

DEEN DAYAL UPADHYAYA COLLEGE (University of Delhi)

Department of Zoology under the aegis of DBT Star College Scheme and in association with Department of Zoology (University of Delhi), Ramjas College (University of Delhi) and Indian National Science Academy (INSA) Outreach Program entitled



"Lectures by INSA Fellows/Young Scientists/Teacher Awardees to Young Students and Teachers of Schools and Colleges in Remote Areas"

organized

<u>**Ba</u>ni <u>S</u>chool <u>Innovation C</u>amp III (BaSIC III)</u>**

A Program Conducted at Govt. Senior Secondary School, Bani, Himachal Pradesh (October 15th, 2018)

Chief Coordinator: Prof. Rup Lal (INSA Fellow)

Coordinators, BaSIC III: Dr. Shailly Anand (DDUC) & Dr. Sukanya Lal (Ramjas College)

Co-Coordinator BaSIC III & DBT Convenor, Department of Zoology: Dr. Sudhir Verma

Organizers (DDUC): Dr. Rashmi Kumari, Dr. Princy Hira, Dr. Priya Singh & Dr. Satyam Dwivedi

Organizers (External): Dr. Helianthous (Ramjas College), Dr. Vipin Gupta (Dept. of Zoology, DU), Dr. Utkarsh Sood (Dept. of Zoology, DU), Ms. Nirjara (Dept. of Zoology, DU), Ms.. Chandni Talwar (Dept. of Zoology, DU), Ms.. Monika (Dept. of Zoology, DU) & Mr. Shekhar (Dept. of Zoology, DU)

Under INSA outreach program, "Lectures by INSA Fellows/Young scientists/teacher awardees to young students and teachers of schools and colleges in the remote/rural areas", in which INSA-fellows can deliver lecture to motivate and ignite young minds, Prof. Rup Lal, Fellow- INSA, Department of Zoology, University of Delhi selected Govt. Senior Secondary School (GSSS), Bani located in the Hamirpur district of Himachal Pradesh. In the year 2016, Prof. Lal and his PhD students collaborated with teachers and undergraduate students from Ramjas College (DBT star college project) and together adopted **GSSS**, **Bani**, **Hamirpur**, **Himachal Pradesh** on **December 23**, **2016** and organized **Bani** School Innovation Camp I (BaSIC, 2016) on December 23rd -24th 2016. BaSIC II was then organised on March 7th, 2018. Both the programs were a major success as seen from the feedback obtained. In continuation of these efforts, a third camp was organized on October 15th, 2018 and was called **Ba**ni **S**chool Innovation **C**amp III or BaSIC III. The program was organized with an aim of uplifting the rural areas through propagation of scientific thoughts, promotion of student-teacher interactions and development of communication skills.

This school was established in 1905 to impart education upto the 4th standard. In 1951, this school was upgraded to High School level and in the year 1990 became Senior Secondary School (co-educational) imparting education to students from the villages located in and around Bani. Over the years many students who passed out from this school have attained very good positions in India and globally. Prof. Rup Lal himself passed his matriculation from this school in the year 1969. During BaSIC- 2016, Prof. Rup Lal targeted and inspired students of classes

IX-XII through his lecture. His interactions with students of classes VI-VIII and the confident and fearless attitude of these students forced him to organize the camp again for students of classes VI-VIII during BaSIC II. Hence, this time in order to motivate the students of all the classes of the school i.e. VI-XII, a plan to organize BaSIC III was submitted to INSA under the INSA outreach program that was sanctioned.

