

SASTRAJALAKAM

THREE DAYS SCIENCE CAMP AT SREE SANKARA COLLEGE, KALADY

23RD TO 25TH NOVEMBER 2018

**Organized by State Institute of Educational Technology and General Education
Department, Government of Kerala**

REPORT

In association with General Education department and State Institute for Educational Technology (SIET), Sree Sankara College successfully organized a three days Science Camp named “Sasthrajalakam”, at the campus. The event was coordinated under the directions of college IQAC. Forty three selected students of 9th standard, from various Government and government aided colleges in Ernakulam district actively participated in this camp. 43 students including 26 boys and 17 girls from 19 schools participated in the camp. The camp was envisaged to enhance the scientific aptitude in students and to motivate them for pursuing higher studies and career in pure science.

Sasthrajalakam at Sree Sankara College was inaugurated by the honourable Ernakulam district collector Sri. Mohammed Safirulla IAS on 23rd November in a function presided by the college principal, Sri. Sambhu Nampoothiri N. Noted science writer and retired teacher, Prof. S. Sivadas delivered the keynote address and the meeting was felicitated by the Panchayath President Smt. K. Tulasi, Management representative Dr. Jacob George and Science Club Coordinator Dr. Minimol K. C. The College IQAC coordinator Dr. S. Mohan rendered the vote of thanks.

Day I Inaugural Session



Inauguration by the Hon. Ernakulam district collector Sri. Mohammed Safirulla IAS



District Collector addressing the gathering



Noted Science writer and teacher Prof. S. Sivadas delivering the keynote address



The participants and organizers with the guests

During the three days camp, the students could listen to classes in Basic and Applied Sciences (Physics, Chemistry and Biology), handled by experts and got opportunities to do hands on experiments in the laboratories of these departments in the college. They also got familiarized to various research laboratories associated with the above departments. The students were involved in various activities and projects, such as paper bag making, paper pen making, etc. organized by the Bhoomitrasena club of the college. The Science club of the college arranged a science exhibition for the participants, which was well received. The students could also interact with eminent academicians and scientists.

The students were served with sumptuous meals and snacks by the whole hearted cooperation from the college canteen. The stay was arranged at Divyakarunyasramam, Thannippuzha, Okkal about 3 kms from the college campus and bus was arranged for the safe and comfortable transportation of the students. Three male teachers and three female teachers including the coordinator stayed with the boys and the girls students, respectively.

The participants were given the camp certificates by the honourable Vice Chancellor of Mahatma Gandhi University, Dr. Sabu Thomas during the concluding session on 25th November. The Vice Chancellor had a long and motivating interactive session with the participants and cleared their scientific doubts with much enthusiasm. The programme ended with National Anthem and the students went back to their homes with a happy, motivated and satisfied self.

The detailed report of various activities is presented below.

DAY I PHYSICS – FRIDAY, 23.11.2018

The first session was handled by noted science writer and motivator Prof. S. Sivadas who talked on “*Sasthrapadanam Engane Rasakaramaakkaam?*” (How to make the learning of Science interesting?). He articulated very clearly and jovially to students on how to make the learning of science a fun through interesting anecdotes. He joined the students in visiting the science exhibition arranged by the college Science Club under the supervision of the Science Club Coordinator Dr. Minimol K. C. The students enjoyed the exhibits and asked the volunteers questions on various displays.

Later on, Dr. Sobhen C. S., Associate Professor in Physics retired from Maharajas College, Ernakulam talked about the Physics in daily life (“*Bhouthikasasthram Nityajeevithathi!*”) and had an interactive session with the participants to clear their doubts in Physics.

Afterwards the students visited the Physics laboratory and had experience with some experiments. The various experiments which were arranged are:

1. Simple Pendulum – period and g
2. Surface Tension – capillary Rise
3. Refractive Index of Liquid – Spectrometer-hollow prism
4. Resistivity of a wire – Ohms law
5. Rigidity modulus of material – Static Torsion
6. Frequency of ac – Using CRO
7. Electric circuits and field – Tangent Galvanometer
8. Light and Optics – Laser Diffraction

In the evening, representatives of Astronomical Society of Kerala (ASK), Dr. Tharanath R. (Asst. Professor in Physics, Aquinas College, Edakochi) and Dr. Nijo Varghese (Asst. Professor in Physics, Sacred Heart College Chalakkudy) gave a special session on observational Astronomy and explained how skywatching could be done using the software “Stellarium”. Since the sky was cloudy, sky-watching could not be done live as planned earlier.



The Registration Desk



Prof. S. Sivadas on "Sasthrapadanam Engane Rasakaramaakkaam?"



