

**STATE INSTITUTE OF EDUCATIONAL TECHNOLOGY
&
NEHRU ARTS & SCIENCE COLLEGE, KANHANGAD**

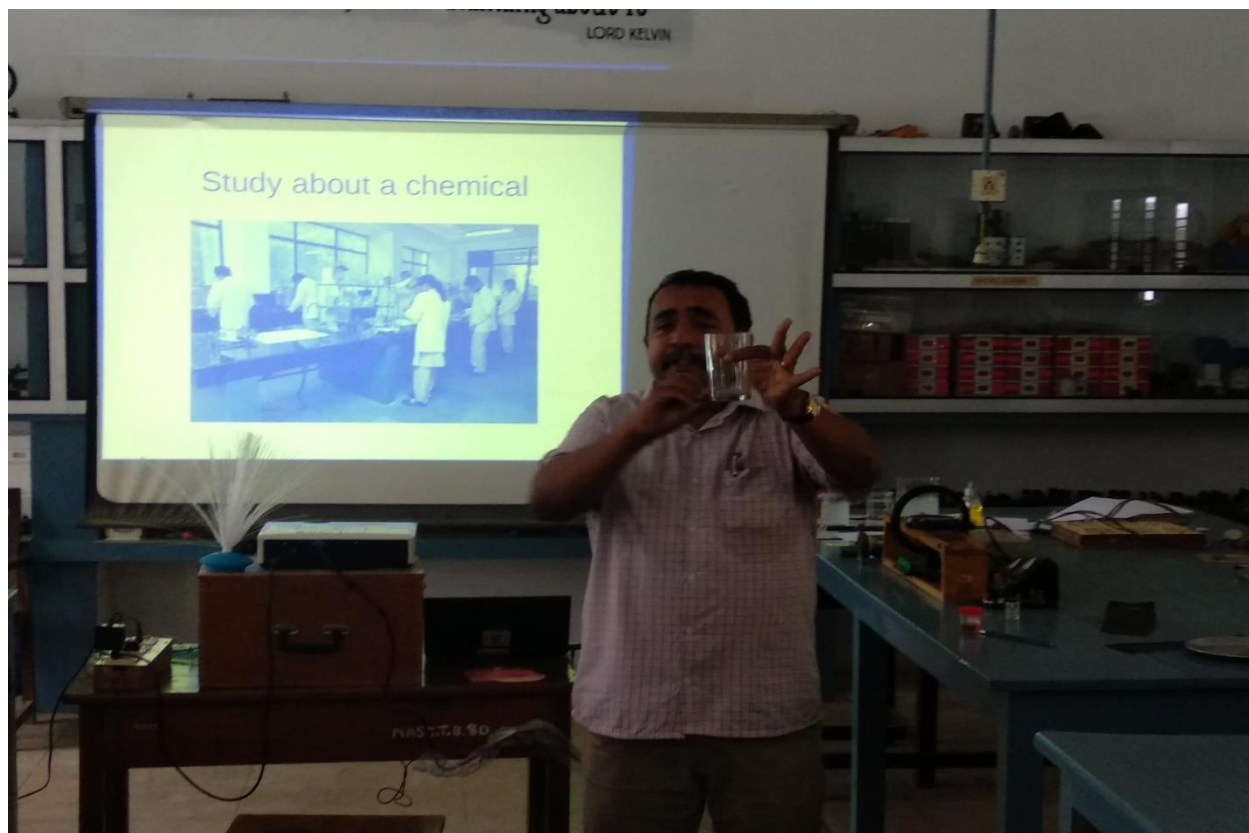
TALENT HUNT

SASTHRAJALAKAM

Batch-II

2018 November 2, 3, 4

NEHRU ARTS & SCIENCE COLLEGE, KANHANGAD



KASARAGOD

REPORT

The sasthrajalakam programme for the second batch students of Kasaragod district was conducted at Nehru Arts & Science College(NASC), Kanhangad on November 2,3 & 4. Out of 53 students selected, 49 were attended the programme. Dr. A. Mohanan, Co-ordinator of sasthrajalakam welcomed the gathering. Dr. T.Vijayan, Principal NASC presided over the function. In his presidential address he pointed out the importance of science in our daily life. Dr.K.M.Sreekumar, Professor, Agricultural College, Padannakad inaugurated the programme. In his inaugural address he explained the development of science in India and he pointed out that lack of scientific awareness is there in most of our actions including in the environmental issues. So this programme is a right platform for the students to make them scientifically enriched. Dr. K.V.Murali, HoD, Dept. of Physics, briefed about the programme. Smt. Pushpa K.V., DEO Kanhangad, Dr. K.Radhakrishnan Nair, HoD, Dept. of Statistics, Dr. T.Dinesh, HoD Mathematics, Dr. N.T.Supriya, HoD, Dept. of Zoology and Smt. N.G.Salini, Asst. Professor, Dept. of Chemistry were felicitated over the function. Dr. K.Mangala, Asst. Professor, Dept. of Chemistry, proposed the vote of thanks. At 10.15am the inaugural session was over and the participants dispersed for tea break.

After tea break the first session was handled by Dr. K.M.Udayanandan, Associate Professor(Retd.), Dept. of Physics, NAS College Kanhangad. Through simple experiments and power point presentation he explained the applications of physics. He conducted so many experiments in the area of optics. Dr. K.V.Murali, HoD, Dept. of Physics delivered a talk on the applications of physics. In simple language he introduced the concept of nanotechnology and the students were highly motivated and interacted with him to clarify their doubts. After this session the students were went for lunch.

In the afternoon students went to the physics lab for observing the physical phenomenon behind the experiments. The M.Sc. Physics students arranged various experiments like carry force bridge to measure the resistivity and spectrometer, an instrument for analyzing the spectra of radiations. The students understood how to measure ray deviations and refractive indices by using a glass-prism spectrometer. Experiments were shown by using laser and. The experiments were conducted to measure the diameter of a capillary tube by using a travelling

microscope. Electric components like resistors, capacitors, semiconductors, diodes were familiarized in the lab. The wave form of electronic signals were displayed by using Cathode ray Oscilloscope.

