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PRESS RELEASE

IIT (ISM) Dhanbad Drives STEM Education for KGBV Jharia Students Using Innovative Training Methods and Experiential Learning

IIT (ISM) Dhanbad today conducted a day-long STEM (Science, Technology, Engineering and Mathematics) outreach and motivation programme at **Kasturba Gandhi Balika Vidyalaya (KGBV), Jharia, Dhanbad** for around 250 students and teachers from Classes IX, X and XII. Organised under a CSR initiative of Bharat Coking Coal Limited (BCCL), the programme focused on children of Project Affected Persons (PAP) and aimed at fostering scientific temper, enhancing conceptual understanding and building analytical skills through innovative, hands-on learning methods.

The programme was led by Prof. Rashmi Singh, Programme Coordinator, and Prof. Niladri Das, Programme Co-Coordinator, from the Department of Management Studies and Industrial Engineering, IIT (ISM) Dhanbad. Senior BCCL officials including Shri Murlu Krishna Ramaiah, Director (HR), Shri Surendra Bhushan, General Manager (CSR), along with the CSR team led by Kumar Manoj, General Manager (CSR), and Shri Abhijeet Mitra, CSR Manager, were also present during the session.

The core highlight of the programme was its **training methodology**, which integrated visual, logical and experimental learning approaches to make science engaging and relatable. A series of simple yet impactful experiments—such as Balloon Blow-Up, Candle Water Rising, Turmeric Indicator, Elephant Toothpaste and Lava Lamp—were demonstrated to explain fundamental scientific principles. These activities enabled students to understand concepts like gas formation, air pressure, oxygen consumption, chemical reactions, pH indicators, density differences and fluid motion through real-life applications.

Prof. Rashmi Singh emphasised that “learning science becomes more effective when students can see, think and experiment,” underlining the importance of experiential learning in improving comprehension. Prof. Niladri Das noted that such initiatives play a crucial role in nurturing curiosity and equipping students with the skills needed for higher education and careers in STEM fields.

School Principal Sunita Shaw and faculty members appreciated the initiative, stating that such interactive sessions significantly enhance students’ interest and confidence in science.

The programme builds on similar recent STEM outreach sessions conducted by IIT (ISM) Dhanbad at DPLMA High School, Nawagarh, reflecting a sustained effort to expand scientific learning in coalfield regions.

This initiative is part of an ongoing collaboration between IIT (ISM) Dhanbad and BCCL, with more such programmes planned across the region to promote inclusive, practical and future-ready education

Rajni Singh
Dean (Corporate Communications)