

## **Mirror**

**Title : Storytelling with science makes students' Sunday**

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### **Eminent scientist Dr Sayan Bagchi spent a part of the day talking to schoolkids about the relationship between atoms, molecules and light**

In an interactive talk session on 'Atoms, Molecules and Light', students from different schools spent a part of their Sunday interacting with eminent scientist Dr Sayan Bagchi.

The talk was organised by The Exciting Science Group (ESG), a volunteer group of scientists from the National Chemical Laboratory (NCL) and the Indian Institute of Science Education and Research (IISER).

“Every object around us is made up of smaller objects, which can be further divided into even smaller particles. However, 'big' and 'small' are relative definitions and can be questioned further. Definition is surface-level understanding, which wouldn't really help students when it comes to applying these concepts. My aim was to discuss the relationship between atoms, molecules and light by giving them different examples from every life,” Bagchi, who completed his doctorate in physical chemistry from the University of Pennsylvania, Philadelphia, and now works in the Physical and Materials Chemistry Division at NCL, told Mirror.

His approach certainly appealed to the students who had gathered for the talk. Vedang Dinesh Phadke, a Class VIII student from Bharatiya Vidya Bhavan, said, “I always wondered how jellyfish emit light. I got the answer on Sunday when Dr Bagchi explained how a light molecule can produce impact on another molecule and produce light through radiation. It was like a storytelling session when the concept of bioluminescence was explained to us.”

Dhruva Ingale, a Class VI student of DAV Public School, said, “I had only heard of light and the concept of photons. But, at the lecture, Dr Bagchi explained these concepts by tracing the history of the journey from Albert Einstein to Arthur Compton to G N Lewis. He also explained how one theory led to another and how assumptions led to theories.”

Vishwesh Patil, another student who attended the lecture, said, “Dr Bagchi asked us if light could be produced with the interaction of two chemicals or molecules. I promptly answered in the negative. But, when he gave the an example of glow sticks which produce light after mixing of two chemicals, my interest was piqued. He went on giving us examples such as fireflies and jellyfish. I've seen pictures of them, but had no idea that they worked on the same principle.”

Phadke added, “I have learnt in school about the relationship between molecules, atoms and light. But, I did not know how one molecule and one light can produce another and that this is called phosphorescence. Neither did I know how one molecule and another molecule can produce light as seen in fireflies. Also, I learnt that two lights can produce a third, and that blue light is formed after mixing two red lights.”

Gayatri Khsirasagar, one of the volunteers from ESG, said, “The primary objective of the talk was to have scientists share the excitement of science with school children, rather than simply teaching them. Their interest was evidently aroused as there was a flood of questions during the post-talk session.”

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**VEDANG DINESH PHADKE,  
A CLASS VIII STUDENT FROM  
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The talk caught students' interest and there were several questions following the talk.