

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

**TALENT HUNT**

**SASTHRAJALAKAM**

**Batch-I**

**2018 October 26, 27, 28**

**NEHRU ARTS & SCIENCE COLLEGE, KANHANGAD**



**KASARAGOD**

# REPORT

In order to enrich scientific awareness among students, State Institute of Educational Technology (SIET) was organized, three days residential programme entitled '**Sasthrajalakam**' in various districts of the state. The sasthrajalakam programme for the first batch students of Kasaragod district was conducted at Nehru Arts & Science College(NASC), Kanhangad on October 26,27 & 28. The programme meant for the IX<sup>th</sup> standard students of various high schools in Kasaragod district. Out of 53 students selected, 44 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. Sri. V.V.Rameshan, Chairman, Kanhangad Municipality inaugurated the programme. In his inaugural address he commented that development means not constructing buildings and roads. It means to develop the educational background of the individuals. To have such an exposure scientific approach is required in all our activities. So this programme is a right platform for the students to make them scientifically enriched. Dr. T.V.Vimal kumar, State Co-ordinator of sasthrajalakam briefed about the programme. He explained the motto and implementation of the programme in all over the state. Dr. K.V.Murali, HoD, Physics and P.V.Deepthi, HoD, Chemistry were felicitated over the function. Dr. Prajith K.V., Convener, Science Club 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. Jijo, Assistant Professor, Dept. of Physics, Govt. College, Kasaragod. He explained the basic concepts of physics with models and experiments. The students were very much motivated towards physics by him with his one and half hour presentation. Then the students went to the physics lab for the second session on applied physics. Dr. K.M.Udayanandan, Associate Professor(Retd.), Dept. of Physics, NAS College Kanhangad handled a wonderful session dramatically. Through simple experiments and power point presentation he explained the applications of physics. Students were very much interested 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 K.V.Murali, HoD, Dept. of Physics, delivered an interesting talk on nanotechnology. The students were highly motivated and interacted in the session. After an half an hour break a science based film was shown. With dinner the activity of first day was came to an end.

### **27-10-2018**

In the second day of the programme, chemistry related talks and experiments were conducted. Prof. M. Gopalan, Former HoD, Dept. of Chemistry, Govt. college, Kasaragod and retd. Principal of EKNM College Elerithattu was given an excellent talk on the basic aspects of Chemistry. With several simple experiments he made the students to know more about chemistry and how chemistry is related to our daily life. After tea break Dr. Sujith. K.V. Asst. Professor, Dept. of Chemistry of Payyanur college handled a session on the application of Chemistry. He explained the places where one can go for higher education in chemistry and the career opportunities a student get after completing a course in chemistry. Moreover he pointed out the applications of Chemistry in the fast development of the world.

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( $\text{KMnO}_4$ ) was explained by titrating  $\text{KMnO}_4$  against Mohr's salt in presence of Sulphuric acid( $\text{H}_2\text{SO}_4$ ). 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  $[(NH_4)_2CO_3]$  was shown with the help of naphthalene balls. After tea break an interesting session was handled by Mr. Dineshkumar Thekkumpad. He performed science magic with known concepts. He explained the physics and chemistry behind in each experiment. Students were highly motivated to his performance and the way in which he taught the concepts.

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

### **28-10-2018**

The third day is meant for biology. 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 Aminoacids 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 got good exposure and experience through this programme. The certificates were distributed by Dr. Mohanan A, Co-ordinator Sasthrajalakam, Dr. Rekha P., Asst. Professor, Dept. of Statistics Mr. Satheeshkumar KV, Asst. Professor Dept. of Chemistry, Govt. College, Kasaragod and Mr. Jayesh, Staff from SIET. With this 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 Sri. V.V.Rameshan, Chairman Kanhangad Municipality



Programme briefing by Dr. T.V.Vimal kumar, State Co-ordinator of sasthrajalakam



Felicitation by P.V.Deepthi, HoD, Department of Chemistry



Felicitation by Dr. K.V.Murali, HoD, Department of Physics





Vote of Thanks by Dr. Prajith K.V. , Convener, Science Club NASC.



Sri. B.Aburaaj, Director, SIET interacting with students



Physics Basic Concepts by Dr. Jijo P.U, Assistant Professor, Dept. of Physics, Govt. College, Kasaragod,



Applications of physics by Dr.K.M.Udayanandan, Associate Professor(Retd.), Nehru college, Kanhangad.