Under this program an innovation camp was conducted at GSSS Bani on October 15th, 2018. The program was given the name **Bani S**chool Innovation Camp III also called as **BaSIC III**. The program was discussed by Dr. Sukanya Lal, Coordinator of DBT Star College Project, Ramjas College and Dr. Shailly Anand, Coordinator BaSIC III, Deen Dayal Upadhyaya College of University of Delhi. They were accompanied by a team of teachers from the Department of Zoology of Ramjas College (1 in number), and Deen Dayal Upadhyaya College (5), University of Delhi. Additionally Ph.D students from the Department of Zoology (8), undergraduate students from the Ramjas College (7) and Deen Dayal Upadhyaya College (21) and masters students (4) from Department of Zoology, University of Delhi also accompanied the group. Under the program, many different teaching modules were organized that covered the different areas of science and technology and revolved around the central theme of propagation of scientific thoughts among students. The sessions and modules were designed to not only to raise interest of school children in the field of science but also the latest technologies that make our lives better such as emails and e-banking and fund transfers. The students were not only taught theoretically but were given hands-on training and demonstrations to develop their interest. Apart from these, the camp also included sessions for the parents of the school children to help bridge the communication gap between parents and children and to address the common issues while highlighting the roles and responsibilities of both the children and their parents.

The main objectives of BaSIC III camp organized under INSA outreach program were:

- 1. Propagation of scientific thoughts.
- 2. Promoting gender equality in rural areas.
- 3. Development of personality and communication skills.
- 4. Guiding the parents.
- 5. Promotion of extra-curricular (cultural and sports) activities.

The following students of DDUC participated in the Outreach Program:

S. No.	Student Name	Course
1.	Harsheen	B.Sc (H) Zoology II year
2.	Ujjwal	B.Sc (H) Zoology II year
3.	Ritesh Saha	B.Sc (H) Zoology II year
4.	Abhay Verma	B.Sc (H) Zoology III year
5.	Sneha Bisht	B.Sc (H) Zoology III year
6.	Devyani Sharma	B.Sc (H) Zoology III year
7.	Ojaswita Toppo	B.Sc (H) Zoology III year
8.	Karishma	B.Sc (H) Zoology III year
9.	Deepika	B.Sc (H) Zoology III year
10.	Pragya	B.Sc (H) Zoology III year
11.	Samriddhi	B.Sc (H) Zoology III year
12.	Kavita	B.Sc (H) Zoology III year
13.	Swati	B.Sc (H) Zoology III year

14.	Virender	B.Sc (H) Zoology II year
15.	Vaishnavi	B.Sc (H) Zoology III year
16.	Vishakha Singh	B.Sc (H) Zoology III year
17.	Sachin	B.Sc (P) Life Science III year
18.	Badal	B.Sc (P) Life Science III year
19.	Aysha Ahmed	B.Sc (H) Zoology III year
20.	Mansi	B.Sc (H) Zoology III year
21.	Jayendra	B.Sc (H) Zoology II year

The following faculty members of DDUC organized the Outreach Program:

- Dr. Shailly Anand
 Dr. Sudhir Verma
- 3. Dr. Rashmi Kumari
- 4. Dr. Princy Hira
- 5. Dr. Priya Singh
- 6. Dr. Satyam Dwivedi



Dream School: A Joint Initiative under INSA (Indian National Science Academy, New Delhi) Outreach Program and Department of Biotechnology (DBT) Star College Projects under Deen Dayal Upadhayaya College (DDU) and Ramjas College (RC) University of Delhi, Delhi

Programme Schedule

(15th October 2018, Monday)

Time	Activity							
09:00-09:30 a.m.	Student assembly and prayer							
09:30-09:45 a.m.	Welcome speech by Principal							
09:45-10:30 a.m.	Introduction of the program by Prof. Rup Lal and felicitation of alumni and teachers							
Teaching Sessions								
Time	Activity							
10:30 – 11:00 a.m.	VI & VII	VIII		IX				
	Importance of eMAIL and	DDU Module 1:		RC Module: How to Handle				
	web searching Make it Rain Indoors		in Indoors	Micropipettes				
	X	XI (Med and N.	XI (Arts and	XII (Med and N. Med)				
	DDU Module 2:	Med)	Comm)	DDU Module 3:				
	Fun with your Microscope	World without	Introduction to	Growth and Culture of				
		Microbes: Video	Banking	Dacteriar Flates				
11.00 11.20				117				
11:00 - 11:30 a.m.	VI & VII	VIII		IX				
	DDU Module 2:	Importance of eMAIL and web searching		DDU Module 4:				
	Fun with your Microscope			Transformation of Energy				
	X	XI (Med and N.	XII (Med and N.	XII (Arts and Comm)				
	RC Module: How to	Med)	Med)	Introduction to Banking				
	Handle Micropipettes	DDU Module 5:	World without					
		Can you catch the DNA?	M1crobes: Video					

