REPORT

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

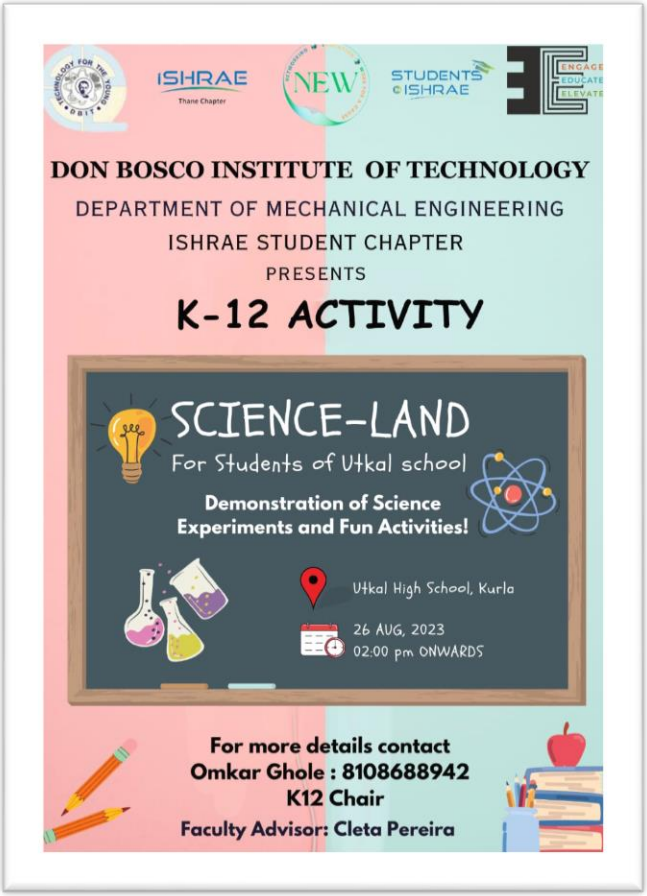
Activity Mode: Offline

Number of ISHRAE Attendees: 6

Number of Faculty: 2

Number of Participated Students: 20

Poster/Flyer:



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 experiments.

Description:

"Science Land", a K12 activity was held on 26th August 2023 at 2.00 PM. The activity was conducted by ISHRAE DBIT Student Chapter and ISHRAE faculty Advisor, Prof. Cleta Pereira. The activity was conducted offline with the students of Utkal school, Kurla (West). The activities performed by the council members was a great example of fun, plus the knowledge gained was appraised to be helpful for the school-going children, which may help students to find their interest in the field of science and to overcome their fear of science. So, to make the event more appealing and to grab the attention of small children, we – the student council of ISHRAE DBIT Chapter – came up with a thought-provoking idea of experiments related to science.

We kept two sessions of 30 minutes each and our council members performed and explained the planned physical experiments as below:

First session held by JAEE HINDALEKAR (Women in ISHRAE)

Concept of Pressure

Jaee Hindalekar interacted with students asking them the terms and definition of pressure. Students answered enthusiastically what they know about pressure. Further she explained the definition of pressure and how it acts. The force acting on a unit area of a surface is called pressure. It acts perpendicular to the surface on which pressure is exerted.

Pressure= force/area on which it acts.

Lesser the area, greater is the force, is the concept which is used to show students how it works. Omkar Ghole and Vilas Kodam (K-12 Team) arranged the prerequisites and items required for experiment: Set of paper pins fixed on cardboard, inflated balloons.

Following procedure followed by Jaee Hindaleker to conduct the experiment.

1: Took a balloon and placed it on single paper pin. As soon as balloon was placed on pin the balloon got burst. Which made the students experience that during less area of pin less pressure required due to which balloon burst.

2: Took a set of paper pins mounted on cardboard and placed balloon on it. Balloon did not burst easily on the surface of multiple pins. It made to apply more pressure on balloon to get burst. Which made the students experience that more pressure required when area is more.

Some students were called on stage to conduct the same experiment and experience the pressure application required in both cases.
Learning objective: students were able to know about pressure is depended on area of force application.

