

24th HIMACHAL PRADESH
STATE LEVEL CHILDREN'S SCIENCE CONGRESS – 2016

REPORT

FOCAL THEME: “Science, Technology & Innovation for Sustainable Development with Special Emphasis on Accessibility for Persons with Disability”



National Organiser



A programme of

**National Council for Science & Technology Communication (NCSTC)
Department of Science & Technology (DST), Govt. of India, New Delhi
*Organized by***



**HP State Council for Science, Technology & Environment (HPSCST&E)
B-34, SDA Complex, Kasumpti, Shimla- 171009, Himachal Pradesh**

in collaboration with

Sarv Shiksha Abhiyaan, Department of Education, Himachal Pradesh

at

**Govt. (Boys) Senior Secondary School, Nahan, Distt. Sirmour,
Himachal Pradesh (November 15-18, 2016)**

24th HIMACHAL PRADESH STATE CHILDREN'S SCIENCE CONGRESS-2016

Introduction

The HP State Council for Science, Technology & Environment (HPSCST&E) is promoting the scientific and technological innovations among the school children in the State so as to bring out the hidden talent in the young minds. To achieve this objective, the council has been organizing *Vigyan Melas* (Science fairs/ Competitions) for school children since 1998. To ensure more involvement particularly from rural areas, these Melas were extended to Block, District and State level from the year 1991. The feedback received from these programmes has revealed that such programmes have created the interest of students and teachers in science. The National Council of Science, Technology & Communication (NCSTC), Department of Science & technology (DST), Government of India and NCSTC-Network, in the recent years, introduced the concept of Children Science Congress that is being held at National Level. In the year 1993 *Vigyan Mela* programme was restructured & renamed as Bal Vigyan Sammelan or **Children's Science Congress**. The programme is now held every year in the State and new activities are incorporated so as to make it more effective and useful for the students, teachers and community. Every year CSC is organized at four different levels i.e. Sub-division, District, State and National Level. The programme is organized in collaboration with NCSTC, DST, NCSTC-Network, Sarv Shiksha Abhiyaan, Department of Education, Himachal Pradesh and Rashtriya Vigyan Evam Prodyogiki Sanchar Parishad, Department of Science & Technology, Govt. of India, New Delhi for the students studying in 6th-12th classes. It provides forum for the children between 10-17 years of age to undertake study in their locality applying the methods of science under the prescribed theme. The outcome of the study is presented through project reports along with posters at different levels of CSC. In this programme, emphasis is laid on learning by doing and on field projects to be undertaken by children under the guidance of teachers. The programme has been successful in creating interest in science among students & teachers. Up to District level, the programme is organized by the Department of Education, through Deputy Director (Education), Science Supervisors/Science consultants as per the programme guidelines. However, the students are selected for National Level CSC at State Level Science Congress.

The 24th HP Children's Science Congress -2016 has been organised at Sub-division, District and State level as per the schedule finalized during the meeting of District Coordinators held on 22nd July, 2016 in the office of SCST&E. This year Himachal Pradesh Children Science Congress was organised by SCST&E in collaboration with RAA, SSA, Department of Education and NCSTC, GOI.



Schedule for HP Children's Science Congress

Sub-Division Level	September - October, 2016
District Level	7 th - 9 th November, 2016
State Level	15 th - 18 th November, 2016 (GBSSS Nahan, Sirmaur, H.P.)
National Level	27 th - 31 st December, 2016 (VIIT Baramati, Maharashtra)
Indian Science Congress	3 rd - 7 th January, 2017 (Sri Venkateshwar University, Tirupati, A.P.)

As per guideline and instructions issued during the meeting of District Science Coordinators, the HP Children's Science Congress was initiated at Sub-Division Level in all 60 Sub-Divisions of the state.

The Focal theme of 24th HP Children's Science Congress was ***"Science, Technology & Innovation for Sustainable Development with Special Emphasis on accessibility for Persons with Disability"***.

The sub-themes for the Children's Science Congress were:

Sub-theme-I: (a) Natural Resource Management.

(b) Food and Agriculture

Sub-theme-II: (a) Energy

(b) Health, Hygiene & Nutrition

Sub-theme-III: (a) Lifestyle and Livelihood

(b) Disaster Management

(c) Traditional Knowledge System (TKS)

CSC at Sub-Division Level

Sr. No.	District	No. of Sub-Division	No. of Participants	Activities organised
1.	Kangra	8	2869	Science quiz, Mathematic Olympiad, Activity corner
2.	Bilaspur	3	1194	
3.	Chamba	7	931	
4.	Hamirpur	5	2213	
5.	Sirmaur	5	928	
6.	L&S	2	0	
7.	Kinnaur	3	387	
8.	Shimla	7	1600	
9.	Una	4	867	
10.	Solan	4	1527	
11.	Kullu	4	815	
12.	Mandi	8	1758	
Total		60	15089	

The Schools under Rashtriya Avishkar Abhiyan of Sarv Shiksha Abhiyan were separately invited to participate in Sub-Division and District Level Children's Science Congress – 2016 by the Deputy Directors of Elementary Education of each District.