Time	Activity						
11:30 – 12:00 p.m.	2:00 p.m. VI & VII VIII			IX			
	DDU Module 4:	DDU Module 3:		DDU Module 2:			
	Transformation of Energy	Growth and Culture of Bacterial Plates		Fun with your Microscope			
	Х	XI (Med and N. Med)		XII (Med and N. Med)			
	World without Microbes:	RC Module: How to Handle Micropipettes		DDU Module 5:			
	Video			Can you catch the DNA?			
12:00 – 12:30 p.m.	VI & VII	VIII		IX World without Mierobese			
	DDU Module 1:	DDU Module 4:	~~~	Video			
	Make it Rain Indoors	Transformation of Energy		v Ideo			
	X	XI (Med and N. Med)		XII (Med and N. Med)			
	DDU Module 5: DDU Module 3:			RC Module: How to Handle			
	Can you catch the DNA?	Growth and Culture of Bacterial Plate	s	Micropipettes			
Common Session							
11:00 to 12:00	Interactive session with Parents of Students on 'The Real Duties of Parent Hood' with Prof. Rup Lal						
12:00 to 12:30	Lecture on Women in Science 'Towards Women Empowerment' by Dr. Sukanya Lal and Prof. Rup Lal						
12:30 – 01:00 p.m.	Lecture on "Scientific discoveries: From Failures to Success" by Prof. Rup Lal						
01:00 – 01:30 p.m.	Lunch						
01:30–02:30 p.m.	Volley ball match between school students and BaSIC III team						
02:30 – 04:00 p.m.	Valediction: Felicitation and Award ceremony						

Following are the highlights and outcome of the "Bani School Innovation Camp" (BaSIC)

On October 13th, 2018, the journey started at 06:20 am from Department of Zoology, University of Delhi to GSSS, Bani, Hamirpur. The BaSIC III team was led by Prof. Rup Lal accompanied by Dr. Sukanya Lal, Coordinator-DBT Star College Project- Ramjas College, and Dr. Shailly Anand Coordinator BaSIC III under DBT Star College Project, Deen Dayal Upadhyaya College, University of Delhi. The team reached Bani, Himachal Pradesh at 6:00 pm. All the members of the team stayed in village Kanoh (native village of Prof. Rup Lal) and 5 km from the GSSS Bani.



Pic 1: Team of Bani School Innovation Camp - BaSIC III

The next day, 14th October, 2018 was spent in doing preparations for the BaSIC III program to be held on the next day.

BaSIC III Program: 15.10.2018

The BaSIC III program was held on October 15, 2018 at the GSSS, Bani where the team reached at 9:00 am. The team was received by the school Principal Ms. Nirmal Thakur and the teachers. After reaching GSSS Bani, preparations to implement the program were started.

- 1. BaSIC III banner was installed.
- 2. The arrangement of certificates class wise and cash prizes along with gifts (bags) to be given to winners of cultural program and merit holders of each class.
- 3. Preparation and rehearsal of experiments to be performed in the teaching sessions.



Pic 2: Members of BaSIC III team leaving for GSSS, Bani from Kanoh.

Pic 3: BaSIC III Banner installed at the GSSS, Bani.



Pics 4-5: School students offering prayers during morning assembly.

Following this, the BaSIC III team was addressed by the school principal, Ms. Nirmal Thakur. The principal welcomed Prof. Rup Lal and entire team and appreciated the previous efforts of BaSIC I and II in the upliftment of the school. This was followed by the introduction of the BaSIC III program by Prof. Rup Lal which marked the inauguration of the program. The beginning of the program was marked by a brief introduction by Prof. Rup Lal, purpose of the program and role of Indian National Science Acadamy, New Delhi (INSA) and Department of Biotechnology (DBT) in this program.



