

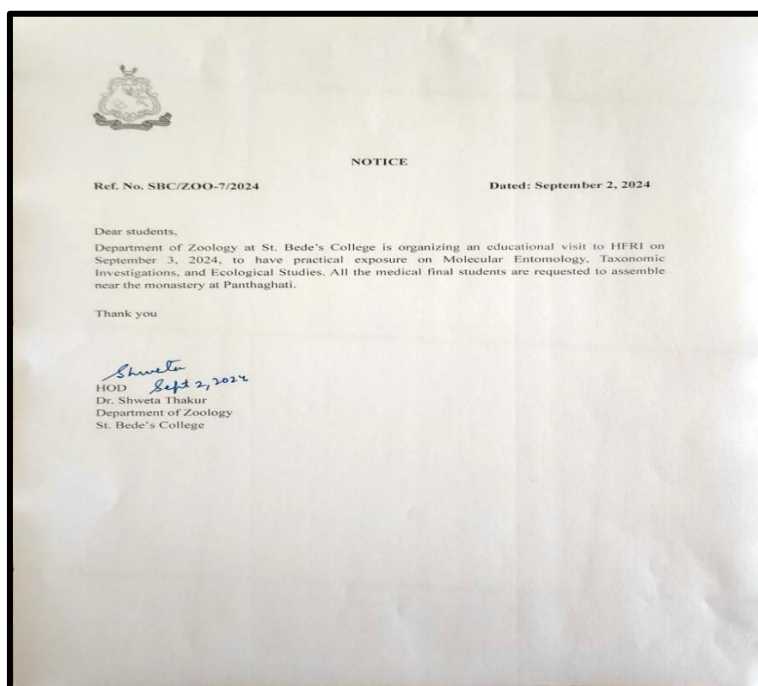


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**VISIT TO HIMALAYAN FOREST RESEARCH INSTITUTE PANTHAGHATI SHIMLA**

**Objective:** The visit was organized to provide students with practical exposure to real-world research activities. The visit was designed to deepen students understanding of the challenges and solutions in forest conservation, management, and biodiversity, equipping them with both knowledge and practical skills essential for their academic and professional growth.

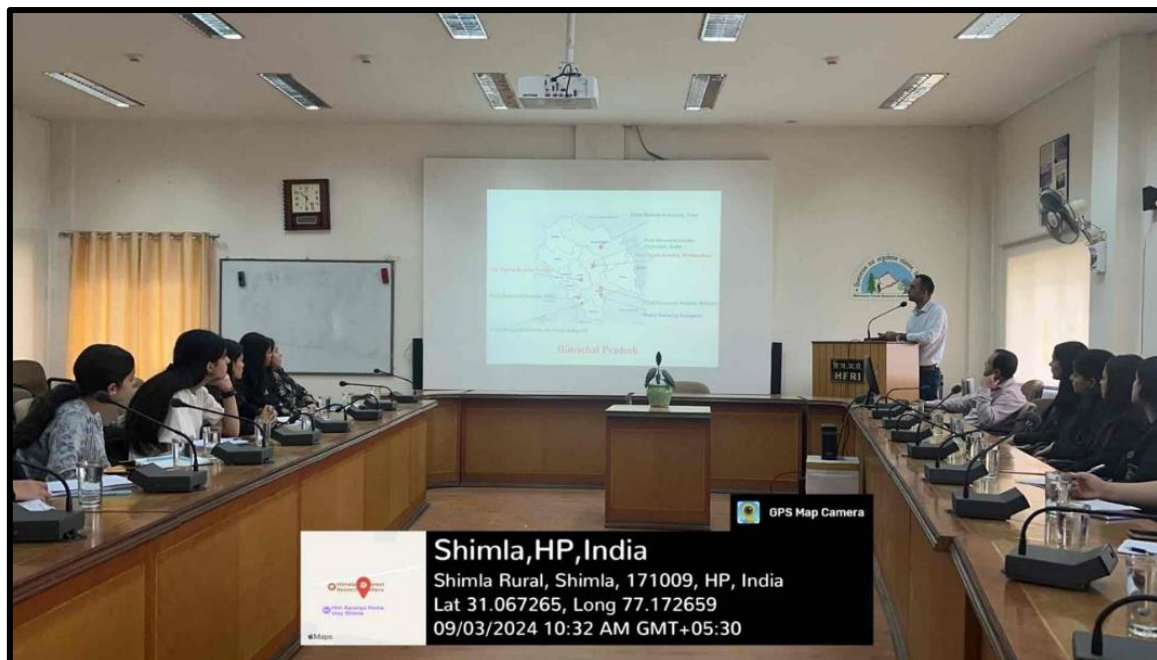
**Description:** On September 3, 2024 the students of B.Sc. - III, Department of Zoology, St. Bede's College visited Himalayan Forest Research Institute, Panthaghathi Shimla. The day began with a detailed presentation delivered by Dr. Akhil, a research associate at the institute. He started by introducing the students to the history and development of the Himalayan Forest Research Institute. He explained the institute's role in contributing to forestry research, its inception, and its mission to conserve and manage forest resources, especially in the ecologically sensitive Himalayan region. He provided a comprehensive overview of the various research initiatives undertaken by the institute. These included studies related to forest biodiversity, ecosystem conservation, climate change impacts, and sustainable forest management and forest protection. Dr. Sandeep Sharma, Director of HFRI, provided students with guidance on available internships and project opportunities at the institute, including summer and winter projects. These opportunities aim to help students gain practical experience and enhance their skills in forest research and related fields.