After a tea break a science based film was shown. With dinner the activity of first day was came to an end.

03/11/2018

Chemistry related talks and experiments were conducted in the second day of the programme. Mr. Rajeesh. P, Assistant Professor, Dept. of Chemistry, was given an excellent talk on the basic aspects of Chemistry. With several simple experiments he made the students to know more about chemistry in elementary and in molecular level. After tea break Smt. Deepthi. P.V. and Dr. K.Mangala, Asst. Professors, Dept. of Chemistry were handled a session on the application of Chemistry. They explained the role of chemistry in the fast growing of the world. They explained the merit and demerit of chemical substances and made the students to comment on how one can reduce the problems related to plastics and pollution.

After lunch break the students were went to the chemistry lab for performing experiments. In the chemistry lab students were introduced common glasswares such as pipette, burette, standard flask, conical flask etc. pH of various solutions were measured using a pH meter and classified them as acidic, basic & neutral. Oxidation reaction of Potassium permanganate(KMnO_4) was explained by titrating KMnO_4 against Mohr's salt in presence of Sulphuric acid(H_2SO_4). Using a viscometer the flow time and viscosity of different liquids were explained. Different flame colouration by alkalimetal chlorides was explained to the students. Alcohol catches fire was easily explained to the students by burning a paper moistened with 1:1 alcohol water mixture. Decomposition of Hydrogen peroxide(H_2O_2) in the presence of Potassium Iodide (KI) was explained by making lather with the help of soap solution. The Carbon dioxide (CO_2) releasing action of Hydrochloric acid (HCl) on ammonium carbonate $[(\text{NH}_4)_2\text{CO}_3]$ was shown with the help of naphthalene balls.

After a short break cultural programmes were conducted. The students performed various items like skit, song and monoact etc.

04/11/2018

The third day biology related talks and experiments were conducted. In the morning session Dr.V.P.Syama, Associate Professor (Retd.), NASC delivered a talk on the basic aspects of biology. She explained phenomenon like evolution, metabolism, ecosystem and Photosynthesis. She also explained the cell structure and function in simple language. The second session was handled by Dr. Sudeep N.M., Post doctoral fellow, Dept. of Biotechnology, Central University of Kerala. He briefly discussed the concepts like Genetics, Microbiology, Biotechnology, Bionics , Molecular Biology. The session was so impressive and the students made good interaction with him.