Pic 6-7: Prof. Rup Lal, Dr. Sukanya Lal, Dr. Shailly Anand, and Engg. C. L. Kaushal with the school Principal Ms. Nirmal Thakur and retired senior staff of the GSSS, Bani during the inauguration of the program BaSIC III.



Pic 8: School Principal Ms. Nirmal Thakur welcoming the BaSIC III team at the school.



Pic 9: Prof. Rup Lal introducing the BaSIC III program under the INSA outreach activity.

Following this, Dr. Sudhir Verma, Assistant Professor, Deen Dayal Upadhyaya College, University of Delhi, introduced the school staff and children about the role of DBT star college project in the BaSIC III event. Prof. Rup Lal and Engg. C. L. Kaushal then felicitated the senior staff of the school- retired maths teacher Shri Ramesh Katna and retired English teacher Shri Sarwan Singh for their dedication towards teaching and for their honourable service. The retired teachers then shared their experiences and urged school children to always work with passion and honesty in order to succeed in life.



Pic 10-11: Dr. Sudhir Verma, Assistant Professor, Deen Dayal Upadhyaya college introducing the DBT star college project and BaSIC III program to the school children and staff.



Pic 12-13: Prof. Rup Lal and Engg. C. L. Kaushal felicitating the retired school staff Mr. Katna and Mr. Sarwant Singh for their outstanding service and dedication towards teaching.

At the end of the inauguration ceremony Dr. Sukanya Lal felicitated the school principal Ms. Nirmal Thakur while thanking her for extending a warm welcome to the BaSIC III team and foe her cooperation in holding the program at the school. Prof. Rup Lal was felicitated by the school Principal and school staff for his continuous efforts in guiding the school children through BaSIC camps.



Pic 14: Dr. Sukanya Lal felicitating the school Principal Ms. Nirmal Thakur during inauguration.



Pic 15: Prof. Rup Lal being felicitated by the school Principal and staff during the inauguration of BaSIC III.

Teaching Modules

Immediately after the inauguration, the teaching sessions were held for students of classes VI-XII in their respective classrooms. The sessions were coordinated by Prof. Rup Lal, Dr. Sukanya Lal, Dr. Shailly Anand & Dr. Sudhir Verma. The faculty members of Deen Dayal Upadhyaya college and Ramjas college-, Dr. Helianthous Verma, Mr. Satyam Dwivedi, Dr. Rashmi Kumari, Ms. Priya Singh and Ms. Princy Hira conducted the sessions with assistance from the undergraduate and masters students and Ph.D scholars from Department of Zoology, University of Delhi.

> Module 1: MAKE IT RAIN INDOORS

This activity was performed with an aim to make the school students understand different forms of water and how water changes its form. The main focus of this exercise was to explain why there is a need to conserve water, the role of water cycle in our environment. The water cycle was also experimentally demonstrated using make it rain indoors setup to provide better understanding of the process. This activity was carried out by undergraduate students from Deen Dayal Upadhyaya College, Ujjwal, Ritesh, Jayendra, Kavita, Samridhi along with Dr. Princy Hira for students of class VI, VII & VIII.



Pic 16-17: Undergraduate students explaining the concepts of rain and water cycle. The team was led by Ms. Princy Hira.

> Module 2: FUN WITH YOUR MICROSCOPE

This module was envisaged to provide hands-on exposure of microscopy to the students. The concept of 'magnification' and 'resolution' were taught using simple exercises to students of VIth, VIIth, IXth and Xth standard. The importance of fixation and staining were also emphasized in brightfield microscopy. Also, a brief introduction was given about the types of microscopy in use. The exercises demonstrated were visualisation of stained human cheek cells (std X), blood cells (std IX) and structure of hair, sugar crystals etc. (std VI, VII). The team members involved were Devyani, Sachin, Mansi and Swati along with Dr. Sudhir Verma and Mr. Satyam Dwivedi.



Pic 18-20: Dr. Sudhir Verma and Mr. Satyam Dwivedi along with the undergraduate students explaining the concepts of magnification and resolution. The team provided hands-on exposure to microscopy to the school children.