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*Presentation delivered by Dr. Akhil, in the conference hall HFRI*



Following the presentation, the students were given a guided tour of the institute's laboratories and research facilities. The students explored the institute's technology and demonstration centre, the students were informed about the ecological and economic importance of the Himalayan Pencil Cedar. Students learned about the various techniques used to break seed dormancy, such as stratification and other seed treatment processes, which significantly improve the germination rates. The students learned about the numerous medicinal plants that have been used for centuries in traditional healing practices. Some of these plants are renowned for their therapeutic properties and play a key role in local herbal medicine. In addition to



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medicinal plants, the students also explored the role of traditional cereals in the region's agricultural and dietary practices. These methods have opened new possibilities for conserving and expanding the population of this ecologically significant tree species in the Himalayan region.



*Technology and Demonstration centre*

Students visited the herbarium lab, which houses an extensive collection of plant specimens. In this lab, the students observed how herbarium specimens are meticulously prepared and mounted on special sheets, used to preserve plant samples for long-term study. The herbarium holds approximately 7,400 plant specimens, representing around 1,500 species from 135 plant families native to the Western Himalayas.





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***Herbarium Lab***

Students also had the opportunity to explore both the Genetics and Tree Improvement Division and the Silviculture and Forest Department Laboratory, where they gained hands-on exposure to advanced molecular biology techniques used in forestry research. In the Genetics and Tree Improvement Division, students were introduced to the processes aimed at enhancing the genetic quality and productivity of tree species through scientific innovation.

In the Forest Protection Lab, students were introduced to cutting-edge tools and techniques used in forest conservation and protection research. The lab focuses on both pathological and entomological studies that are essential for maintaining healthy forest ecosystems. The students observed the collection of insect boxes, where various species of butterflies, moths, and other insects are preserved and stored. These insect specimens are crucial for entomological studies, as insects play a significant role in forest ecosystems, either as pollinators or as pests that can damage trees. As part of their hands-on experience in the lab, the students participated in the stretching of butterflies, a technique used to prepare and display butterfly specimens for study. This process involves carefully positioning the wings of the insects to preserve them for entomological examination. The students also had the opportunity to conduct a detailed dissection of a moth. During the dissection, they focused on the male moth's reproductive system. They removed and observed the genitalia of the male moth, studying its reproductive organs under a microscope.



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*Students participating in the stretching of insects*



*Display of insect boxes*

**Outcome:** The visit to the Himalayan Forest Research Institute was highly educational and impactful, providing them with valuable insights, practical skills, and enhanced knowledge. This fostered a greater appreciation for the role of scientific research in protecting forests and ecosystems, while equipping students with hands-on experience and knowledge that will benefit their future studies and careers.



