



Workshop/Seminar Feedback Form

Workshop Title: Biology Olympiad Exposure Camp

Workshop Date: 09.9.19- 12.9.19

Venue: Homi Bhaba Centre for Science Education

Tata Institute of Fundamental Research, Mankhurd, Mumbai.

Attended by: Ms. Vidhi Oberoi

Resource Person: Prof Anwesh Mazumdar, Prof Rekha Vartak, Prof B.B Nath, Dr. Sasi Kumar Menon, Prof Vijay Singh, Mr. Vikrant Ghanekar, Ms. Harsha Chandwani, Ms. Neha Khan, Ms. Sayali Shelar

Organizer: HBCSE, MUMBAI

Profile of the Resource Person:

Prof Anwesh Mazumdar – National Coordinator, Science Olympiads

Prof Rekha Vartak – Academic Coordinator, Biology Olympiad Programme

Prof B.B Nath – Head, Dept of Zoology, Savitribai Phule Pune University

Prof Vijay Singh – Center for Excellence in Basic Sciences, Mumbai University

Dr. Sasi Kumar Menon – Assistant Director, Therapeutic Drug Monitoring Lab, Mumbai

Prof Anupama Ronad - Coordinator, Biology Olympiad Programme

Mr. Vikrant Ghanekar, Ms. Harsha Chandwani - Biotechnology Lab Resource Coordinators

Ms. Neha Khan, Ms. Sayali Shelar – Molecular Biology Lab Resource Coordinators

Content of the Workshop/Seminar

A four day Workshop was organized for the Biology teachers of Central Schools, Government Schools and Public Schools from different states of India. It was attended by 21 Biology TGTs from different states of India.

DAY- 1 (09.09.19)

Resource Person – Prof Anwesh Mazumdar – National Coordinator, Science Olympiads

Prof Rekha Vartak – Academic Coordinator, Biology Olympiad Program

- The session started with a warm welcome by Prof Rekha Vartak, The Coordinator of Biology . She emphasized on the importance of training for the teachers and the need of workshops to upgrade oneself in present education system. She introduced Prof Anwesh Mazumdar and further asked him to continue the sessions.
- He started with management of stress and its importance in our life. He said that a Major Olympiad Programme in Basic Sciences is operational in the country. The programme aims at promoting excellence in science among Pre University students and selecting teams of students to represent India at the International Olympiads in Astronomy, Biology, Chemistry, Junior Science and Physics.
- He also described in length about International and National level Biology Olympiad. He said that at Initial School Level Exam, Interested students have to pay Rs. 150 and the further three stage selection of the students coupled with two stage training is fully funded by Government of India, DAE, DST, DOS, and MHRD.
- The duration of the School level exam is two hours. Questions are MCQ with negative marking. With 20 students school becomes an exam center. Question papers are delivered and OMR sheets are collected by HBCSE personnel on the day of the exam from exam center.

DAY 2(10.09.19)

Resource Person –Team of Lab Resource Coordinators

- An introductory session of activities and instructions to prepare some innovative activities for classes VI-X in and also in our specialized field. These activities were written and verified later to help us to show to children for better understanding of the subject.
- Highlights were Nucleic Acid Extraction and Agarose Gel Electrophoresis
- Slide Making and Staining of Leaf of a Mangrove Plant, Stem of Beetel
- Activity Based Learning of Classification based on Similarity Matrix
- Evolution of New Species by comparing Animal Behaviour

DAY 3(11.09.19)

Resource Person-Prof B.B Nath – Head, Dept of Zoology, Savitribai Phule Pune University

- He spoke on Topic, Biology Classroom Unplugged and stated with the quote of Theodosius Dobzhansky – “Nothing in Biology makes sense except in the light of evolution.”
- He further emphasized that Biology is a science of Exceptions. Connect your teaching with Evolution of life and Inter relationships amongst organisms and impress upon the students, how we are different from others. Every child is born as a Scientist, We must not kill that curiosity. Use Analogies, Simulations, Models, Live demonstrations, Video Clippings etc and make Biology interesting for all.

Resource Person-Prof Vijay Singh – Center for Excellence in Basic Sciences, Mumbai University

- He presented Inter Disciplinary Character of Science. It was really interesting to know that in 300 BCE Pingala Chansutra explained that Sanskrit sankhya are 2 raised to the power of 8 i.e 256 and this knowledge further became Golden Ratio for Taj Mahal and BMI Scaling Law. He also discussed about length about Demons and how Hagrid like characters as shown in Harry Potter Series can not exist. Every time such huge demon will get up to stand, its thigh bone would break.