Experiments in physics lab



Experiments in physics lab



Experiments in physics lab



Basic Concepts of Chemistry, Prof. M.Gopalan, Retd. Principal, Govt. College, Elerithattu, Kasaragod



Applied Chemistry, Dr. Sujith K.V., Asst. Professor, Dept. of Chemistry, Payyanur College, Payyanur



Experiments from chemistry lab





Chemistry Magic show by Dineshan Master





Cultural programme



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



Valedictory function





Certificate distribution

**വിദ്യാർത്ഥികൾക്കായി ടാലന്റ് ഹണ്ട്**

നിലേശം. • വിദ്യാർത്ഥികളിൽ ശാസ്ത്രാഭിരുചി വളർത്താൻ സ്റ്റേറ്റ് ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് എജ്യൂക്കേഷൻ കേന്ദ്രങ്ങളിലെ നേതൃത്വത്തിൽ പൊതുവിദ്യാഭ്യാസ വകുപ്പ് സംസ്ഥാനതലത്തിൽ നടപ്പാക്കുന്ന ടാലന്റ് ഹണ്ട് ശാസ്ത്രജാലകം പദ്ധതി ജില്ലയിൽ തുടങ്ങി.

പടന്നക്കാട് നെഹ്റു ആർട്സ് ആൻഡ് സയൻസ് കോളജിന്റെ സഹകരണത്തോടെ തയ്യാറാക്കുന്ന പദ്ധതിയിലേക്കു ജില്ലയിലെ വിവിധ വിദ്യാലയങ്ങളിൽ ഒൻപതാം ക്ലാസിൽ പഠിക്കുന്ന 150 വിദ്യാർത്ഥികളെയാണ് തിരഞ്ഞെടുത്തത്.

ഒന്നാംഘട്ടമായി നടത്തിയ മൂന്നു ദിവസത്തെ ശാസ്ത്ര ശിൽപശാലയായ ശാസ്ത്രജാലകം കാണത്തോട് നഗരസഭാ ചെയർമാൻ വി.വി.രമേശൻ ഉദ്ഘാടനം ചെയ്തു. നെഹ്റു കോളജ് പ്രിൻസിപ്പൽ ഡോ.ടി.വിജയൻ അധ്യക്ഷത വഹിച്ചു.

എസ്.എ.ഇ.ടി ഡയറക്ടർ അബ്ദുരാജ്, ശാസ്ത്രജാലകം സംസ്ഥാന കോ-ഓർഡിനേറ്റർ ഡോ.ടി.വി.വിമൽകുമാർ, ജില്ലാ കോ-ഓർഡിനേറ്റർ ഡോ.എ.മോഹനൻ, നെഹ്റു കോളജിലെ ശാസ്ത്ര പഠനവകുപ്പുകളുടെ അധ്യക്ഷരായ ഡോ.കെ.രാധാകൃഷ്ണൻ നായർ, ഡോ.കെ.വി.മുരളി, പി.വി.ദീപ്തി, സയൻസ് ക്ലബ്ബ് കൺവീനർ ഡോ.പി.കെ.പ്രജിത്ത് എന്നിവർ പ്രസംഗിച്ചു. ക്യാമ്പ് ഇന്നു സമാപിക്കും.

വിദ്യാർത്ഥികളിൽ ശാസ്ത്രാഭിരുചി വളർത്താൻ ലക്ഷ്യമിടുന്ന ശാസ്ത്രജാലകം ടാലന്റ് ഹണ്ട് പദ്ധതിയുടെ ജില്ലാതല ത്രിദിന ക്യാമ്പ് പടന്നക്കാട് നെഹ്റു കോളജിൽ കാണത്തോട് നഗരസഭ ചെയർമാൻ വി.വി.രമേശൻ ഉദ്ഘാടനം ചെയ്യുന്നു.

മഹർജർ ലർമാര സന്തോഷം സന്തോഷം കൃഷ്ണൻ അബ്ദു കിർമാത്ത്, റ്റ ഉായ രാമച യ്തി സ.ശി

നെ ശ്രീ കൃ അ

**നിർഗാർഭൻ - മന്ദനം**

The programme in media