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**HANDS ON TRAINING IN BEEKEEPING AT Y. S. PARMAR UNIVERSITY OF HORTICULTURE AND FORESTRY NAUNI**

**Objective:** The beekeeping training aimed to equip students with foundational skills in hive management, species identification and understanding bee life cycles and brood development. It emphasized disease identification and management, sustainable and ethical practices, and highlighted bees ecological roles in pollination and biodiversity.

**Description:** On October 23, 2024 the SEC students of B.Sc. III and B.Sc. II Department of Zoology, St. Bede's College visited Y. S. Parmar University of Horticulture and Forestry Nauni, Solan for hands on training in beekeeping. The training introduced students to the fundamentals of beekeeping, focusing on two bee species: *Apis mellifera* and *Apis cerana*. This session provided a unique blend of theoretical knowledge and practical skills, bridging classroom learning with real-world applications.

The training began with an introduction to the fundamentals of beekeeping, covering the life cycles and social structures of honeybees. Students learned how to identify different brood stages and recognize the characteristics of worker bees, drones, and the queen. This knowledge was reinforced by hands-on activities, where students practiced critical hive management skills. They learned to handle and inspect frames within the hive, identify storage cells containing honey, pollen, and brood, and recognize different life stages within a colony. This exposure not only equipped them with practical skills but also instilled confidence in working with bees.

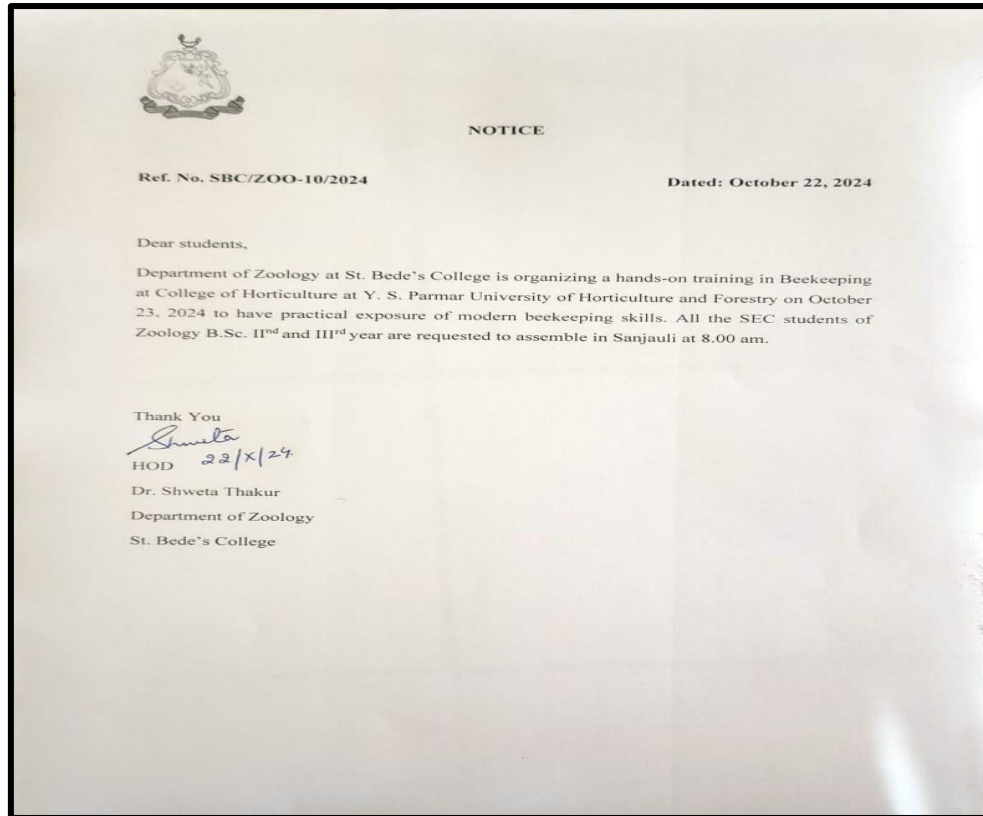
A significant part of the training emphasized the importance of recognizing and managing common bee diseases and pests that can impact hive health. Students were introduced to methods of disease prevention and the proper handling of affected hives to reduce risks to bee populations. This aspect of the training highlighted the complexities of maintaining hive health and the importance of vigilance in sustainable beekeeping practices.