DAY 4(12.09.19)

Resource person- Dr. Sasi Kumar Menon – Assistant Director, Therapeutic Drug Monitoring Lab.

- It was an advanced level lecture on Hutchinson Gilford Progeria Syndrome. Case Study of Nihal Bitla , A Progeia Patient who died at an age of 20 was discussed.
- He further explained that Lamin A and C are two structural Proteins important for integrity of Nuclear membrane. Point mutations cause changes in nuclear membrane resulting in to Apoptosis and Faster aging but all this can happen only if modification of mutant Lamin A undergoes Farnesylation. All this led to the discovery of cancer treatment by Chemotherapy by Lonafarnib.

Prof Rekha Vartak – Academic Coordinator, Biology Olympiad Programme

Prof Anupama Ronad - Coordinator, Biology Olympiad Programme

- Discussed at length about the quality of a good question for Biology Olympiad-
 1. It should be attractive to all students, must be attempted by all.
 2. All 4 choices of the answer given should be equally attractive.
 3. Appropriate difficulty level questions should be formed.
 4. Questions should be Analytical, Reasoning, Graph and Data analysis based.
 5. Questions based on Memory should be avoided.

1. Learning outcomes (Knowledge and Information) from the workshop/Seminar?

- Comparative Study of Plant Pigments by Thin Layer Chromatography and Reversed Phase Thin Layer Chromatography – The Role of Chlorophyll in Photosynthesis is equivalent to that of haeme in Mitochondrial Electron Transport.

- Activity Based Learning of Mimicry, camouflage and Natural Selection
- Determination of Enzyme Activity and Numerical Taxonomy.
- Study of Plant Anatomy and its correlation with the habitat.
- Study of animal Behaviour in fish *Betta splendens* and Olfactory Response of *Drosophila melanogaster* Larvae.

2. Which topics or aspects of the workshop/Seminar did you find most interesting or useful and can be applied to the classroom teaching?

- Nucleic Acid Extraction and Agarose Gel Electrophoresis
- Slide Making and Staining of Leaf of a Mangrove Plant, Stem of Beetel
- Activity Based Learning of Classification based on Similarity Matrix
- Create enabling environments and supportive communities for healthy behavior.

3. How will you implement the knowledge & techniques acquired to your subject?

- Implement Information & Communication Technology in education
- Promote Hands On and Activity Based Learning
- Involve students, teachers and other school staff in developing a vision, goals and objectives for good overall development of Students.

4. Comments and suggestions (How do you think the workshop/Seminar could have been made more effective?)

It was a very well designed, comprehensive and informative enriching experience.

5. Was the advance briefing about the workshop/Seminar appropriate? YES

GENERAL FEEDBACK	YES	NO	NOT SURE
• The workshop/Seminar was applicable to my job	• <input type="radio"/>	• <input type="radio"/>	• <input type="radio"/>
• I will recommend this workshop/Seminar for other faculty members.	• <input type="radio"/>	• <input type="radio"/>	• <input type="radio"/>
• The program was well paced within the allotted time	• <input type="radio"/>	• <input type="radio"/>	• <input type="radio"/>
• The material was presented in an organized manner	• <input type="radio"/>	• <input type="radio"/>	• <input type="radio"/>
• The resource person was a good communicator	• <input type="radio"/>	• <input type="radio"/>	• <input type="radio"/>
• The resource person was knowledgeable on the topic	• <input type="radio"/>	• <input type="radio"/>	• <input type="radio"/>
• I would be interested in attending a follow-up, more advanced workshop / Seminar on this same subject	• <input type="radio"/>	• <input type="radio"/>	• <input type="radio"/>
• I will be able to conduct follow up workshop for the benefit of fellow Staff Members	• <input type="radio"/>	• <input type="radio"/>	• <input type="radio"/>

GLIMPSES FROM THE WORKSHOP (Photographs with captions)



Homi Bhabha Center Of Science Education



Participants with Dr. S.K Menon



Discussing innovative strategies



Receiving Certificate From HBCSE

Report submitted by

Signature

Name – Ms. Vidhi Oberoi

Designation - TGT

Submission Date – 15. 09. 2019