Students visiting Science exhibition by the Science Club



Prof. Sobhen P. S. talking on “Bhouthikasasthram Nityajeevithathil”



Students at Physics Laboratory



Students at Physics Laboratory



Dr. Tharanath R., on Observational Astronomy



Dr. Nijo Varghese on Sky watching through Stellarium



Food at college canteen



Transportation to Divyakarunyasramam

DAY II BIOLOGY – SATURDAY, 24.11.2018

The second day was tightly scheduled with classes, lab visits, projects and research facilities visits. An hour could be squeezed out for the students to stage their artistic talents and also to have a free walk around the campus and to get acquainted with each other.

In the first session, Dr. Mini K. D. Assistant Professor of the Department of Zoology, Sree Sankara College, Kalady delivered an interactive session on “*Janthusastravismayangal*” (Wonders of Zoology), wherein she talked about the wonderful life thriving around us and how important it is for us to be responsible enough to keep our environment sustainable and survivable. In the second session, Dr. Jee G., Assistant Professor and Head, Dept. of Botany, talked on the methodologies and prospects of Biology, in his lecture “Applied Biology”. Later on, the students visited the Botany laboratory and had some hands-on experiments, as listed below:

1. Paper Chromatography
2. Demonstration of Osmosis
3. Hydrilla Experiments

After lunch they had a training on paper pen making and paper bag making arranged by the volunteers of Bhoomitrasena Club of the college, under the supervision of the Bhoomitrasena Coordinator Dr. Mini K. D. The students also visited the Zoology laboratory and did experiments listed below.

1. Study of Mitotic division using onion root tip
2. Gram Staining
3. Cheek Epithelium Demonstration
4. Blood Grouping
5. Estimation of Dissolved Oxygen

After the lab sessions, the students spent one hour to stage their artistic talents through entertainment programmes. A debate on “Is written exam necessary for academic evaluation?” was also conducted in which students actively aired their views. After tea break, they spent some time at the college playground. Then they proceeded to the research lab of the Department of Microbiology to visit the sophisticated research facilities there, with the help of faculty members.

As the last session of the day, a visit was arranged at the FABLAB of Adi Shankara Institute of Engineering Technology (ASIET), a sister concern, to have a glance on Artificial Intelligence as the latest and emerging contributions of Science to Technology.



Dr. Mini K. D. handling class on “Wonders of Zoology”



Dr. Jee G. handling a lecture on “Applied Biology”



Dr. Ancy Mathew explaining Botany experiments



Zooology Lab Visit by the students



Entertainment Programmes by the participating students



Entertainment Programmes by the participating students



Debate on “Is written exam necessary for evaluation?”



Debate on “Is written exam necessary for evaluation?”



Training on Paper pen and Paper bag making, by Bhoomitrasena club



Participants and teachers at Sree Sankara College garden



Snacks time



Enjoying a break from the tight academic schedule



Visit to the research lab of Microbiology department



An introduction to FABLAB at ASIET



Visit to FABLAB at ASIET

DAY IV CHEMISTRY – SUNDAY, 25.11.2018

On the last day of the three days camp, the students had inspiring sessions on “Rasathantharithinte Aavirbhaavavum Vikaasavum” (Evolution of Chemistry), by Dr. Gireesh, Assistant Professor, Dept. of Chemistry Sree Sankara College and on “Wonders of Nanochemistry”, by Sri. Jerly K. K., The Cochin College, Kochi. Afterwards they visited Chemistry lab and some research facilities of the department too. The list of experiments are given below.

1. Separation techniques using Chromatography
2. Water analysis-hardness, conductivity, pH.
3. Colour changes of KMnO_4
4. Reappearance of organic acid from base solution
5. Borax bead test
6. Viscometry- oswal's viscometer
7. Dissolution through sonication
8. TFM Value of Soap



Dr. Gireesh M. K. talking on Evolution of Chemistry



Sri Jerly K. K. handling class on “Wonders of Nanochemistry”



Students visiting Chemistry Laboratory



Hon. VC of M. G. University as Chief Guest of the Valedictory Function



Valedictory Function



Hon. MG University VC Dr. Sabu Thomas addressing the gathering



Hon. MG University VC Dr. Sabu Thomas interacting with the students



Hon. MG University VC Dr. Sabu Thomas distributing the certificates



Sasthrajalakam Participants with the Vice Chancellor

Towards the evening, the valedictory function was arranged with the honourable Vice Chancellor of Mahatma Gandhi University, Dr. Sabu Thomas as the chief guest. Dr. Jee G. welcomed the gathering. Dr. Sabu Thomas spent almost one and a half hours interacting with

the students. The students felt much motivated by discussing with him not only science and its developments, but also the methods and means to learn science and to pursue their career ambitions. The Vice Chancellor distributed camp certificated to the students. Sasthrajalakam coordinator Dr. Manju T. rendered the vote of thanks. The camp came to an end at 5.00 pm with National Anthem.