Additionally, students gained insights into the crucial role bees play in pollination and maintaining biodiversity. Through detailed discussions, they learned about the ecological and agricultural significance of bees, understanding how their pollination activities support both natural ecosystems and agricultural productivity. The training underscored the ethical and sustainable practices essential in beekeeping, such as using eco-friendly methods to care for hives and promoting bee conservation.





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*Introducing to the bee hives*



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*Storage cells containing brood and honey*



*Identification of queen bee*

**Outcome:** The training provided students with hands-on skills in hive management, understanding bee behaviour, and recognizing diseases. They learned about honey, pollen, and wax production, emphasizing ethical harvesting and bee welfare. The program highlighted bees crucial role in pollination and biodiversity, linking it to ecosystem health. Students left with a foundation in sustainable beekeeping and potential career pathways in apiculture and conservation.





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## **RAISING AWARENESS ON BIODIVERSITY CONSERVATION**

**Objectives:** The awareness activity aimed to educate students on the importance of preserving biodiversity and its role in ecosystem health. It highlighted major threats, including habitat destruction, climate change, pollution, and overexploitation of resources.

**Description:** On October 23, 2024, students from the Zoology Department conducted an awareness activity through PowerPoint presentation on biodiversity conservation at Frontline Public School in Thanedar, Shimla. This initiative was aimed at raising awareness among school students about the critical importance of preserving our planet's biodiversity. The event was organized to engage young minds in discussions about environmental issues and to inspire them to act in their communities.

The presentation was delivered by four enthusiastic students: Sanyogita Chauhan, Shourya Sharma, Rishika Negi, and Abha Verma. They skillfully outlined some of the most pressing threats to biodiversity, including habitat destruction, climate change, pollution, overexploitation of resources, and the introduction of invasive species. Each speaker emphasized the urgent need to address these challenges to ensure the survival of various species and ecosystems. They discussed the critical role of biodiversity in sustaining life on Earth and how its loss can have severe consequences for humanity, including food security and health impacts and provided an insight about the flora and fauna of Himachal Pradesh.

In addition to discussing the reasons behind biodiversity loss, the presenters highlighted the importance of conservation efforts. They explained how biodiversity contributes to ecosystem services such as pollination, water purification, and climate regulation, which are essential for human survival and well-being. The students shared various strategies for restoring biodiversity, including habitat restoration, sustainable resource management, and community engagement in conservation initiatives.

To enhance the learning experience, the event featured an interactive feedback session at the end of the presentation. This allowed the school students to ask questions, share their thoughts, and engage in meaningful dialogue with the presenters. The feedback session aimed to evaluate the effectiveness of the presentation and encouraged students to think critically about biodiversity issues and their roles in fostering conservation efforts.



