

Nanritam's Filix School of Education initiates learning science through classroom experiments in partnership with IAPT Centre for Scientific Culture, Midnapore College under the aegis of Education for All (EFA) program.

Science and STEM Education is one of the strongest points of Filix School's pedagogy. Inspired by the teaching and philosophy of Swami Vivekananda, Filix School of Education has also embarked on a journey to embrace and accommodate the schools, teachers and children outside their campus to build a common platform, named Education for All (**EFA**). The objective and purpose of this platform is to share all education related research work, pedagogy, content and so forth with the broader community for collective growth with best-in-class education quality.

To initiate that foundational science learning initiative, Filix School has partnered with Indian Association of Physics Teachers (**IAPT**) **Centre for Scientific Culture, Midnapore College**. IAPT is a grass-root organization working for the betterment of physics teaching by conducting various programs and activities, throughout the country. A three day long inaugural residential workshop was held in Filix campus during 29th -31st October, 2022. Three prominent science educators of national fame from IAPT conducted the workshop.

Key feature of the workshop was to implement experimental techniques that can be performed in a regular classroom set up, using simple tools, like a ruler, a stone, a bottle, a lens, water, sand, graph papers etc. covering important and even advanced topics of physics.

Through this approach students and teachers experienced how a regular classroom can be converted to an effective powerful laboratory with simple means; they have also learned the essential features of studying science methodically: that is how to take repetitive unbiased measurements, tabulate data meticulously, express experimental results in graphical format, analyze, extract, validate information mathematically and draw conclusion.

The pedagogy of Active Teaching Learning Process (ATLP) was used where every problem was introduced by sensitizing the learners about the diverse learning outcomes of an experiment, and they were asked to achieve them and in every stage relate the intimate connection between physics and mathematics. The teachers were supposed to act as facilitators. The teaching-learning transaction was supposed to be ACTIVE, not a passive one-way flow from a teacher to the students.

Filix School was fortunate to have three extraordinary personalities to guide and conduct this important workshop. These eminent personalities have not only achieved the highest level possible in their academic and teaching credentials, these thought leaders have also dedicated a major part of their life to passionately champion science education at the grassroots throughout the country.

Prof. Birendranath Das, Former Professor of Physics in Presidency College, Vidyasagar College and Thakurpukur Vivekananda College, Kolkata. He has been a pioneering science communicator at the national level.

Prof. Subhash Samanta, Former Professor of Physics, Midnapore College and All India General Secretary of IAPT for three years and the Founding Secretary of the IAPT Centre for Scientific Culture, Midnapore College

Dr. Chinmoy Kumar Ghosh, Former Director, National Centre for Innovations in Distance Education, Indira Gandhi National Open University (IGNOU), who had also taught Physics for eight years at Scottish Church College, Kolkata and had been a Consultant, Teaching Learning Center, CET, IIT, Kharagpur

Fifty four students (15 girls and 39 boys) from Standard IX and X and 19 science teachers from Filix and another nine schools from Purulia district participated in the workshop. (*List of schools attached*)

List of participating schools

1. Filix School of Education, Para, Purulia
2. P. K Raj Bhagini Nivedita Vidyapith, Kadshipur, Purulia
3. Golagara Pathmandir, Puncha, Purulia
4. Ramkrishna Sishu Sikhsaniketan, Gopalnagar, Purulia
5. Sishu Bharati Vidya Mandir
6. Kamalpur Netaji High School, Kamalpur, Purulia
7. Munseffdanga High School, Purulia
8. Bari Sosibhurian H.S. School
9. BanKati Primary School (Teacher only)
10. T.D.B. College (Teacher only)