



ISHRAE
Thane Chapter

DON BOSCO INSTITUTE OF TECHNOLOGY

AICTE APPROVED, AFFILIATED TO MUMBAI UNIVERSITY,

ISO 9001:2015, NAAC ACCREDITED WITH B++ GRADE

DEPARTMENT OF MECHANICAL ENGINEERING

ISHRAE THANE DBIT STUDENT CHAPTER

**SUMMARY REPORT
ACADEMIC YEAR 2023-2024**

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1.0 INTRODUCTION

1.1 About ISHRAE

The Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE), was founded in 1981 at New Delhi by a group of eminent HVAC&R professionals. ISHRAE today has over 28,780 HVAC & R professionals and Student-members. ISHRAE operates from over 42 Chapters and sub Chapters spread all over India, with HQ in Delhi. It is led by a team of elected officers, who are members of the Society, working on a voluntary basis, and collectively called the Board of Governors.

1.2 ISHRAE Objectives

- Advancement of the Arts and Sciences of Heating, Ventilation, Air Conditioning and Refrigeration Engineering and Related Services.
- Continuing education of Members and other interested persons in the said sciences through Lectures, Workshops, Product Presentations, Publications and Expositions.
- Rendition of career guidance and financial assistance to students of the said sciences.
- Encouragement of scientific research.

1.3 ISHRAE In DBIT

ISHRAE DBIT is the student chapter of Don Bosco Institute of Technology, Kurla with ISHRAE Thane chapter as the parent chapter. ISHRAE DBIT has its own Chapter Working Committee under the Presidentship of Mr. Saurabh Yadav from BE Mechanical and Prof. Cleta Pereira as the Faculty In-charge. ISHRAE in DBIT has given our students great opportunities with each passing year. DBIT has been a part of ISHRAE since 2013. It was initially led by Prof. Sarangi. ISHRAE conducts various activities in DBIT and for the students of DBIT.

Table 1. List of CWC Members of ISHRAE DBIT (2023-24)

Sr. No	Name	Designation
1	SIMRAN AHIWALE	PRESIDENT
2	VED YEMITKAR	PRECIDENT ELECT
3	SAHIL JADHAV	SECRETARY
4	MOHD. ANAS	TREASURER
5	ANKIT KSHIRSAVAR	SPORTS CHAIR
6	JAEET HINDALEKAR	ENVIRONMENT CHAIR
7	YASH SAWANT	MEMBERSHIP CHAIR
8	PARMINDER SINGH	IJF CHAIR
9	OMKAR GHOLE	K-12 CHAIR
10	VILAS KODAM	CO-K12 CHAIR
11	UMERA SHAIKH	WOMEN IN ISHRAE CHAIR
12	YASH KHAMKAR	MARKETING CHAIR

2.0 ACTIVITIES

2.1

Title: Installation Ceremony 2023

Speakers/ Resource personnel: ISHRAE Thane Chapter

Date and Time: 15th July, 2023 at 9:00 am onwards

Session Mode: Offline

Flyer:



Goals and Objectives:

Objective of the Installation Ceremony for the new CWC members of the academic year 2023-2024

Description:

ISHRAE APSIT Students chapter under ISHRAE Thane Chapter conducted the Installation ceremony for the new CWC members of the academic year 2023-2024. 12 Colleges which falls under ISHRAE Thane chapter participated in this event with their Advising Faculties. Ceremony was commenced with National Anthem and Lamp lighting ceremony by the Distinguish Dignitaries present in the event.

The event was hosted by ISHRAE APSIT'S CWC members Sakshi Gunta and Rutuja Patil . Sakshi Gunta introduced ISHRAE to all the participants , also she introduced the Honorary Guests to the participants gathered. **Dr. Pratapsingh Desai (ISTE President of ISHRAE), Mr A. Madhukar (member of various technical community of ASHRAE AND ISHRAE), Mr Hardik Shukla (Zonal chair of ISHRAE west), Dr Uttam Kolekar (Principal of APSIT), Mr Manish Gulalkari (Regional Director of ISHRAE west), Mr Hemant Khadse (President of ISHRAE Thane chapter) and Prof. Wilson Pinto (Vice President MaTPO)** were the honorary guests present in the ceremony



Sr. No	Name	Designation
1	SIMRAN AHIWALE	PRESIDENT
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4	MOHD. ANAS	TREASURER
5	ANKIT KSHIRSAGAR	SPORTS CHAIR
6	JAEE HINDALEKAR	ENVIRONMENT CHAIR
7	YASH SAWANT	MEMBERSHIP CHAIR
8	PARMINDER SINGH	IJF CHAIR
9	OMKAR GHOLE	K-12 CHAIR
10	VILAS KODAM	CO-K12 CHAIR
11	UMERA SHAIKH	WOMEN IN ISHRAE CHAIR
12	YASH KHAMKAR	MARKETING CHAIR

2.2

Title: K12 Activity – Drawing competition

Mapping with 3-Track Programme: Wellness

Date and Time: 4th August 2023, 10.30am to 12.30pm

Venue: Mumbai Utkal School

Activity Mode: Offline

Number of ISHRAE Attendees: 7

Number of Faculty:

Number of Participated Students: 55

Poster/Flyer:



Goals and Objectives:

Aim of this event was to showcase the creativity of students while imbibing knowledge about the environment and view towards it. Develop the competing skills

Description -

On August 4, 2023, the ISHRAE DBIT Club organized a drawing competition for school students, part of the K-12 activities by ISHRAE. The goal was to show off students' creativity while teaching them about the environment. The event focused on developing the kids' skills in drawing.

Starting at 10:45 am, students got a warm welcome from organizers Omkar Ghole and Vilas Kodam. The team made sure things ran smoothly, guiding students to their spots and creating a positive vibe for the competition. At 11 am, all participants got drawing papers and supplies, ensuring everyone had an equal chance. The themes, "Go Green," "Save Water," and "Air Pollution," were chosen to fit different age groups.