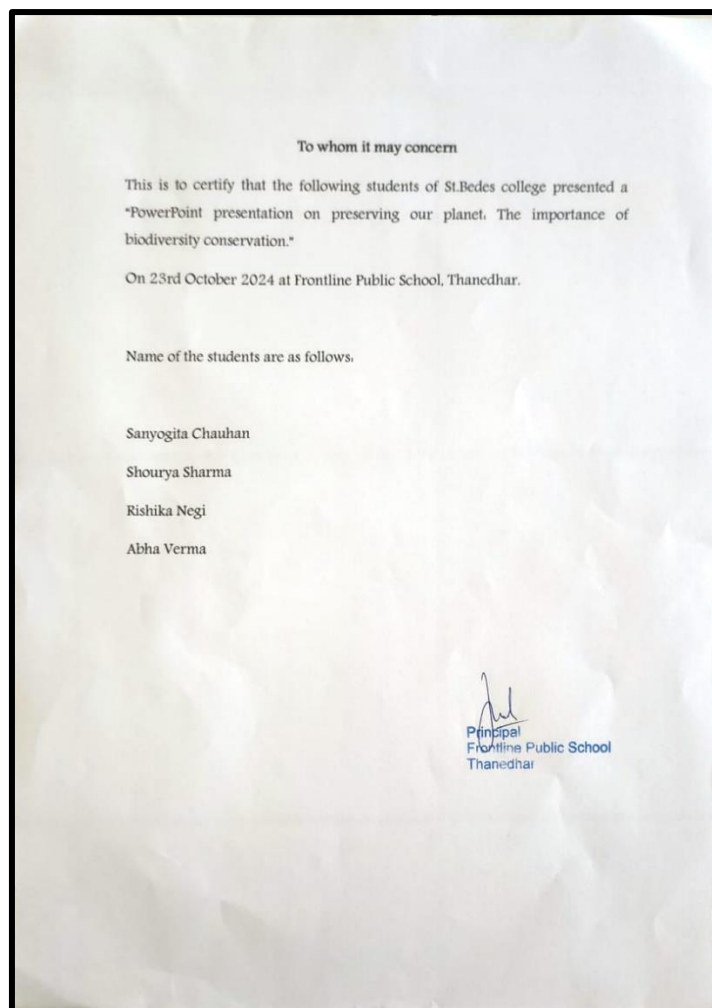
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*Awareness activity through PowerPoint presentation on biodiversity conservation at  
Frontline Public School in Thanedar*



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***Appreciation letter***

**Outcome:** The awareness program successfully increased students awareness of the significance of biodiversity and the urgent need for its conservation. The presentation provided practical conservation strategies, encouraging students to consider their contributions to environmental efforts. The event inspired students to become advocates for biodiversity conservation and take part in stewardship activities.

**RAISING AWARENESS ON SELF-BREAST EXAMINATION**

**Objective:** To educate individuals about the importance of proactive health practices and self-care and empower participants with the knowledge and techniques of self-breast





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examination. To engage the community, including students and local residents, to broaden the outreach of the awareness campaign.

**Description:** On November 27, 2024, the Department of Zoology, under the aegis of the IQAC, organized an impactful awareness session on *Self-Breast Examination* to promote early detection and prevention of breast cancer. The program saw active participation from students of Shimla Nursing College, Bhattakuffar, and local residents from the Shimla region, ensuring a broad outreach. The primary objective of the initiative was to educate and inform the community about breast cancer, empowering individuals to take charge of their health through awareness and proactive practices. Dr. Kalpana, a renowned social worker and a supporter for breast cancer awareness, graced the occasion as the resource person. Known for her extensive work on prominent platforms, Dr. Kalpana shared her expertise and experiences, offering a comprehensive understanding of breast cancer and its prevention.

### **Session Overview**

Dr. Kalpana delivered an insightful and interactive session, focusing on critical aspects of breast cancer. Key topics covered during the program included:

#### **1. Understanding Breast Cancer:**

- Definition, prevalence, and increasing cases of breast cancer globally and locally.

#### **2. Risk Factors:**

- Genetic factors contributing to breast cancer risk.
- Lifestyle factors such as diet, lack of exercise, obesity, and stress.
- Environmental influences and their impact.

#### **3. Symptoms and Diagnosis:**

- Common warning signs, including lumps, changes in breast shape, and unusual discharge.
- Importance of self-breast examinations and regular mammograms.
- Overview of diagnostic tools like imaging tests and biopsies.

#### **4. Treatment Options:**



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- Available treatment modalities, including surgery, chemotherapy, radiation therapy, and targeted therapies.
- Emphasis on emotional and psychological support for patients undergoing treatment.

**5. Prevention and Awareness:**

- Strategies for reducing breast cancer risk, such as maintaining a balanced diet, regular exercise, and avoiding stress.
- Incorporating yoga and physical activity into daily routines.
- The need for emotional support and assistance for underprivileged individuals and children affected by cancer.

