

BIRLA वृत्तांत

#BirlaCollegeNewsletter

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Birla College, Kalyan

Bioenergy the need of Time

Department of Botany organize a special lecture on '*Bioenergy*' **10th Norkett, Chopra, Gangulee and Udar Memorial Lecture** on Thursday, the 5th April, 2018 at 10.30 am. Prof. Arvind M. Lali, Head, Centre of Energy Biosciences, Institute of Chemical Technology, Mumbai talked on '*Bioenergy*' and topics like sustainable energy, Biofuels from Agricultural waste and its production. He also gave information about ongoing research projects in the same field and the research facilities available in the ICT, Mumbai.

Teachers Colleagues, Research Students and M. Sc. Students from Department of Botany / Biotechnology / Life Sciences from various Colleges have attended the Programme. More than 150 students were present for this special lecture

Faculty Enrichment Program

‘National Seminar on e-Learning and MOOCs in Higher Education’

B. K. Birla College of Arts, Science and Commerce, Kalyan organized ‘National Seminar on e-Learning and MOOCs in Higher Education’ on 7th April 2018 jointly with Guru Angad Dev Teaching Learning Centre (GAD-TLC) SGTB Khalsa College, University of Delhi A Centre of MHRD under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) scheme of MHRD .

Following resource persons delivered session on the same

- **Dr Vimal Rarh**, Joint Director, **Guru Angad Dev Teaching Learning Centre of MHRD**, Govt of India and Deputy Director, **Centre for e-Learning**, SGTB Khalsa College and a senior Chemistry Faculty at SGTB Khalsa College, University of Delhi
- **Dr. (Ms.) Kumud Sharma**, Department of Hindi, University of Delhi

This seminar aims to create awareness about the following aspects:

- MOOCs, their basic philosophy with a focus on their potential to change the face of Higher education in India.
- Development and Quality of MOOCs.
- SWAYAM portal and different types of learners
- Role of Teachers in MOOCs
- About the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching scheme of MHRD, Govt. of India and how teachers can benefit from it.
- Changing roles of Teachers in technology driven Higher Education

Indian Higher education is undergoing enormous amount of transformation and one of the main reasons is the impact of technology on the process of teaching and learning as well as assessments. e-Learning and Blended learning are becoming buzz words. One of such major technological integration is through MOOCs. MOOC is an acronym, which stands for Massive Open Online Courses.

Approx. 110 faculty members participated in this seminar, 67 faculty members were from institution in an around Mumbai.

Science is about more fun with “Wonders of Basic Science”

A Summer School on the 'Wonders of Basic Science' was conducted from 16th April 2018 to 21st April 2018 by the Department of Biological Sciences. Total 48 students from various schools in Kalyan, like B.K. Birla Public School, St. Thomas High School, Holy Cross High School, Vani Vidyalaya, Mahavir Jain High School etc. participated in the workshop. The program was arranged to encourage school students about the basic facts of Science and Research.

1. Workshop on Biocomposting

Under the event of Summer Camp for school students, organized by Departments of Biological Sciences, a “**Workshop on Biocomposting**” was organized on 16th April 2018. Total 45 students from various schools in Kalyan participated in the workshop. The workshop started at around 1.30 pm. The workshop was conducted in two sessions as follows:

Session I: Lecture on ‘Biocomposting and its importance’.

Speaker: Dr. Sonal Tawde

Venue: Biotechnology Laboratory, IT building, 3rd floor.

Time: 1.30 pm to 2.00 pm.

Session II: Practical on Biocomposting

Venue: Biotechnology Laboratory, IT building, 3rd floor.

Time: 2.00 pm to 3.00 pm.

In the first session, Biocomposting process was explained to the students. The technical aspects of segregation of waste, biocomposting and growing of plants were explained by Dr. Sonal Tawde. After the first session, students were directed to prepare Biocomposting bins by Dr. Sonal Tawde along with student volunteers from Department of Environmental Sciences.

The Biocomposting bins were made by adding layers of bricks, bagasse, dry leaves waste with top layer of waste vegetable parts and fruit peels in used plastic bins and bottles. The vegetable and fruit peels which are generated at home everyday can be introduced on a daily basis in the bin. The bioculture which was (prepared by students of M.Sc. Environmental

Sciences) can be spread on this waste intermittently. The waste then gets converted into a very good organic fertilizer for the plants grown at home or garden.

The ready compost black in color which is already being prepared in the Department of Environmental Sciences was shown to the students. The overall experience of the day was very enriching for the students. At the end, all the students were happy after learning this ecofriendly process of taking care of kitchen waste.



Presentation on Biocomposting



Preparing Biocomposting Bin

2. Mathemagic

A math based activity was conducted on day one by Ms. Shruti Shah. This activity intended to develop interest in the subject by making kids learn simple and easier tricks to solve some complex calculations. The kids were taught different methods of multiplication and division, tricks to calculate simple interest and compound interest, tricks to write table of any number between 1-100 and much more. The kids were made to solve some puzzles to make session interesting.