With instructions from Vilas Kodam, the drawing competition kicked off, giving students a chance to bring their ideas to life. Judges Omkar Ghole, Vilas Kodam, and Pranav Bhatkar assessed the drawings, while outside, participants enjoyed fun games. At 12:15 pm, the competition ended, and students eagerly awaited results. Mrs. Mausami Parija, the school principal, was set to acknowledge and reward the talented artists. The event successfully blended creativity, environmental awareness, and skill-building in a day full of art and learning.



2.3

Title: SEMINAR ON MARINE ENGINEERING.

Mapping with 3-Track Programme: Educational

Date and Time: 4th August 2023 at 3.00pm to 5.00pm

Venue: Don Bosco Institute of Technology

Activity Mode: Offline

Number of ISHRAE Attendees: 20

Number of Faculty: 1

Number of Participated Students: 60

Poster/Flyer:



DON BOSCO INSTITUTE
OF TECHNOLOGY

ISHRAE
Thane Chapter

ISHRAE DBIT'S **SEMINAR** ON MARINE ENGINEERING

FRIDAY
04 AUGUST 2023

TIME
03:00–05:00 PM

SPEAKER

Ashley Paul

urrently employed as a third engineer at Seaspan Corporation, a prominent organization specializing in independent container ship management and ownership, with experience spanning over 7 years, he has worked aboard medium and large container ships.



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Goals and Objectives:-

The seminar aims to raise awareness about the field of marine engineering and generate interest among participants in pursuing careers in this dynamic industry .Through the presentation by Ashley Paul, the seminar seeks to

provide participants with valuable insights into the steps to become a marine engineer, the responsibilities associated with different ranks, and the daily tasks involved in the profession .The seminar aims to guide aspiring marine engineers in choosing the right college or institution for their education, considering factors like accreditation and facilities .The event provides a platform for participants to interact with a seasoned marine engineer, fostering networking opportunities and enabling the exchange of ideas and experiences.

Description

The marine engineering seminar, orchestrated by the Ishrea DBIT Club, unfolded as an enlightening experience, aiming to raise awareness and instill interest in the maritime industry.



Ashley Paul, a seasoned 3rd Marine Engineer, delivered a comprehensive presentation. He navigated attendees through the educational trajectory to become a marine engineer, shedding light on the diverse responsibilities tied to different ranks and providing insights into the daily intricacies of the

profession. The seminar extended beyond education, offering valuable tips on selecting the right college, considering accreditation, faculty, and facilities. A visual demonstration of a ship's engine added depth to the understanding.



Gratitude was expressed to Ashley Paul, leaving participants not only motivated but also equipped with a well-rounded comprehension of marine engineering. The seminar served as a catalyst for aspiring engineers to embark on a fulfilling journey in this dynamic and crucial field, contributing to the ever-evolving world of marine engineering.

2.4

Title: K12 Activity – science land

Mapping with 3-Track Programme: Wellness

Date and Time: 26th August 2023 at 2.00pm to 5.00pm

Venue: Seminar Hall, Don Bosco Institute of Technology

Activity Mode: Offline

Number of ISHRAE Attendees: 6

Number of Faculty: 2

Number of Participated Students: 20

Poster/Flyer:



Goals and Objectives:

Aim of this event was to make the budding generation aware of the technical world with a twist of fun learning and the event was conducted with great enthusiasm. Also help students to be more observant and inquisitive with teaching them experiment

Description

"Science Land," a K12 activity conducted on August 26, 2023, by the ISHRAE DBIT Student Chapter, aimed to make science enjoyable and educational for Utkal School students in Kurla (West). Led by ISHRAE faculty advisor Prof. Cleta Pereira, the offline event featured two engaging sessions.



In the first session, Jaee Hindalekar introduced the concept of pressure, demonstrating it with a balloon and paper pins. Students actively participated in experiments, realizing how pressure varies with force application area. The second session, led by Vilas Kodam, explored the movement of water molecules at different temperatures. This experiment helped students understand molecular behavior in substances.



A treasure hunt, based on general knowledge questions, added a fun element to the event. The ISHRAE student chapter members, including Simran Ahiwale, Omkar Ghole, Sahil Jadhav, Vilas Kodam, Jaee Hindalekar, and Pranav Bhatkar, actively organized and managed the creative session. The event concluded with a successful group photo, capturing the memorable learning experience for both students and ISHRAE council members.



2.5

Title: K12 Activity

Mapping with 3-Track Programme: Wellness

Date and Time: 26th August 2023 at 2.00pm to 5.00pm

Venue: Seminar Hall, Don Bosco Institute of Technology

Activity Mode: Offline

Number of ISHRAE Attendees: 6

Number of Faculty: 2

Number of Participated Students: 20

Poster/Flyer:



DON BOSCO INSTITUTE OF TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

ISHRAE STUDENT CHAPTER

PRESENTS

K-12 ACTIVITY

 मंच का सरपंच
For Students of Utkal school

Elocution Topics:-

1. Importance of Education
2. Digital India
3. Unity in Diversity
4. Child Labour



 Utkal High School, Kurla
 26 AUG, 2023
02:00 pm ONWARDS

For more details contact
Omkar Ghole : 8108688942
K12 Chair

Faculty Advisor: Cleta Pereira

Goals and Objectives:

Aim of this event was to help students improve their communication skills, including speaking fluency, articulation, clarity, and voice modulation. Through practice and feedback, students learn to express their ideas.

effectively and engage with the audience. Provide a platform for them to overcome stage fright and build self-confidence

Description

The Utkal High School witnessed a vibrant elocution competition on August 26, 2023, organized by the ISHRAE DBIT Student Chapter. Omkar Ghole (K12 Chair) and Vilas Kodam (Co K12 Chair) explained the rules and topics, including "Importance of Education," "Digital India," "Unity in Diversity," and "Child Labour." Mrs. Cleta Pereira and Mr. Mahesh Rajwade served as jury members, evaluating content, confidence, gestures, and presentation.

