate aspirants. For that too we provided student with sample papers nad some study material to help them prepare for the screening test.

Based on its result we guided students further for 2nd screening test conducted in the month of August. With selected passionate students from the two screening we started classes in the month of September in extra time other than school hours (Morning assembly & 40 minutes stay back after dispersal of school) NOC were obtained from parents of these students to ensure their safety.

These classes / project helped our students in two dimensions:-

1.It helped our students to develop critical thinking capability and working for a purpose in life.

2.It helped them to prepare for the exam and score good position in the merit list. With great pleasure I would like to extend my words that this session 2024-25, our 29 students registered for the exam and 11 students scored good position in the merit list.

We also worked to manage study resources for these students, as mostly students could not afford to purchase any study material. We made arrangement of books for preparation of the exam.

A special study room was allocated to ensure that students could use those books and study whenever they want to sit and study and could do group study, group discussion in the presence of a teacher.

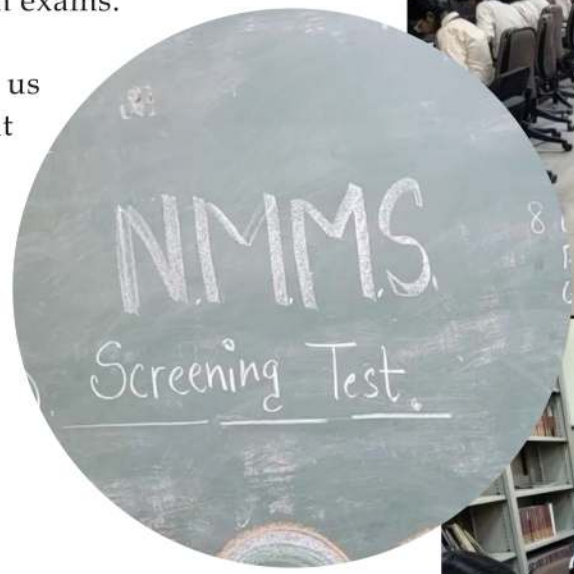
This achievement is a result of co-ordinated efforts of our students, mentor teacher and out of the box thinking of our respected HOS ma'am. She extended all her support resources and motivation to the mentor teacher and students. Her frequent interaction with students was a great source of inspiration for students that they succeeded with flying colors.

After the results , to appreciate the hard work and success of our students, we rewarded them on stage during assembly which motivated our other students too.

The success of this project has inspired many students currently in 8th standard and will be appearing for the exam in this session.

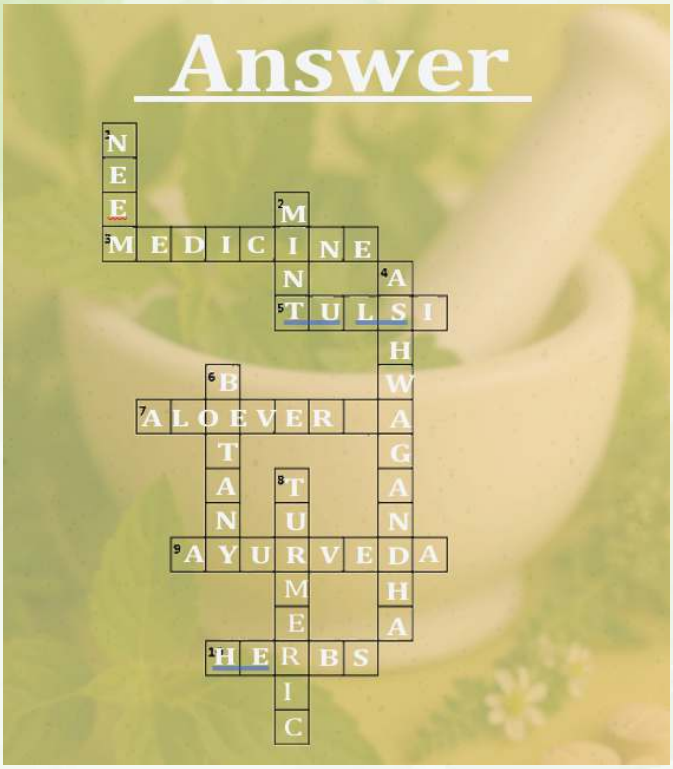
They have started preparing for the screening test and have developed a zeal to perform their best and score good position in such exams.

This motivates us to further put our best efforts and succeed in other exams too.



Dolly
TGT Natural Science
GSKV
Nithari

Answer Brain Mapping



Answers

1. Neem
2. Mint
3. Medicine
4. Ashwagandha
5. Tulsi
6. Botany
7. Aloe vera
8. Turmeric
9. Ayurveda
10. Herbs

#OurBuddingArtists

Prena Manna, St.Thomas' Girls Sr Sec School
Mandir Marg

Prayan Khemka, Class-9-A
Bal Bharati Public School

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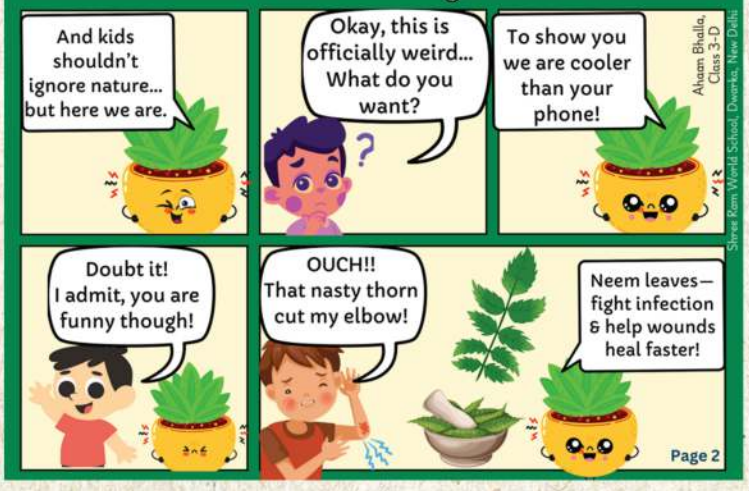
Kid's Corner
Cartoon Story