All the tricks and methods were equally appreciated by all the grades. It was nice to see curiosity and enthusiasm of students to learn all the techniques.

4 Bottle Garden

As a part of this summer school a workshop on designing of 'Bottle garden' was conducted on 17th April 2018. During this workshop students were given brief information about the technique of designing and making Bottle garden and its maintenance. Hands on training was given to the students for the same. 45 students from various schools of Kalyan were participated in the workshop.

Bottle garden or terrarium is a glass container in which plants are grown. Plants are grown inside the bottle with little or no exposure to the outside environment. 'Bottle Garden' are commonly used as a form of decoration or substitute garden in little indoor space. It is easy to create and maintain. It is used in schools as an economic way to study miniature ecosystem within the confines of a classroom.



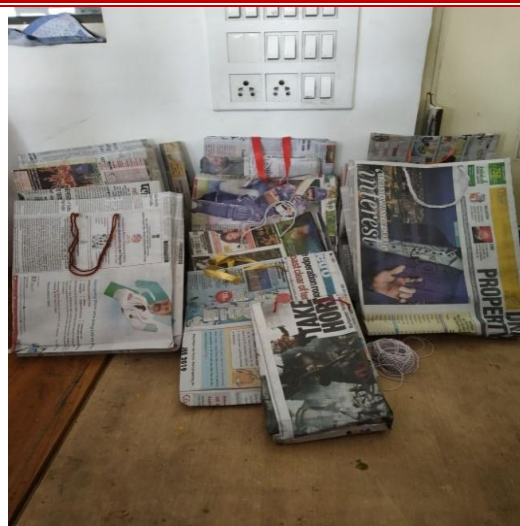
5 Workshop on 'Paper Bags Making'

A Workshop on 'Paper Bags Making' was organized on Wednesday, 18th April 2018 as an activity under Summer Camp. Total 36 students from various schools were present for the workshop. All students were asked to bring newspapers, string and fevicol. Ms. Vandana Gupta, Assistant Professor, Department of Environmental Sciences conducted the workshop. The consequences of using plastic bags and its impacts on the environment were explained to the students. The explanation was followed by demonstration of making of paper bags using newspapers. After demonstration, all students were taught to make paper bags individually.

The students were very excited and participated actively to make paper bags which they carried along with them. Suggestions were given to them regarding how to make paper bags more artistic. At the end students were satisfied and happy with the workshop.



Demonstration of Bag Making



Paper Bags prepared by students

3. Plant tissue culture workshop

A Plant Tissue Culture session was carried out by Dr. Shivani Kakkar on the 19th April 2018. The students were explained in a power point presentation what is PTC, the benefits and the techniques carried out in PTC. They were shown the media and how it is prepared. They were also showed the working of a Laminar Air Flow. They were shown how the tubes are kept after inoculation. Each student was taught how to carry out seed inoculation and individual hands on experience was given to them. The students carried out seed inoculation and incubated their tubes in the culture room. The students were shown callus formations also. All the students enjoyed working in a LAF wearing a lab coat, mask and cap.



Student performing experiment on Plant Tissue Culture



Workshop on Plant Tissue Culture

4. Magic of Microbial World

A Session on 'Magic of Living World' was conducted by Dr. Sonali Patil. This session was organized to introduce the interesting facts of living organisms. The five Kingdom classification was taught to the students wherein each kingdom were briefed with examples. The cellular organization of living organisms was also explained.

As the students would know the Plants and Animals as living organisms and other three kingdoms are not known to them with examples, the session has create curiosity among the students to see the sections under microscope as well as to study their characteristics.

The first kingdoms which includes Bacteria, was explained by showing growth of Air, water, Skin and oral (Mouth) flora on media. The students were given cotton swab and told to collect the flora of skin, mouth and water which were then spread on the media. Next day after incubation, the students were amazed to see the colonies from the given sample. Some of the organisms were already plated and their pigmentation and their uses were explained to them.

The second and third Kingdom – Protista and Fungi were explained by mounting the slides of Paramecium and Penicillium.

The forth kingdom – Plantae was taught by showing the slides of T. S. of organs like leaf, stem and root of plants.

And the fifth kingdom – Animalia was introduced by Dr. Kranti Ozarkar, Assistant Professor, Dept. of Zoology. The Kingdom was explained with different phylums with the examples of each. Vertebrates and invertebrates were explained by showing slides and specimens.

The overall experience of the day was very enriching for the students and they learnt the lessons of beauty and importance of all living organisms and ways and means by which they can be identified.



5. Biomolecules

A session on Biomolecules was arranged on the last day of the summer school by Dr. Annika Durve Gupta. A power point presentation was given explaining the various biomolecules and their role in being healthy. A practical session was arranged to detect the presence of Sugars, Proteins and Lipids in samples provided. The students were divided into groups where they were given chemicals to carry out the tests. The students were thrilled to mix chemicals and see the colour changes to detect the positive or negative results. DNA extraction from Banana was carried out where the students carried out the extractions. A very interactive and fun filled session where the students enjoyed playing with chemicals.



Students performing experiments in Workshop on Biomolecules