Participants, given 2 minutes each, delivered impassioned speeches, showcasing their public speaking skills. The event encouraged audience participation, providing a platform for students to express opinions. Elocution, a platform for personal development, concluded with applause for contestants, winners receiving accolades and encouragement. The ISHRAE student chapter members, including Simran Ahiwale, Omkar Ghole, Sahil Jadhav, Vilas Kodam, Jaee Hindalekar, and Pranav Bhatkar, successfully organized the event, fostering an environment for creative expression and team collaboration.



2.6

Title: Science Land Date: 08th September 2023

Time: 10:00 AM to 12:00 PM

Venue: Mumbai Utkal School

Target Audience: Students of 5th, 6th, 7th, 8th Std

No. of Participants Present: 70

Resource Person: Mrs. Mousami Parija

Organization of Recourse Person: Mumbai Utkal School

Organizing Department / Committee / Authority: ISHRAE

DBIT Student Chapter Faculty Coordinator: Prof. Cleta Pereira



Objectives:

- ❖ To encourage students to ask questions, make hypotheses, and engage in the scientific method to develop problem-solving and critical thinking skills.
- ❖ To help students grasp scientific concepts by demonstrating them in a tangible, real-world

Detailed Report

On September 8, 2023, at 10:00 AM, the ISHRAE DBIT Student Chapter, led by faculty advisor Prof. Cleta Pereira, organized the "Science Land" K12 activity offline at Mumbai Utkal School, Kurla (West). The event aimed to demonstrate scientific principles in everyday life, fostering an interest in STEM fields. Omkar Ghole (K12 Head) kicked off the event with an introductory speech, providing a glimpse of planned experiments.

Session Breakdown:

1. Capillary Action (Vilas Kodam):

- Explained the concept to students, emphasizing the absorption capability of liquids by specific materials.
- Demonstrated capillary action using ink mixed in water and tissues.

- Household examples and applications were shared for better understanding.

2. Tyndall Effect (Ankit Kshirsagar):

- Interacted with students about the Tyndall effect, where small particles carry light.
- Demonstrated the effect using laser light passing through different mixtures (saltwater, chalk powder, milk).
- Explained how light scattering occurs in mixtures with unblended particles.

3. The Mighty Balloon (Omkar Ghole):

- Engaged students by challenging them to see if a balloon could lift a glass several times its weight.
- Demonstrated the experiment involving a balloon, a matchstick, and a glass bottle.
- Illustrated the principles behind the experiment, highlighting the role of heated air and pressure.



2.7

Title: Walk through

Date: 12 September,

Time: 2:00 to 3:00 pm

Venue: Don Bosco Centre of Learning

Target Audience: Mechanicall

Participants Present: 13

Resource Person: Prof. Cleta Pereira.

Organization of Recourse Person: Don Bosco Institute of Technology.

Organizing Department / Committee / Authority:
ISHRAE Thane Chapter.**Faculty Coordinator:** Prof. Cleta Pereira.

Objectives:

- ❖ To Enhance Practical Knowledge with hands-on exposure to real-world situations, enabling them to apply theoretical concepts in practical settings effectively.
- ❖ To help students directly observe and interact with real-world AC and refrigeration systems, helping them develop practical knowledge.
- ❖ To ensure that participants understand and adhere to safety protocols, reducing the risk of accidents and injuries along with basic knowledge of maintenance.

Detailed

1. Introduction to HVAC Basics:

- Professor Cleta provided a brief overview of HVAC cycles and systems, laying the foundation for participants' understanding.

2. Exploration of Domestic AC Units:

- Participants were introduced to a variety of domestic AC units, each serving distinct purposes.

- Emphasis was placed on the water cooler's refrigeration cycle, highlighting its role in providing chilled and refreshing drinking water.

3. Air Curtains:

- The concept and role of air curtains were elucidated, focusing on how they maintain indoor comfort while preventing external elements from entering enclosed spaces.
- Students grasped the technology's application in commercial settings for energy-efficient temperature control.

4. Refrigerator Types Overview:

- Different refrigerator types, including top-freezer, bottom-freezer, and side-by-side configurations, were explored.
- Students gained insights into layouts, temperature zones, and energy-efficient features of these household appliances.

5. Industrial Refrigeration Systems:

- The walkthrough extended to industrial refrigeration systems designed for larger-scale and commercial purposes.
- Students learned about the immense capacity and critical role these systems play in preserving large quantities of perishable goods.

6. Awareness and Maintenance Practices:

- Participants gained valuable insights into basic maintenance practices for domestic AC units.
- Practical tasks like cleaning filters, checking coolant levels, and ensuring proper ventilation were demonstrated, empowering participants to proactively maintain their cooling systems.



2.8

Title: Tech Quest (Treasure hunt)

Date: 15 September 2023

Time: 2:00 pm to 5:00 pm

Venue: DBIT Campus

Target Audience: All department (MECH/EXTC/IT/COMPS)

No. of Participants Present: Total No of group 16 (4 participant each) – 64 Participants

Resource Person:

Organization of Recourse Person:

Organizing Department / Committee / Authority: ISHRAE Club in collaboration with the Student Council of Don Bosco Institute of Technology



Objectives:

- ❖ Foster innovation and creativity among engineering students.
- ❖ Test and enhance logical reasoning skills.
- ❖ Promote effective communication of engineering concepts.

Tech Quest, held on Engineers' Day (15th September), was a collaborative effort between the ISHRAE Club and the Student Council at Don Bosco Institute of Technology. Aimed at fostering innovation, creativity, and technical aptitude, the event engaged engineering students from various disciplines in intellectually stimulating activities.

1. Aptitude Test:

- The Aptitude Test served as the initial segment, evaluating participants' logical reasoning skills.
- Questions covered mathematics, analytical reasoning, and logical deduction, simulating real-world engineering challenges.
- Participants applied problem-solving strategies, receiving valuable feedback for skill improvement.
- The test functioned as both a competition and a learning experience, pushing participants to think critically.