Some pictures of Sub-Division Level Himachal Pradesh CSC

Thereafter, the District Level Children Science Congress was organized on 7th – 9th November, 2016 at all District Headquarters except Sirmaur, which was organised on 25th – 27th October, 2016.

Detail of District Level Children Science Congress is below:-

Sr. No.	District	No. of schools Participated	No. of Participants	Activities organised
1.	Kangra	82	423	Science quiz, Mathematic Olympiad, Activity corner, Survey report, Innovative Science model, Science Skit.
2.	Bilaspur	39	235	
3.	Chamba	47	271	
4.	Hamirpur	114	508	
5.	Sirmaur	53	312	
6.	L&S	0	0	
7.	Kinnaur	20	183	
8.	Shimla	40	240	
9.	Una	44	195	
10.	Solan	53	270	
11.	Kullu	36	195	
12.	Mandi	59	292	
Total		587	3124	



Some pictures of District Level Himachal Pradesh CSC

The State Level Children's Science Congress was organised at Government (Boys) Sr. Sec. School, Nahan, District Sirmour, Himachal Pradesh.

Inaugural Ceremony

The 24th Himachal Pradesh State Level Children's Science Congress-2016 was inaugurated on 15th November, 2016 by Sh. Ajay Bahadur, Chairman, HIMFED, and Dr. Rajendra Dobhal, Director General, Uttarakhand Council of Science & Technology was the Guest of Honour.



Inaugural Ceremony

Sh. Kunal Satyarthi (IFS), Joint Member Secretary, SCST&E welcomed the Chief Guests, dignitaries, participating Child Scientists and teachers. Sh. Kunal Satyarthi, Joint Member Secretary highlighted the preamble and features of the programme of HPCSC – 2016.

The Chief Guest, Sh. Ajay Bahadur, visited the science exhibitions, interacted with the young scientists and praised their efforts in giving new dimensions to science. He said the spread of education, farming on barren land and industrial revolution were possible only due to achievements of the science.

About 700 delegates comprising of Child Scientists, Guide Teachers, District Coordinators, Jury members, Staff of SCST&E and other officers of the State Government also attended the four days deliberation from 15th- 18th November, 2016.

The exhibitions covering various fields of science and technology were organised by different State and National Level organisations as per details given below. These exhibitions were the main attraction of the Science Congress and were appreciated by people from all walks of life.



Exhibition visited by Chief Guest and other dignitaries

List of main Exhibition

Sr. No.	Name of organization/ University	Exhibits
1.	Agastya International foundation	Experiments on basic Sciences
2.	Chitkara University	Science Model developed by university
3.	Jaypee University	Science Labs (Advanced)
4.	Bahra University	Models and Robotic car
5.	ATC Sundernagar	Solar Passive Models and Pine needle briquettes
6.	IMD, Shimla	Weather Station
7.	Himurja	Exhibits on renewable energy
8.	PCB	Instruments for air quality monitoring ppm
9.	Eternal University, Baru Sahib, Sirmour, HP	Intervention of Biotechnology in agriculture
10.	G.B. institute of Himalyan Environment, Kullu	
11.	Punjab State Council for Science and Technology	Food testing centre and mobile science van



Exhibition visited by Chief Guests on opening and closing ceremony

Beside exhibitions a number of science competitions viz. (Survey Report, Science quiz, Mathematics Olympiad, Science models, Science Skit and Activity Corner) were organised during the congress. These competitions were conducted on 16th and 17th of November, 2016.



Exhibition visited by Sh. Tarun Kapoor, Principal Secretary,
Environment, Science & Technology, H.P.

Sh. Tarun Kapoor, Principal Secretary, Environment, Science and Technology, visited the venue of HP Children's Science Congress on 16th November, 2016. He interacted with Child Scientists and visited all the exhibitions installed during the Congress.

The following activities were performed during HP Children's Science Congress - 2016

1 Science Activity Corners

Science Activity corners on Physics, Chemistry, Biology, Science puzzle, Origami, Media/Communication, Mathematical Olympiad, Miracle, Computer (Information Technology), etc. were organized. The Quiz was organized for different categories, as, Senior Secondary Group (Class 10th & 10+2), Senior Group (Class 9th & 10th) and Junior Group (Class 6th to 8th). Scientific skit and plays were regularly organized in the evening by all the participating schools.

2. Scientific Project Reports by students on the theme "Understanding Weather & Climate"

107 projects reports on the theme "Science, Technology & Innovation for Sustainable Development with Special Emphasis on accessibility for Persons with Disability" were presented by child scientists from different schools of the State covering 11 Districts during HP Children Science Congress - 2016.