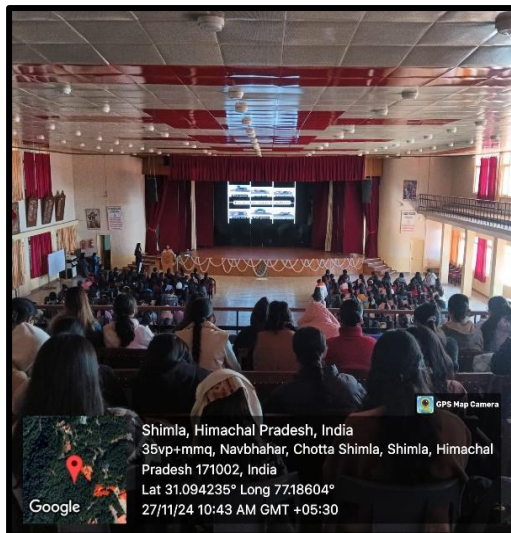
**Video Demonstration**


A key highlight of the program was a short, engaging video demonstration led by Dr. Kalpana on self-breast examination techniques. She provided clear, step-by-step guidance on conducting daily self-examinations, empowering participants to adopt this life-saving practice.

**Outcome:** The awareness program on self-breast examination was a significant step toward fostering a proactive approach to women's health. It provided participants with vital knowledge and practical skills, emphasizing the importance of early detection and prevention. The Department of Zoology, along with IQAC, reaffirmed its commitment to organizing similar programs that address pressing health concerns and contribute to the well-being of the community.




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Heritage Status



# St. Bede's College


NAAC Re-Accredited A Grade

Organised by Department of Zoology  
under the aegis of IQAC

AN INITIATIVE TO RAISE  
AWARENESS ON

## Self Breast Examination

Resource person -Dr. Kalpana



Date:  
November 27, 2024  
Time:  
10:30 - 11:15am

**Target Audience-**  
College Students and Local  
Residents of Shimla

*Awareness Program on Self-Breast Examination*





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## **NATIONAL SCIENCE DAY**

**Objectives:** Enhancing awareness of career opportunities in science and research, fostering innovation and creativity among students, highlighting recent scientific discoveries, providing hands-on learning through student-driven projects, and encouraging the practical application of interdisciplinary scientific concepts.

**Description:** On February 28, 2025, the Department of Science at St. Bede's College celebrated National Science Day under the theme “Empowering Indian youth for global leadership in science and innovation for Viksit Bharat”. The event featured a diverse range of activities.

### **Career Guidance Session**

The event commenced with an insightful career guidance session by Dr. Rahul Shrivastava, Professor at the Department of Biotechnology and Bioinformatics, Jaypee University of Information Technology, Waknaghat, Solan. Dr. Shrivastava elaborated on various career opportunities in science, research, and emerging fields, inspiring students to explore diverse avenues in their academic and professional journeys.

**St. Bede's College**  
NAAC Re-Accredited A-Grade  
under the aegis of IQAC  
celebrates

**NATIONAL SCIENCE DAY-2025**  
on  
**Empowering Indian Youth for Global Leadership  
in Science and Innovation for Viksit Bharat**

**Date:** 28th February, 2025    **Venue:** College Auditorium    **Time:** 10:00 am onwards

**List of Events**

- Art of Science: Student Creation in Beauty and Wellness
- Career Counselling Session
- Information Bulletin
- Role Play on Evolution
- Simplifying Calculations with Vedic Mathematics
- Ideation Competition
- Mock Test
- Poster and Slogan Making Competition