2. TechnoShort:

- TechnoShort challenged participants to create 60-second video reels explaining engineering concepts effectively.
- Participants chose their engineering themes, using multimedia elements to make presentations informative and captivating.
- The competition aimed to bridge the gap between complex engineering ideas and clear, concise communication.

- It tested technical knowledge while fostering creativity and innovation in presenting complex concepts.

3. Treasure Hunt:

- The Treasure Hunt was the most captivating segment, designed as a real-life adventure testing problem-solving, teamwork, and navigation.
- Divided into stages, participants navigated through different departments, facing challenges that simulated real-world scenarios.
- Challenges included assembling a computer, solving riddles, navigating circuits, and constructing a functioning car in the workshop.
- The Treasure Hunt represented an engineer's journey, emphasizing collaboration, resourcefulness, and adaptability.





2.9

Title: Alphabets and Numbers for kindergarten

studentsDate: 25th September 2023

Time: 11:00 AM to 1:00 PM

Venue: Mumbai Utkal School

Target Audience: Jr.Kg. and Sr.Kg.

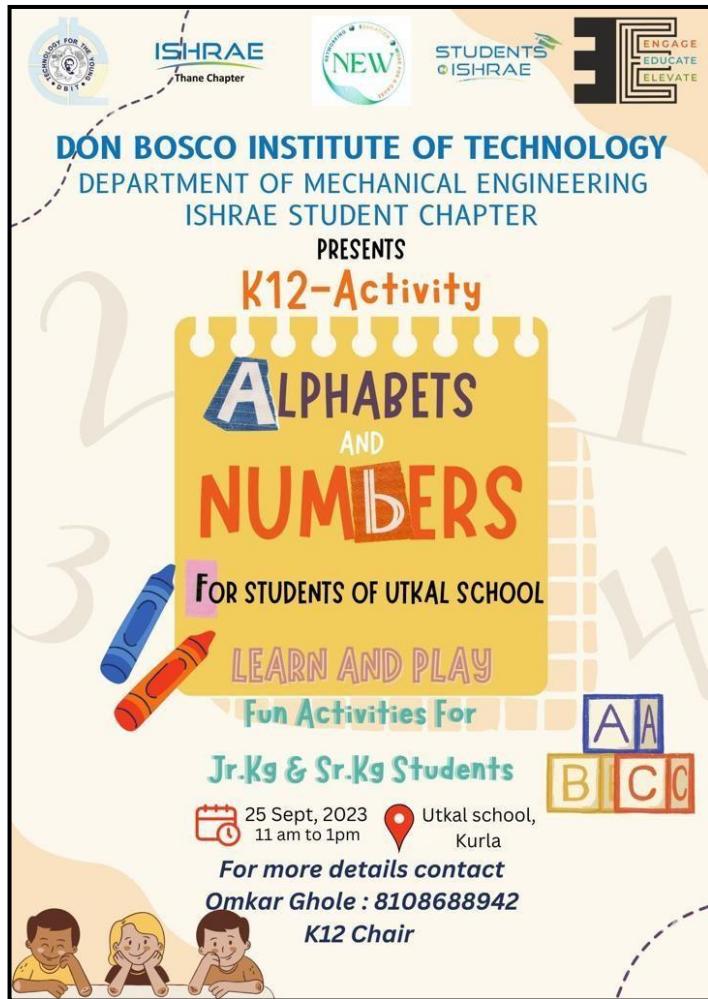
Students

No. of Participants Present: 60

Resource Person: Mrs. Mousami Parija

Organization of Recourse Person: Mumbai Utkal School

Organizing Department / Committee / Authority: ISHRAE DBIT
Student ChapterFaculty Coordinator: Prof. Cleta Pereira



Objective

- ❖ To recognize simple words and familiarize themselves with the concept of print, helping them become more confident readers in the future
- ❖ For developing essential math skills by teaching numbers which introduces basic numeracy skills like counting, recognizing numerals, and understanding quantity and ordinality.
- ❖ Kindergarten students often engage in creative activities related to alphabets and numbers, such as drawing, colouring, and storytelling.

Detailed Report

On September 25, 2023, at 11:00 AM, the ISHRAE DBIT Student Chapter, led by faculty advisor Prof. Cleta Pereira, organized the "Alphabets and Numbers" K12 activity offline at Mumbai Utkal School, Kurla (West). The event was designed to actively engage kindergarten students in learning and fostering recognition of alphabets and numbers.

Event Highlights:

1. Introduction and Energizing Start

- Teachers and the Principal welcomed students with songs, creating a lively and energetic atmosphere.
- Vilas Kodam (Co K12 Chair) introduced the K12 team with physical activities like clapping and waving hands.

2. Origami Activity (Omkar Ghole and Vilas Kodam):

- Students participated in making boats, airplanes, hats, and birds using origami papers.
- K12 team members assisted students individually, guiding them through the steps.

3. Drag and Match Letters (Rahi Prajapati):

- The activity focused on alphabet recognition and identification.
- Students were divided into groups and given chart papers with randomly written alphabets.
- Each group competed to stick the respective alphabet stickers on the chart paper, fostering a sense of competition.
- Groups completing the activity earliest were applauded, and a group photo was taken with the school Principal.

4. Match the Capital and Small Alphabets (Vilas Kodam and Ankit Kshirsagar):

- Students were split into two groups, each given charts with either capital or small alphabets.
- The activity involved students identifying and matching the capital and small alphabets, promoting collaborative learning.
- A group photo was taken with the students upon completing the activity.





2.10

Title: Technical Advancement of field devices in HVAC Industry by Belimo Professionals.

Date: 27th September,

2023 Time: 2:00 pm

onwards

Venue: Seminar Hall , A Wing, 3rd floor,

DBIT.Target Audience: DBIT ISHRAE

members.

No of Participants Present: 44

Resource Person: Prof. Cleta Pereira

Organization of Recourse person: Don Bosco Institute of Technology.