After tea break the students were split into two groups and placed them in botany & zoology labs. Several interesting experiments were conducted for the students in the botany lab. Mitotic cell division using onion root tip was carried out. In this experiment the students were taught the idea of cell cycle happening in plants and taught them how to prepare specimen for cell cycle and how to analyse various stages of mitosis like prophase, metaphase, anaphase & telophase. The Gram staining of Bacteria was also conducted. By this experiment they have learned gram staining techniques and differentiate between gram positive and gram negative bacteria. Also conducted hydrilla experiment to demonstrate evolution of oxygen during photosynthesis. Moreover students visited the botany museum and observed different specimens algae, bryophytes, pteridophytes, gymnosperms etc.

In the zoology lab the following experiments were conducted. Blood group determination is done by using antiserum A, B and D. The principle and procedure was explained with demonstration. Blood group of some students were determined. Blood cells were observed by preparing thin blood smears and stained with Leishman's stain. Blood cells such as RBC and different type of WBCs were observed. One of the effective separation techniques, paper chromatography was determined. The separation of Amino acids was carried out using this technique. Slides of buccal epithelial cells were prepared by using Toluidine blue stain. Students observed the cells. The students were visited the zoology museum. Theory of evolution was explained by showing different specimens. Different preservation techniques were also explained.

After lunch break the validictory function was started. The students gave their feed backs. From their feed backs it was found that students were highly motivated and got good exposure through this programme. The certificates were distributed by Dr. Mohanan A, Co-ordinator Sasthrajalakam and Mr. Jayesh, Staff from SIET. With the certificate distribution the programme came to a an end.





Welcome speech by Dr. A. Mohanan, Co-ordinator, Sathrajalakam



Presidential Address by Dr. T Vijayan, Principal, Nehru Arts & Science, College, Kanhangad



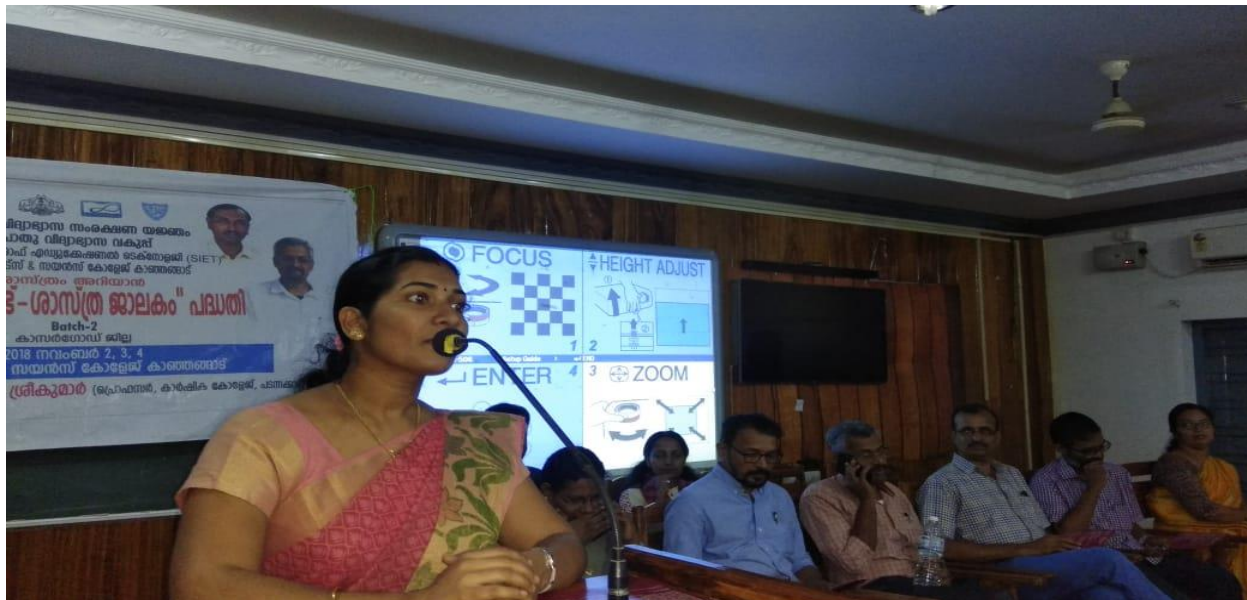
Inaugural Address by Dr. K.M.Sreekumar, Professor, Agricultural College, Padannakad.