Second session held by VILAS KODAM (K12 Chair)
Movement of water molecules at different temperatures
Vilas Kodam interacted with students and asked some questions regarding the knowledge of molecules in substances. He explained students the position of molecules in different states of substances as when the temperature increases, the kinetic energy of the molecules also increases.
1. Filled three transparent glasses with normal water, hot water and cold water in each.
2. Put a drop of ink in normal water. The ink spread in water was not fast and not slow as well.
3. Put a drop of ink in hot water. Ink mixed in water instantly.
4. Put a drop of ink in cold water. Ink layer formed on top of water and started going bottom of glass steady and slowly.
Vilas explained the conclusion as in the hot water the molecules diffuse faster than they are in cold water The spreading of ink takes place due to the movement of water molecules Molecules in a gas have lots of energy and spread out even more than molecules in a liquid. Warm water has more energy than cold water, which means that molecules in warm water move faster than molecules in cold water. More examples and applications were also explained to students such as the food coloring add to the water is pushed around by the water molecules, tea powder while making tea.

Later, as a fun activity Treasure hunt was played in groups among students in seminar hall, the questions and its solution was made on general knowledge questions.

Therefore, the motive of making the students aware of areas like pressure and its application as per area of force, motion of molecules under different temperature of water was explained. Also, the members of ISHRAE student chapter got an opportunity to organize and manage a creative event for small children. The members participating were Simran Ahiwale, Omkar Ghole, Sahil Jadhav,Vilas Kodam, Jaee Hindalekar and Pranav Bhatkar. Active participation of students and team work of the student chapter members made this session a huge success.

DOCUMENT TITLE: Report of K-12 Activity No.2 Science Experiments conducted on 26th August,2023		
Issue Date: 29 August 2023	Revision No: 1	Issue No: 1

A group photo of the students with the ISHRAE Council.

Event Screenshots/Photos:

Prepared by:	Vilas Kodam	Approved by:	Prof. Cleta Pereira
Checked by:	Simran Ahiwale		

Organizing Dept/Committee and its Members: Mechanical Dept-
ISHRAE DBIT and faculty advisor Prof, Cleta Pereira with Student Chapter Members :

ISHRAE Attendees:

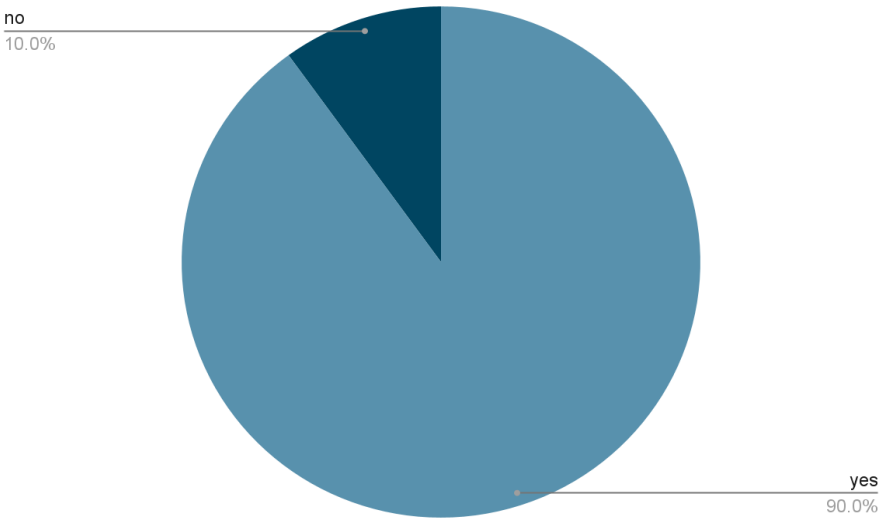
Sr. No.	Name	Position
1	Simran Ahiwale	President
2	Omkar Ghole	K12 Head
3	Sahil Jadhav	Secretary
4	Vilas Kodam	K12 Chair
5	Jaee Hindalekar	Woman in ISHRAE
6	Pranav Bhatkar	

EXPENSE SHEET:

Sr. No.	Item	Quantity	Price (₹)
1	Balloons	1 Packet	50
2	Cardboard	2 Pcs	50
3	Paper pins	25 Pcs	100
4	Transparent Glass	3 Pcs	50
5	Ink	1 bottle	50
TOTAL			300

Feedback from participants:

Did you enjoy the event?



Want more events to be conducted like this?