Organizing committee: ISHRAE DBIT Student Chapter

Faculty Coordinator : Prof. Cleta Pereira



Objectives:

- ❖ To Enhance Practical Knowledge with hands-on exposure to real-world situations, enabling them to apply theoretical concepts in practical settings effectively.
- ❖ To help students observe and understand how different devices like actuators, dampers, sensors and meters work by the professionals itself.
- ❖ To ensure that participants understand the steps industries are taking to create healthier, more comfortable indoor environments that

consumes lesser energy.

Detailed report

On September 27, 2023, the ISHRAE DBIT members organized a seminar about new things in heating, ventilation, and air conditioning (HVAC) systems. Professionals from Belimo Industry were our guests to guide us about these new things. The seminar was attended by all ISHRAE members at DBIT.

Umera Shaikh and Vedika Mathews, members of ISHRAE DBIT, hosted the event. They introduced the guests, and Prof. Cleta Pereira and Mr. Vinay gave them small gifts.

The professionals from Belimo Industry, Mr. Prakash Lewis, Mr. Aniruddha Kapre, Mr. Vishal Jadhav, and Mr. Uttam Kamath, talked to us about HVAC.

Mr. Uttam Kamath started by explaining where ventilation and fire protection systems come from. He showed a video of how fire and smoke protection systems work.

Mr. Vishal Jadhav talked about new things in sensors used in HVAC. He showed us different types of sensors like humidity sensors and explained why they are important. He also showed how Belimo Industry is making better sensors.

Mr. Aniruddha Kapre talked about sensors for workplaces. He showed sensors that are easy for operators to use. He also talked about the 'Belimo Display App' that uses NFC for sensing and operating.

In the end, the Belimo professionals showed the sensors to students and answered their questions. Students thanked the guests and the seminar was a big success because everyone worked together well.



2.11

Title: Vedic Maths for Primary

Student's Date: 6th October 2023

Time: 12:00 PM to 2:00 PM

Venue: Mumbai Utkal School

Target Audience: 1st, 2nd, 3rd & 4th

Standard students No. of Participants

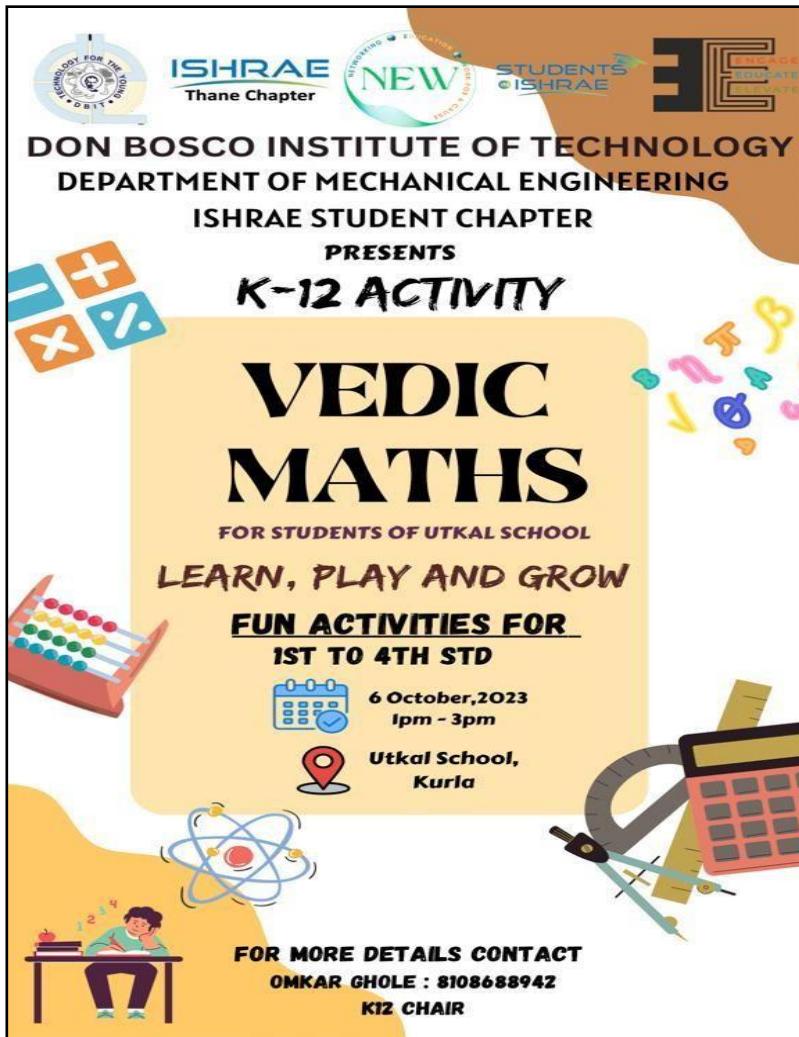
Present: 240

Resource Person: Mrs. Mousami Parija

Organization of Recourse Person: Mumbai Utkal School

Organizing Department / Committee / Authority: ISHRAE DBIT

Student Chapter Faculty Coordinator: Prof. Cleta Pereira



Objectives:

- ❖ To perform calculations with greater speed and accuracy than traditional methods.
- ❖ To introduce primary students to fundamental mathematical concepts such as place value, multiplication tables, factors, and

divisibility rules.

- ❖ To explore Vedic math techniques beyond the primary curriculum if they show interest and aptitude.

Detailed report

On October 6, 2023, ISHRAE DBIT Student Chapter organized an engaging "Vedic Maths for Primary Students" activity. The event, held at Mumbai Utkal School, Kurla (West), aimed to introduce students to Vedic Math techniques for basic mathematical operations.

Vilas Kodam, Co K12 Chair, initiated the event by explaining the significance of Vedic maths. Jaeden D'souza, an ISHRAE member, demonstrated tricks for basic addition, providing students with helpful tips for quick problem-solving. Concurrently, Amogh Solanki, another ISHRAE member, guided students through subtraction, boosting their confidence in a fun and interactive manner.