*Brochure*



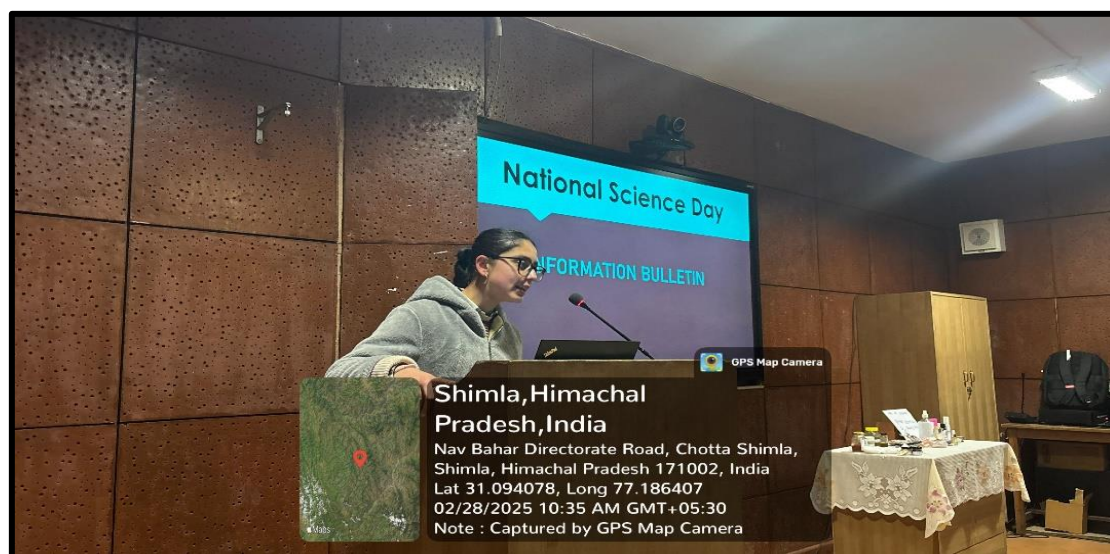
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*Career guidance by Dr. Rahul Shrivastava, Professor at Jaypee University of Information Technology*

**Information Bulletin on Scientific Discoveries**

Students compiled and presented an information bulletin that highlighted the latest discoveries in science. Special emphasis was placed on palaeontology and fossils, where participants delved into groundbreaking research, uncovering insights into the evolution of life on Earth.



*Information Bulletin by Students on Latest Discoveries in the Field of Science*

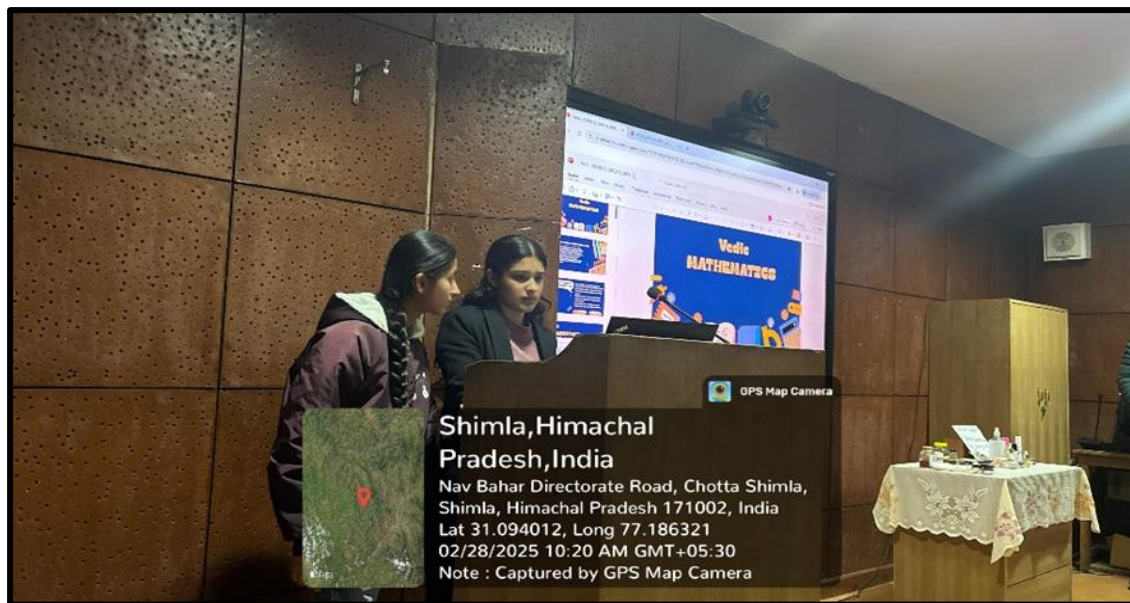




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### **Vedic Mathematics Session**

A dedicated session on Vedic Mathematics was conducted, focusing on simplifying complex mathematical calculations. The session introduced students to ancient mathematical techniques, which offer faster and more efficient ways of solving arithmetic problems.



