

## Expert Speaks

In conversation with Dr. Subhojit Sen, UM-DAE Centre for Excellence in Basic Sciences, Mumbai



**1) How would you describe your overall experience with the Science Movement? What were some of the major takeaways from the Science Camp organized last December?**

While I was able to interact with the students for only one day, I really enjoyed being a part of the camp. What impressed me was that the students were unafraid to ask questions and they were being encouraged to have an open discussion. That's probably what I liked best about the camp. From my past experience as a student, I was always slightly afraid to ask questions and I had to think twice especially when I raised my doubts to researchers and scientists who were far senior to me.

I thought that the camp enabled students to come out of their shell and helped them to have informative and informal discussions with professors and researchers alike.

**2) What was your lecture about and how do you think the students responded to it?**

My talk was on how the environment affects our genes, particularly the DNA which is the fundamental unit of life, and how it is constantly changing as a function of the environment. The talk was geared to help them think about aspects of Biology that we talk about, such as our diet, ancestors, genes, etc.. I gave them an intro to a rather modern field called epigenetics that has been gaining popularity over the last 2-3 decades. The response from the students was great. I hope they enjoyed it!

**3) How well do you think the camp was organized on the whole? Was it convenient for the students and other participants?**

I must say, the camp almost seemed like a conference organized for the students. The platform provided was really impressive. It



was evident that the organizing team had put in a lot of effort into the Camp and that definitely showed in the preparations. The Q&A after the talks was another highlight for me and the questions posed by the students were great. That session was quite enjoyable I think. Even from the student's point of view, they kept throwing questions at us related to their textbooks, research articles they read and the topics covered in the lectures and demonstrations.

**4) Do you feel that such camps encourage students to take up sciences further in the future?**

The camp was geared to excite them about the ideas in science and how to ask the interesting questions. I believe one aspect where the camp can improve is to discuss the career paths for aspiring researchers. Doctors and engineers seem to get all the attention these days but those fields are not the end all of everything. What pure sciences bring to the table could've been mentioned in an interactive manner. I've actually had a few students writing to me on this matter.

While we have completed our formal education quite a while back, talks by students who are pursuing their masters and Ph.Ds will be more relevant and the school students will probably be able to relate to them a lot better.

**5) Would you be interested in participating in such a camp in the future?**

Yes, definitely I would be interested. Academic scientists can give back to society by participating in efforts that spread knowledge and awareness about the field of science. I would definitely like to be a part of more ventures like this in the future.



## Expert Speaks

In conversation with Prof. Shri Ganesh Prabhu, Tata Institute of Fundamental Research, Mumbai



**1) You were a part the first science camp that was organised in December last year. How would you describe your overall experience being involved in the Science Movement?**

I think it was absolutely grand! It was very well organised and all credit goes to Jyoti Sir. It is a really good initiative. Moreover, the students were also actively participating in the events; they were interested in trying their hands on the demonstrations and that was quite heart-warming. They all wanted to come forward to help us out and understand what we were trying to show them. This is quite uncharacteristic of school students who tend to be shy and reserved.

These kids were intrepid in asking their doubts, I think that their lack of inhibition will help them in their learning process in the future as well. While some people might think it is immature to question what you don't know, asking questions is really the first step in understanding science! All in all I was very impressed, the candidates selected were motivated and that is really necessary for such an endeavour to be a success.

**2) What kind of impact do you think such a camp would have on students? Will it inspire bright students to pursue sciences in the future?**

Yes, definitely! It not only increases their interest but also exposes them to relevant research fields in science today. Bookish knowledge won't get them too excited about the subject. While the students may not fully appreciate what has been covered in the lectures and the demonstrations, they are on the right path to understand what pure sciences are all about. Such camps help them think beyond what they learn in their textbooks and that is crucial for them should they want to pursue science in the future.

**3) How much do you think the students were able to relate to your demonstration and lecture? Was it too difficult for them to follow the concepts covered?**

I talked about electromagnetic waves and they knew the very basics. They were quite well aware of what waves are and they knew enough about it to try and follow what I covered in my lecture. I described pretty advanced topics over the course of the lecture. While these topics were new to them, they paid close attention and I think the key to motivating them was in demonstrating the concepts we talked about with the help of interesting experiments, that kept them engaged and this experiential learning is something they'll take away with them and remember for a long time to come.

**4) What are your thoughts on the overall organisation of the camp? Was it convenient for the speakers and the students to interact outside the scheduled talks and discussions?**

Yes, the organization was fantastic, that is one advantage of having the venue and the accommodation in close proximity, I was always present throughout the camp and even when I didn't have my lecture I could still be involved and that really made it an enriching experience for me. My interactions with the students were also quite thought provoking and I hope they benefited from the conversations they had and got to learn more about their subject of interest with the help of this camp.



## Expert Speaks

Words from Prof. Ajit Mohan Srivastava, Institute of Physics, Bhubaneswar



**W**hen I got to know about this program, I was really happy. I have always been involved in actively promoting Science Outreach Programmes. There have been efforts in Odisha but this is probably the first Camp of its kind that has been held on such a grand scale with the best possible resources and support from the organizers. They have managed to bring together the best and the brightest students in Odisha, invite them for this spectacular camp to inspire them and improve their awareness when it comes to the world of science.

Students' interest is no longer given much importance now-a-days, and herd mentality dictates that a student should pursue Engineering or Medicine. This camp provides students the opportunity to explore their interest, interact with eminent professors from all over the country and truly understand what goes behind modern scientific research. I sincerely hope that these students question their parents should they want their children to pursue a specific field arbitrarily. This exposure will help them have a constructive discussion with their parents when the time comes to decide what's next for them. The students were both bright and curious. I personally had a lot of fun being a part of this camp and interacting with the students in the various discussions held. I am certain that the Science Movement will go a very long way into inspiring students and I wish the organizers all the best for the future.



## Expert Speaks

Words of Mr. Samvit Mahapatra, Studying in the UM-DAE Centre for Excellence in Basic Sciences, Mumbai



**I** have been involved in the Science movement because I feel that students in schools should get an opportunity to understand the importance of scientific curiosity and originality in thinking.

In the present education system I feel that students are not given a glimpse of the how relevant curiosity and originality can be in scientific research. When I first started studying science after school, I was exposed to the research environment where I came across many peers and colleagues who were driven not by materialistic goals but by their curiosity and originality in thinking.

They were passionate about their subject and that to me held great meaning.

I felt that students in schools should also get an opportunity to meet these people and learn whatever they can from all that these researchers have to offer. We have tried to bring in school students and academic researchers to a common platform to interact and take learning beyond what you read in textbooks.

The idea was to give students a basic perspective about science irrespective of what they pursue in the future. We also wanted to impart the message that marks, exams or what's in the certificate aren't everything, and that what really matters is who you are and how you build yourself.

We're trying to set a platform and the support received has been overwhelming more than substantial. That said, I think we have a long way to go ahead.