The first activity focused on basic addition and subtraction, encouraging critical thinking and creative problem-solving. Students actively participated, applying their knowledge to unique problem scenarios.

In the second activity, Ved Yemitkar, President Elect, showcased basic multiplication tricks, turning the learning process into an entertaining and intellectually stimulating experience. Students enthusiastically embraced the challenges, mastering the tricks for enjoyable problem-solving.

The third activity, facilitated by Vilas Kodam and Ankit Kshirsagar, delved into the joy of multiplication tables. The use of multisensory techniques, such as flashcards and chants, enhanced memory retention. Creative tricks, involving visual aids like fingers and mnemonic devices, made memorization of multiplication tables engaging and memorable.

The activities concluded successfully, and the students participated energetically. Group photos were taken to capture the memorable

moments. Vilas Kodam extended gratitude to the students and school staff for their support, and chocolates were distributed to the students as a token of appreciation.

The "Vedic Maths for Primary Students" activity proved to be an interactive and enjoyable way to introduce young learners to the fascinating world of mathematical techniques, fostering a positive attitude towards math. The ISHRAE DBIT team looks forward to organizing more such enriching activities in the future.



2.12

Title: BELIMO INDUSTRIAL VISIT

Date: 13/10/2023

Time: 2-5

Venue: BELIMO INDUSTRY

Target Audience: mech

No. of Participants Present: 40

Organizing Department / Committee / Authority: ISHRAE DBIT
STUDENTCHAPTER

Faculty Coordinator: CLETA PEREIRA

Objectives:

- ❖ The primary objective of the industrial visit was to provide the participants with a practical insight into the operations and functioning of Belimo Automations.
- ❖ The visit aimed to enhance the students understanding of the application of automation technology in HVAC systems.

Detailed Report

Arrival and Welcome:

Upon arrival, participants were warmly welcomed with a delightful spread of refreshments, setting a hospitable tone for the visit. The Belimo staff exhibited genuine hospitality and eagerness to host, creating an inviting atmosphere.

Overview Session:

The visit commenced with an overview from the Belimo team, including a detailed history, mission, and the company's global presence. The introduction emphasized the simplicity of managing HVAC systems with advanced technology, highlighting the efficiency and user-friendliness brought by modern automation.

Manufacturing Unit Tour:

Participants were guided through the manufacturing unit, witnessing state-of-the-art production processes for actuators, control valves, and sensors. The tour provided insights into assembly lines, quality control measures, and safety protocols implemented by Belimo, showcasing advanced manufacturing techniques.

Interaction Session:

A dedicated session allowed participants to interact with Belimo representatives, providing an opportunity to ask questions and gain further insights into the company's operations and the HVAC industry.

Customer Support Overview:

Participants received an overview of Belimo's customer support strategies, covering training, technical assistance, and post-sales services. This session highlighted the company's commitment to ensuring client satisfaction.

Key Learnings:

1. ****Advanced Manufacturing Processes:**** Witnessing sophisticated manufacturing techniques reinforced the importance of precision and quality in HVAC control solutions.
2. ****Innovation and Technology:**** Understanding the R&D process highlighted the role of innovation in driving the company's growth and maintaining its competitive edge.

3. **Customer-Centric Approach:** Learning about Belimo's customer support and after-sales services underscored the company's dedication to ensuring client satisfaction.

Interactive Quiz:

During the visit, an interactive quiz was conducted by the Belimo Trainer, covering various HVAC control solutions topics. Parmindar, an ISHRAE member, was recognized for exceptional performance. The quiz added an engaging and educational aspect to the visit, promoting active participation and reinforcing key concepts.



2.13

Title: Introduction to the world of AI

Date: 12th October 2023

Time: 9:00 AM to 11:00 AM

Venue: Mumbai Utkal School

Target Audience: 8th, 9th & 10th

Standard students No. of

Participants Present: 140

Resource Person: Mrs. Mousami Parija

Organization of Recourse Person: Mumbai Utkal School

Organizing Department / Committee / Authority: ISHRAE DBIT
Student

Chapter Faculty Coordinator: Prof. Cleta Pereira



ISHRAE
Thane Chapter



DON BOSCO INSTITUTE OF TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

ISHRAE STUDENT CHAPTER

PRESENTS

K-12 ACTIVITY

INTRODUCTION TO

WORLD OF

AI

ARTIFICIAL INTELLIGENCE

FOR STUDENTS OF UTKAL SCHOOL

8TH TO 10TH STD



12 October, 2023
9am - 11am



Mumbai Utkal School,
Kurla

FOR MORE DETAILS CONTACT

OMKAR GHOLE : 8108688942
K12 CHAIR

Objectives:

- ❖ To introduce AI and its subfields
- ❖ To explore real-world applications of AI in various domains.
- ❖ To encourage critical thinking by presenting them with AI-related

challenges.

Detailed Report

Event Overview:

“Introduction to the World of AI” took place on 12th October 2023 at 9.00 AM, organized by the ISHRAE DBIT Student Chapter with the guidance of Prof. Cleta Pereira. Aimed at students from Mumbai Utkal School, Kurla (West), the event introduced the concept of Artificial Intelligence (AI) in an interactive and engaging manner.

Event Activities:

1. Introduction to AI:

- **Presenter:** Omkar Ghole (K12 Chair)
- Omkar initiated the event by defining AI and prompting students to share their experiences with AI in daily life.
- Shared applications of AI in smartphones, language translation, healthcare, and encouraged students to consider careers in AI.
- Other team members assisted in clarifying doubts, fostering critical thinking among students.



2. Advantages and Disadvantages of AI:

- Presenters: Omkar Ghole (K12 Chair) and Vilas Kodam (CoK12 Chair)
 - Utilized a video presentation to illustrate the advantages of AI, such as automation, efficiency, and data-driven decision-making.
 - Discussed disadvantages, including job displacement, over-reliance, and ethical concerns.
 - Emphasized the importance of balancing AI benefits with potential challenges for a sustainable future.