The power of medicinal plants: Nature's healing touch

The power of medicinal plants: Nature's healing touch



The power of medicinal plants: Nature's healing touch

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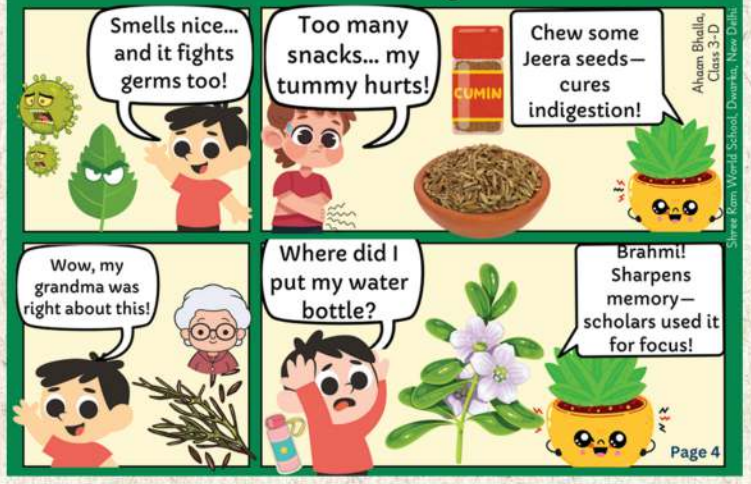

The power of medicinal plants: Nature's healing touch

Ahaan Bhalla

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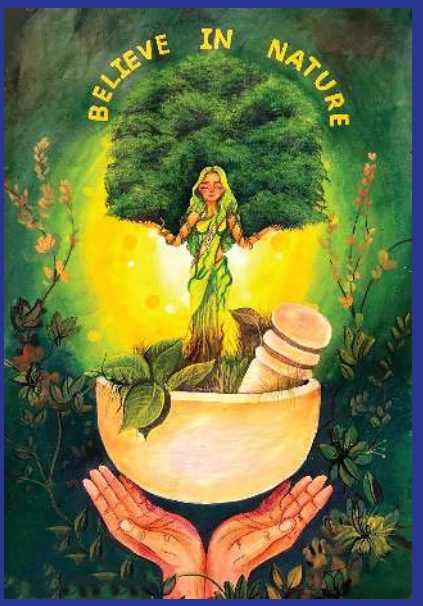
Jayanti Kumari, VIII I GGSSS, JJC, MPK Extn

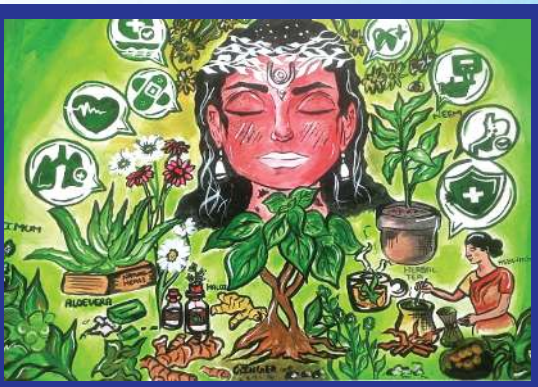


Yash Jain, XI, Prudence School, Phase-II, Ashok Vihar

Jaya, IXth, MM Public School, Vasudha Enclave, Pitampura

Ishita Saini , Maharaja Agarsain Public School

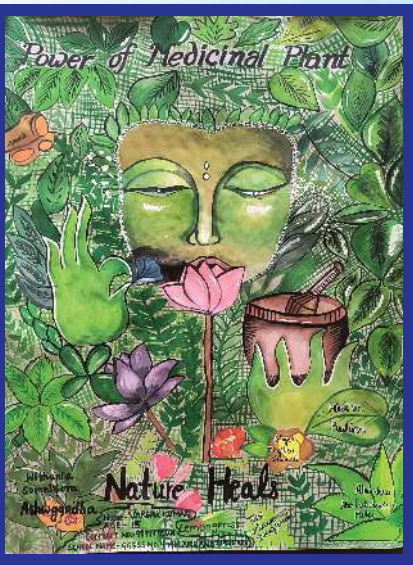
Pratham Batra, Manav Sthali School



Tanya, Sarvodaya Kanya Vidyalaya Nehru Vihar

Kapil, Gbsss A-block Janak Pur

Gyana Ram, IXth Modern School Barakhamba



Varsha Kumari, GGSSS No-1 Molarband

'नई उड़ान' त्रैमासिक विज्ञान पत्रिका का प्रकाशन शिक्षा निदेशालय, दिल्ली सरकार द्वारा किया जाता है।
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