> Module 3: GROWTH & CULTURE OF BACTERIA

To develop the interest among students in the microbiological world, this module was organized for the students of Class VIII, XI and XII (For both medical and non-medical batch). In this the students were taught about the ubiquitous occurrence of bacteria and were shown bacterial colonies of different colours grown on nutrient agar plates. The students were explained how the bacterial isolates occurring in environmental samples particularly soil can be cultivated. Also, the difference between Gram positive and Gram negative bacteria was taught. The activity was conducted by Abhay, Meenakshi, Ayesha, Pragya along with Dr. Rashmi Kumari.



Pic 21-23: Dr. Rashmi Sharma along with the undergraduate students showing the different colored bacteria and explaining their ubiquitous occurrence in nature and methods to cultivate them.

> Module 4: TRANSFORMATION OF ENERGY

This module aimed at making students understand that energy can neither be created nor destroyed. It can only be converted from one form to another. Using everyday examples such as the pendulum, fire crackers, electric fan etc, students were acquainted with the concept of potential, kinetic, chemical, gravitational, static, positive, negative, sound, light, mechanical and solar energy. The activity was carried out by Sneha, Deepika, Karishma, Badal along with Dr. Shailly Anand for students of class VI, VII, VIII and IX.



Pic 24-25: Dr. Shailly Anand and undergraduate students explaining the different forms of energy and its transformation to the school students.

> Module 5: CAN YOU CATCH THE DNA?

This activity was organized for the students of Class X, XI and XII (For both medical and non-medical batch). Firstly, students were introduced briefly to heredity, the most abundant genetic/hereditary material i.e. DNA (deoxyribonucleic acid), its importance, location, structure and the simple methods for DNA isolation. This was followed by the demonstration of the method to isolate DNA from plant cells (onion) using easily available

chemicals (detergent, table salt and absolute alcohol) and apparatus (petri plates, beakers and lamp). This was a brief experiment to familiarise the students with the technique of cell lysis, DNA isolation, precipitation, visualization with naked eye and spooling of DNA strands. Students were highly enthusiastic to spectate the demonstration and learn the basics. The activity was conducted by Vaishnavi, Rupali, Ojaswita, Harsheen along with Priya Singh.



Pic 26-30: A team of undergraduate students led by Ms. Priya Singh explained the DNA structure and function. The team further demonstrated the isolation of DNA from onion while explaining the concepts of cell lysis, DNA precipitation and spooling.

> Module 6: IMPORTANCE OF EMAIL AND WEB SEARCHING

The session was focussed on training the students on how to use eMAIL and web searching for delivering and obtaining the information worldwide. In today's world, email is one of the best communication ways to pass on the information. Since its beginning, it has gained tremendous attention across the world. It is like sending a letter; the only difference is instead of using pen & paper, we use keyboard to type a message on computer. It has benefits like it saves the information for the future and prevents loss of information. It delivers the information in seconds and can reach any corner of this earth. The students were explained about how the emails can be used to share the information fast and with several people at one time. The session was an interactive one and the students were asked if they had a gmail account of their own. Prof. Rup Lal asked the school students to make their own accounts and keep up with the latest technologies. The session was conducted by Mr. Prashant Kaushik, Mr. Vipin Gupta and Mr. Shekhar Nagar.



Pic 31-34: Prof. Rup Lal explaining the importance of emails and web searching as the fastest means of communication and for obtaining worldwide information fast at home. Mr. Vipin Gupta, Mr. Prashant Kaushik and Mr. Shekhar Nagar demonstrated web searching and usage of emails to the school students.