3. Problems for a Possible AI-controlled Society:

- Presenters: Omkar Ghole (K12 Chair) and Vilas Kodam (CoK12 Chair)
 - Showcased a video depicting a futuristic AI-controlled society, sparking discussions on the implications.

- Explored the potential drawbacks, including job redundancy, boredom, and ethical considerations.
- Encouraged students to reflect on finding a balance between AI integration and preserving human engagement

2.14

Title: Fun
withScience

Date:
11th December
2023

Time: 2:00 PM to
4:30 PM

Venue: MMC Lab – Mechanical, Don Bosco Institute of
Technology, **Kurla**

Target Audience: Students of St. Micheal school

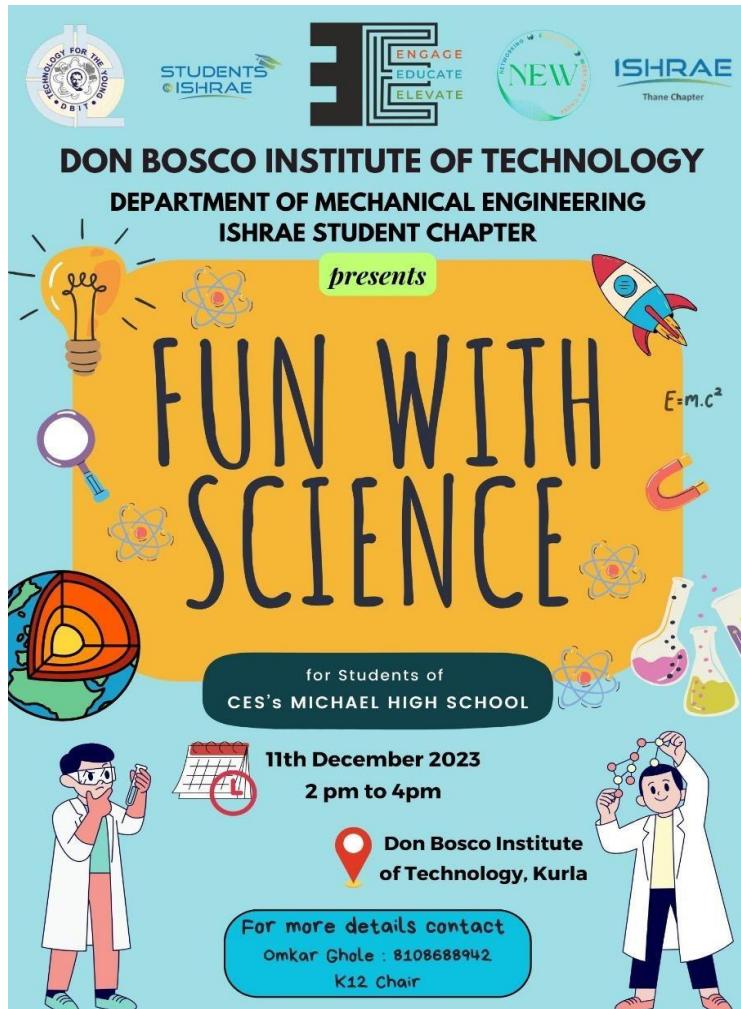
No. of Participants Present: 30

Resource Person: Ms. Samina

Organization of Recourse Person: CES's Michael High School, Kurla

Organizing Department / Committee / Authority: ISHRAE DBIT
Student

Chapter Faculty Coordinator: Prof. Cleta Pereira



Objectives:

- ❖ To encourage students to ask questions, make hypotheses, and engage in the scientific method to develop problem-solving and critical thinking skills.
- ❖ To help students grasp scientific concepts by demonstrating them in a tangible, real-world context.

Detailed Report

Event Overview:

“Fun with Science” took place on 11th December 2023 at 2.00 PM, organized by the ISHRAE DBIT Student Chapter with the guidance of Prof. Cleta Pereira. The event aimed to engage students from CES’s Michael High School, Kurla, in interactive science activities, making learning enjoyable and insightful.

Event Activities:

1st Activity: Capillary Action

- **Presenter:** Vilas Kodam
- Demonstrated capillary action using an experimental setup involving glasses, water, ink, and tissue.
- Explained the significance of capillary action in plants and its application in daily tasks.
- Encouraged student participation and discussions about the observed phenomenon.

2nd Activity: Tyndall Effect

- Presenter: Ankit Kshirsagar
- Conducted an experiment with glasses containing mixtures of saltwater, chalk powder, and milk, illuminated with a LASER.
- Explained the Tyndall Effect, emphasizing light scattering in colloidal suspensions.
- Provided real-life examples and encouraged students to actively engage with the LASER setup.



3rd Activity: Refraction of Light

- **Presenter:** Jaee Hindalekar
- Demonstrated refraction of light using a glass filled with water and a paper with an arrow.
 - Illustrated how the arrow's direction appears reversed when viewed through the water.
 - Promoted discussions on everyday situations exhibiting refraction phenomena.



GPS Map Camera

Mumbai, Maharashtra, India
Don Bosco Institute of Technology, Premier Automobiles road, Kurla (W)
Lat 19.082203°
Long 72.888433°
11/12/23 03:21 PM GMT +05:30

2.15

Title: Automation
Boon or Bane

Date: 11th December
2023

Time: 9:00 AM to
11:00 AM

Venue: CES's Michael High School,
Kurla

Target Audience: Students of St.
Michael school

No. of Participants Present: 30

Resource Person: Ms. Samina

Organization of Recourse Person: CES's Michael High School, Kurla

Organizing Department / Committee / Authority: ISHRAE DBIT

Student Chapter Faculty Coordinator: Prof. Cleta Pereira



STUDENTS
@ISHRAE



ISHRAE
Thane Chapter

DON BOSCO INSTITUTE OF TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING
ISHRAE STUDENT CHAPTER
PRESENTS

K-12 ACTIVITY

FOR STUDENTS OF
MICHAEL SCHOOL KURLA

“AUTOMATION BOON OR BANE”