Felicitation by Smt. Pushpa K.V., DEO Kanhangad.



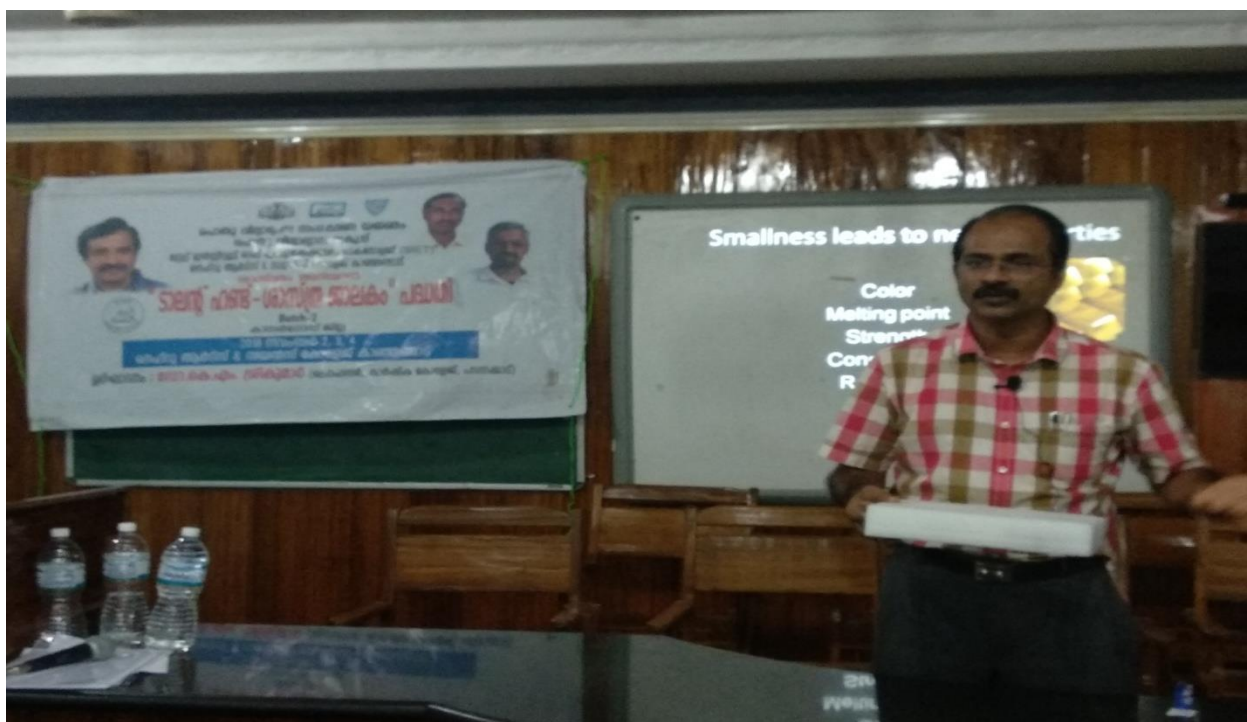
Felicitation by Dr. K.Radhakrishnan Nair, HoD, Dept. of Statistics.



Vote of Thanks by Dr. K.Mangala, Asst. Professor, Dept. of Chemistry



Physics Basic Concepts by Dr. K.M.Udayanandan, Associate Professor(Retd.), Dept. of Physics, NAS College Kanhangad.



Applications of physics by Dr.K.V.Murali, HoD, Dept. of Physics, Nehru college, Kanhangad.



Experiments in Physics lab





Basic Concepts of Chemistry, Mr. Rajesh. P, Asst. Professor, Dept. of Chemistry, NASC



Applications of Chemistry, Smt. Deepthi. P.V. Asst. Professor, Dept. of Chemistry, NASC



Applications of Chemistry, Dr. K.Mangala. Asst. Professor, Dept. of Chemistry, NASC



Experiments in Chemistry lab



Experiments in Chemistry lab





Cultural Programmes





Basic Concepts of Biology, Dr. V.P.Syama, Associate Professor(Retd.) Dept. of Zoology, NASC, Kanhangad



Applied Biology, Dr. Sudheep. N.M , Postdoctoral fellow, Central University of Kerala



Experiments from zoology lab





Valedictory function





Certificate distribution





The programme in media