> Module 7: WORLD WITHOUT MICROBES

The session was held with a view to highlight the importance of micro-organisms (or microbes) that play a very important role in our lives. Microbes are very small living organisms, so small that most of them are invisible which can only be seen with help of microscope .microbes make up more than 60 % of the Earth's living matter and scientists estimate that 2-3 billion species share the planet with us. They are ubiquitous and are very numerous that a cup of soil may have billions of microbes. The students were explained the key role of these microscopic organisms in maintaining life on earth by fixing gases. Microbes also help in breaking down dead plant and animal matter into simpler substances that are used at the beginning of the food chain. Microbes are very important for human purpose like production of medicines, enzymes and food. They are also used to breakdown sewage and other toxic wastes into safe matter in a process called bioremediation. Their importance was explained by giving simple examples like that of *Lactobacillus* that are present in curd and are important probiotics. The activity was conducted by Ms. Anjali, Ms. Sheeba, Ms. Divya, Mr. Jaymohan and Ms. Harpreet Kaur.



Pic 35-36: Prof. Rup Lal and masters students explaining the role of microorganisms in the maintenance of life on earth.

> Module 8: HOW TO HANDLE MICROPIPETTES

In this module, the students were explained the different types of pipettes and their use in chemistry, biology and medicine to transport a measured volume of liquid, often as a media dispenser. The different types of pipettes including single piece glass pipettes to more complex and adjustable electronic pipettes were explained. The students were demonstrated about how the pipettes work by creating a partial vacuum to draw up and dispense liquids. The demonstrations were done using air displacement pipettes which are a type of adjustable micropipettes that deliver a measured volume of liquid, and depending on size, it could be 0.1μ l to 1000μ l (1 ml). The students were introduced to the disposable tips that are required in the use of these pipettes. The different standard sizes of micropipettes correspond to different disposable tip colors. Each student was asked to dispense a measured volume of liquid using the pipettes giving them a hands-on training on their usage. The activity was led by Dr. Sukanya Lal and Dr. Helianthous Verma and undergraduare students from Ramjas college.



Pic 37-39: Dr. Sukanya Lal, Dr. Helianthous Verma and undergraduate students from Ramjas college demonstrating the use of micropipettes in transfer of liquids and explaining their importance in the field of science.

> Module 9: INTRODUCTION TO BANKING

The students of Class XI and XII (Commerce and Arts batch) were introduced to the concept of banking. The students were explained how banks are formed and how they function. They were also explained about their importance in the financial stability of a country. In an interactive manner, the students were informed why it is necessary to maintain minimum balance and how interest is paid and earned. The students were introduced to

modern banking practices. The session highlighted the importance of online banking and how it has made life much easier and faster for both the banks and the customers as it is available 24/7 days from any place with internet access. The session concluded with explanation of online fund transfers. The session was conducted by Mr. Utkarsh Sood along with undergraduate students.



Pic 40-42: Mr. Utkarsh Sood explaining the concept of banking and interest and demonstrating internet banking and online fund transfers to the students.

COMMON SESSIONS

1. Women in Science 'Towards Women Empowerment': Session by Dr. Sukanya Lal and Prof. Rup Lal

A common session entitled "Women in Science 'Towards Women Empowerment" was organised for the school students and faculty members where Dr. Sukanya Lal emphasized on the gender equality and rights of the women. The session focussed on the need of empowering women at early age by providing them education and by not deterring girls from various opportunities especially in rural areas. The session highlighted the significant contributions made by the women not only in the field of science and technology but also in all the different aspects of life. Prof. Rup Lal insisted on the seating plan of each class to be gender-neutral as this would be the first step in empowering women and making them confident.



Pic 43-44: Dr. Sukanya Lal and Prof. Rup Lal interacting with the school staff, children and their parents on empowering women.

2. 'The Real Duties of Parent Hood': Session by Prof. Rup Lal

Thereafter, a common session was also organised for the school students their parents and the faculty members of the school that centred around the duties of parenthood and was focussed on the need to bridge the gap between parents and their children. Prof. Rup Lal discussed the challenges and problems faced by both the students and parents. The students were encouraged to discuss their problems with their parents and confide in them while their parents were also advised to understand the needs of their children.



Pic 45-46: Prof. Rup Lal interacting with the school children, their parents and school staff and discussing the roles and responsibilities of parents and children.