### ***Vedic Mathematics Session Focusing on Simplifying Complex Mathematical Calculations***

### **Idea Pitching Segment**

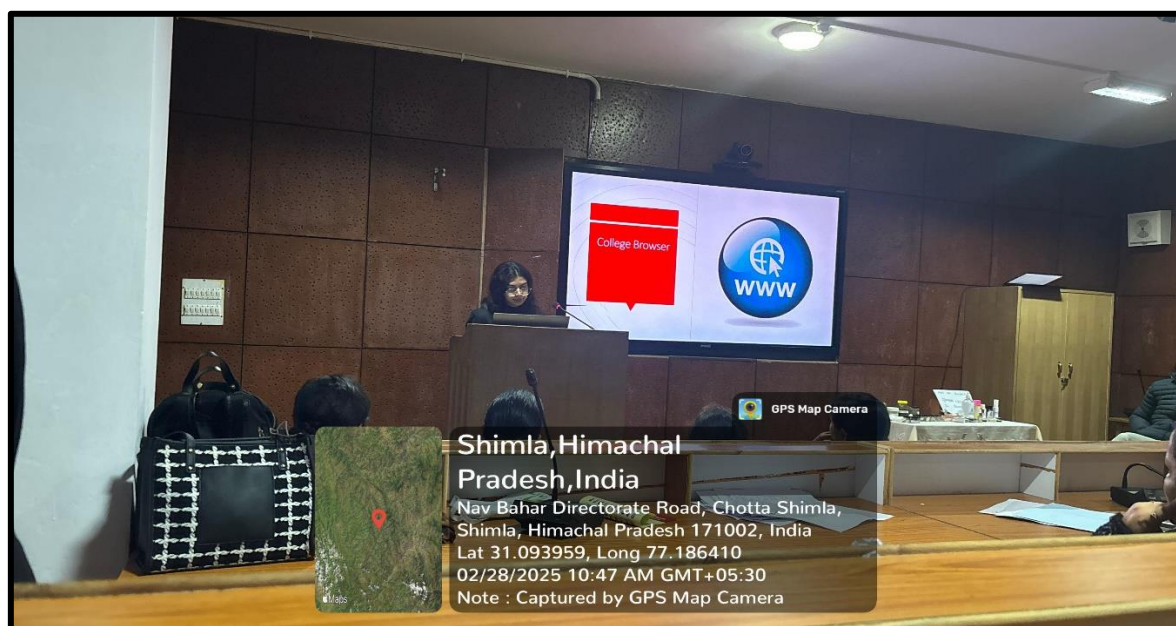
Students showcased their innovative thinking by presenting two unique ideas:

1. **Student Identity Card Creation:** A novel approach to digitizing and managing student identities efficiently.
2. **Browser Engine Innovation:** A browser engine equipped with built-in web search, subject-based quick links, and a customizable homepage designed to enhance online research efficiency.





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*Idea Pitching by the Students*

**Beauty and Wellness Product Presentation**

One of the highlights of the event was the presentation of beauty and wellness products synthesized in the chemistry lab. Students demonstrated the science behind cosmetic formulations, explaining the role of chemistry in developing safe and effective beauty products. This segment provided a practical perspective on applied science and its significance in daily life.



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*Presentation of Beauty and Wellness Products Synthesized in the Chemistry Lab.*

### **Poster and Slogan-Making Competitions**

Students participated enthusiastically in poster and slogan-making competitions, showcasing their creativity and knowledge of scientific themes. The competition aimed to encourage visual and linguistic representation of scientific concepts in an engaging manner.



*Poster and Slogan-Making Competitions*





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**Mock Test**

To assess and reinforce scientific knowledge, a mock test was conducted, covering various scientific disciplines. This activity aimed to enhance students' conceptual understanding and analytical skills while fostering a competitive spirit.

**Outcomes:** Students gained valuable insights into career opportunities in science and technology while developing research, presentation, and problem-solving skills through hands-on activities. The integration of science with mathematics, technology, and real-life applications enhanced their appreciation for scientific advancements. Idea-pitching sessions and creative competitions encouraged innovation and practical application of scientific concepts, while group activities fostered teamwork and collaboration among participants.