Report: Hands-On Training in Molecular Biology for Grade 12 students from Legacy International School , 28th and 29th October, 2024

On October 28th and 29th, 2024, Grade 12 students from Legacy International School participated in a two-day hands-on workshop in Molecular Biology at Mount Carmel College, Bangalore. This engaging program offered students an exceptional opportunity to bridge theoretical knowledge with practical applications in cutting-edge scientific techniques. The workshop was meticulously designed to introduce students to advanced techniques in Molecular Biology, fostering a deeper understanding of genetic manipulation and analysis. Key highlights included: Genetic Modification and Culturing: Students explored the processes involved in modifying organisms at the genetic level and culturing genetically modified strains, gaining insight into biotechnology's real-world applications.

High-Performance Liquid Chromatography (HPLC): Students delved into the principles and applications of HPLC, a powerful tool used to separate, identify, and quantify compounds.

DNA Profiling Techniques: Participants performed DNA amplification using Polymerase Chain Reaction (PCR) and visualized DNA bands through Agarose Gel Electrophoresis under UV light, learning crucial steps in DNA profiling.

This immersive experience allowed students to connect scientific theory to hands-on practice, igniting curiosity and enthusiasm for STEM fields. By working directly with advanced equipment and methodologies, they gained practical skills and a better appreciation for the role of molecular biology in addressing real-world challenges.

The two-day workshop proved to be a catalyst for inspiring the next generation of scientists, equipping students with essential skills and a passion for discovery. Initiatives like this are vital in shaping future changemakers and fostering a culture of innovation and excellence in education.

Key Highlights:

Hands-on training in genetic modification, HPLC, PCR, and gel electrophoresis.

Bridging theoretical knowledge with practical applications.

Inspiring future scientists and innovators.


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