CES's MICHAEL
HIGH SCHOOL

II December, 2023
9am -11am

FOR MORE DETAILS CONTACT
OMKAR GHOLE : 8108688942
K12 CHAIR



Objectives:

- ❖ Efficiency and Productivity
- ❖ Innovation and Technological Advancement
- ❖ Job Displacement vs. Job Creation
- ❖ Safety and Risk Reduction
- ❖ Economic Growth and Competitiveness

Event Activities:

****Activity: Introduction to Automation****

- **Presenter:** Jaee Hindalekar (Women in ISHRAE)
- Introduced students to the concept of automation, emphasizing its role in performing repetitive tasks with minimal human intervention.
- Provided examples of automation in daily life, such as automatic doors, washing machines, and manufacturing plants.
- Explained the mechanisms behind automation, including programming machines, the use of sensors, and the integration of computer systems

.



Movie Screening:

- A diverse selection of movies, from science fiction classics to documentaries, was chosen to showcase both fictional and real-life examples of automation.
- The movies sparked discussions on ethical dilemmas related to AI, the impact of automation on industries, and its transformative effect on the workforce.
- Interactive discussions followed each movie screening, encouraging students to reflect on the benefits and challenges of automation, its potential impact on jobs, and ethical considerations.



****Hands-on Activities:****

- Small-group tasks were designed for students to simulate automated processes using simple props.
- Basic programming sequences were introduced to provide a practical understanding of how automation functions.
- The hands-on activities complemented the movie screenings, reinforcing key concepts in an interactive manner.

2.16

Title: Creative Thinking and Innovations

Date: 12th December 2023

Time: 1.30 pm to 4.30 pm

Venue: Don Bosco Institute of Technology, Kurla

Target Audience: Students of CES's Michael High School, Kurla

No. of Participants Present: 30

Resource Person: Ms. Samina

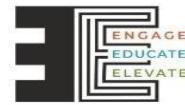
Organization of Recourse Person: CES's Michael High School, Kurla

Organizing Department / Committee / Authority: ISHRAE DBIT Student Chapter

Faculty Coordinator: Prof. Cleta Pereira



STUDENTS @ ISHRAE



ISHRAE

Thane Chapter

**DON BOSCO INSTITUTE OF TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING
ISHRAE STUDENT CHAPTER**

PRESENTS

K-12 ACTIVITY
CREATIVE THINKING
AND
INNOVATIONS

FOR STUDENTS OF
CES'S MICHAEL HIGH SCHOOL



12TH DECEMBER 2023
11:00 AM - 1:00 PM



**DON BOSCO INSTITUTE OF
TECHNOLOGY, KURLA**

FOR MORE DETAILS CONTACT

OMKAR GHOLE : 8108688942

KI2 CHAIR

Objectives:

- ❖ Encourage imaginative thinking.
- ❖ Develop problem-solving abilities.
- ❖ Build spatial awareness as kids visualize and assemble

Detailed Report

Event Activities:

****Interactive Discussion:****

- **Facilitator:** Prof. Cleta Pereira
- Engaged students in an interactive discussion to create a comfortable learning environment.
- Introduced the concept of creative thinking and innovations, explaining their significance.
- Set the stage for the upcoming hands-on activities with LEGO and mechanic models.



****Building Models:****

- Provided students with kits containing LEGO and mechanic model components.
- Instructed students to construct models based on designs provided in a reference book.
- Students actively participated in the building process, gaining hands-on experience.
- Completed models within the first hour, showcasing the importance of creativity.



****Creativity and Innovation Session:****

- Emphasized the concept of modifications and personalization to the built models.
- Encouraged students to think creatively and make modifications to their models.
- Students engaged in the process of rebuilding and enhancing their models.
- Prof. Cleta Pereira highlighted the significance of inserting personal creativity into the models.

2.17

Title: Eco-Friendly
Crafting

Date: 14th December
2023

Time: 10:00 AM to
12:00 PM

Venue: Don Bosco Institute of Technology, Kurla

Target Audience: Students of CES's Michael High
School, Kurla

No. of Participants Present: 30

Resource Person: Ms. Samina

Organization of Recourse Person: CES's Michael High School, Kurla

Organizing Department / Committee / Authority: ISHRAE DBIT
Student Chapter

Faculty Coordinator: Prof. Cleta Pereira



Objectives:

- ❖ Use Recycled Materials: Choose materials like recycled paper, cardboard, glass, or fabric for your crafts. Repurpose items like old magazines, newspapers, or packaging materials.
- ❖ Upcycling: Repurpose items that might otherwise be discarded, like glass jars, plastic bottles, or old clothing, into new and useful items.
- ❖ Minimal Packaging: Use minimal or no packaging in your crafts. Consider using reusable or biodegradable packaging materials if needed.

Detailed Report

Event Activities:

Introduction by Vilas Kodam:

- **Facilitator:** Vilas Kodam (Co K12 Chair)
- Highlighted the necessity of eco-friendly crafting for waste management.
- Initiated a discussion about students' prior knowledge of the term "Eco-Friendly."
- Introduced the K12 team and outlined the topics to be covered in the activity.

Eco-Friendly Crafting Workshop:

- **Facilitator:** Prof. Cleta Pereira
- Advocated for the integration of reusable materials into creative projects.

- Emphasized the importance of reducing waste and minimizing the exploitation of natural resources.
- Demonstrated how eco-friendly crafting can be aesthetically pleasing and environmentally responsible.
- Illustrated the versatility of reusable materials through real-life designs.
- Provided participants with old newspapers, scissors, and ice cream sticks for crafting.



Crafting Process:

- Participants were encouraged to explore the versatility of old newspapers, often considered disposable.
- Utilizing techniques like rolling, folding, and weaving, newspapers were transformed into colorful, textured elements.
- Ice cream sticks, typically discarded after initial use, were repurposed as structural components.
- Participants learned to assemble and combine these materials to create functional objects and art.