3. "Scientific discoveries: From Failures to Success": Session by Prof. Rup Lal

This was followed by a common session where Prof. Rup Lal delivered a lecture entitled "Scientific discoveries: From Failures to Success". In his lecture, Prof. Rup Lal highlighted how failures may build a way towards success. He encouraged students to take motivation from the failures to excel in any field and reach their goals. Through examples of some successful personalities, he conveyed that the pinnacle of success cannot be reached directly. It is alright to make mistakes and fail. As the failures make us learn through experiences. He insisted that failure teaches one a lot about himself, his attitude towards everything, his potential and eventually makes one more sharp at way of handling things, all which is essential in order to reach success. He motivated students to never fear of failure and instead learn from them. His lecture was very interactive as the students were seen equally participating and answering to the questions raised. He gave example of famous scientists that failed hundreds of times but always embraced them and turned them into stepping stones for enormous success. His lecture conveyed the message that behind any success, there lies a failure story or hundreds of them, be it small or large. He encouraged the students to never feel weak or inferior if they fail once or twice in life. Instead, they should learn from every mistake and never repeat them.



Pic 47-50: Prof. Rup Lal delivering a lecture on "Scientific discoveries: From Failures to Success" in a common session with the school students from class VI to XII, school staff and parents.

Sports and Physical Activities: Volleyball Match

After the teaching sessions and lectures, a volleyball match was organised between the school students and students from Delhi University. Prof. Rup Lal also took part in the match to encourage young students to regularly take part in the outdoor sports and physical activities to promote health. The students of both the teams were very enthusiastic. The teams were cheered by all students of the school, college students and Ph.D. scholars. The team school students displayed high co-ordination and won the match.



Pic 51-53: Voleyball match between teams of GSSS and Delhi University. Prof. Rup Lal participated in the match and encouraged the students while inculcating them with the spirit of sportsmanship.

Cultural Program

After promoting physical activities through volleyball match, the students were also encouraged to participate in cultural activities like singing and dancing. For this, a cultural program was organised in which the students came on the stage to display their talents. From dancing on Bollywood songs to singing Himachali folk songs, the students of the school displayed all sorts of talents. The performances were cheered by all.



Pic 54-59: Students of GSSS, Bani displaying their talents like singing, dancing and reciting poems during the cultural program of the event.

Valediction: Award Ceremony

For their enthusiastic participation in the BaSIC III program, the students were awarded with cash prizes, certificates and gifts (bags) in the closing ceremony. Three students from every class with excellent academic records were awarded with a gift (bags) and a certificate. The best interjector award was given to Rajneesh of Class XI for his interactive participation during the entire event. The whole team of GSSS, Bani who won the volleyball match was awarded with a cash prize of Rs. 700. All the eight participants of the cultural program were also awarded with a cash prize of Rs. 100 each. The whole BaSIC III team was then felicitated with certificates for their efforts by the school Principal.





Pic 60: Engg. C. L. Kaushal and Ms. Nirmal Thakur giving certificates and gifts to meritorious students.

Pic 61: Dr. Shailly Anand and Dr. Sudhir Verma giving cash prizes to the participants of the cultural program.



Pic 62: Prof. Rup Lal giving cash prize to the winning team of volleyball match.



Pic 63-64: Coordinators, BaSIC III of Ramjas College and DDUC: Dr. Sukanya Lal and Dr. Shailly Anand being awarded by the school principal Ms. Nirmal Thakur.



Pic 65-66: The research scholars and college students of BaSIC III team being awarded by the school principal and Dr. Sukanya Lal for their efforts.



Pic 67: The BaSIC III team with all the participants of GSSS, Bani at the completion of the program.

Summary of the Program

The BaSIC III program was organised under the under INSA outreach program to promote science in rural/ remote areas in association with the DBT-Star College Project, University of Delhi. During this one day program held at GSSS, Bani :

- 1. Scientific and technological awareness was spread among the school students through the teaching modules.
- 2. Parents were educated about their changing roles and responsibilities with time.
- 3. Awareness about gender equality and women empowerment was spread.
- 4. Students were encouraged to learn from their failures.
- 5. Students' participation in sports and cultural events was encouraged
- 6. Students of Delhi University were exposed to the rural life.