3. Innovative Science Model

Innovative Science Models prepared by the students of different schools of the State on the theme: "Science, Technology & Innovation for Sustainable Development with Special Emphasis on accessibility for Persons with Disability" was displayed during the event.

4. Science Quiz Competition

Science Quiz Competition was organized, the students selected at the District level Children's Science Congress – 2016 participated in the Quiz competition.

The Science Quiz covered all the branches of Science including knowledge about scientific discoveries/ inventions.

5. Mathematical Olympiad

A Mathematical Olympiad was organized during the HP Children's Science Congress – 2016. The students selected at District Level Mathematics Olympiad participated in the State Level Children's Science Congress – 2016.

Prize Distribution/ Closing Ceremony

The prize distribution was held on 18th November, 2016. The closing ceremony was presided over by Sh. Vinay Kumar, Hon'ble Chief Parliamentary Secretary (PWD), H.P. The Chief Guest visited the science exhibitions, interacted with students about project work on a variety of highly relevant local issues and the scientific models prepared by them and praised their efforts.

Sh. Ajay K. Lal, Member Secretary, State Council for Science, Technology & Environment, Sh. Ghanshyam Chand, State Project Director, Sarv Shiksha Abhiyan and Ms. Manjula Sharma, Teacher Training Incharge, Sarv Shiksha Abhiyan were present as special guests.



Closing Ceremony

On behalf of State Council for Science, Technology & Environment, H.P., Sh. Kunal Satyarthi, Joint Member Secretary, SCST&E welcomed the guests, teachers, child scientists, judges and evaluators, presented a brief report of the activities and programme organized during 24th HP Children's Science Congress.

Sh. Vinay Kumar, CPS (PWD) in his speech, appreciated the efforts of child scientists for participation in the State Level Children's Science Congress – 2016 at Nahan. He told that the students have prepared excellent models and are required to be motivated further to carry forward their spirit and interest for adopting science as a career. He further added that the State Govt. is committed for inculcating scientific temper in school students. For the purpose the Govt. has opened many schools having science stream at 10 + 2 level.

Sh. Satyarthi further highlighted and announced that besides participation in National Children's Science Congress and Indian Science Congress, the prize winning students will be undertaken for a training programme at Regional Science Centre, Uttarakhand Council of Science & Technology during February, 2017. He announced that the 16 selected students for NCSC – 2016 will be provided training at UCOST w.e.f. November 27 – 29, 2016. Sh. Satyarthi, further added that a financial grant of Rs. 5000/- will be provided to selected schools for improvement in Innovative Science Models to make them working models.

In the end, Sh. Kunal Satyarthi conveyed his sincere thanks to Ms. Vinti Manuja, Principal Govt. (Boys) Senior Secondary School, Nahan and her dynamic staff for hosting the whole event in an excellent manner. He further conveyed sincere thanks to Sh. Ghanshyam Chand, State Project Director, SSA for supporting this program in letter and spirit.

Sh. Satyarthi expressed gratitude to Ms. Poonam Sood, Deputy Director Elementary Education, Sirmaur and Sh. Hardev Thakur, District Science Supervisor, Sirmaur for making this programme a grand success.

NATIONAL CHILDREN'S SCIENCE CONGRESS – 2016

The 24th National Children's Science Congress was organized at VIIT, Baramati, Maharashtra w.e.f. 27th to 31st December, 2016. The Focal theme for the year 2016 was **“Science, Technology & Innovation for Sustainable Development with Special Emphasis on accessibility for Persons with Disability”**. The Child Scientists from 29 States and 7 UTs participated in the programme. About 1200 child scientists participated in the National Children's Science Congress. A Group of 16 child scientists, selected at the State level Children's Science Congress – 2016 held at Govt. (Boys) Sr. Sec. School, Nahan, w.e.f. Dec 15 -18, 2016 participated in the National Children's Science Congress as per following details.

SL. No.	Name of the Child Scientist	Age	Title of the Project	Name of School
1	Palvi Thakur	13Yrs.	Resource mapping of traditional water source 'Khatris' in Jandru area of Hamirpur district.	GSSS Jandru, Hamirpur
2	Diksha	15 Yrs.	Case study on energy consumption by cooking utensils in Bajaura area.	G.S.S.S. Bajaura
3	Priya Bisht	15 Yrs.	Case study on solid waste and its management in Bajaura area.	G.S.S.S. Bajaura
4	Pritika Rana	16 Yrs.	Chemical farming to organic farming and journey towards eco resort and sanjeevkhethi.	L.M.S. Kullu
5	Vanshika Sharma	13 Yrs.	Water and health sanitation.	L.M.S. Kullu
6	Mohammad Anas	16 Yrs.	Shuddhi karak dwara paritantra ka upchar.	Guru Nanak, Mission Pub School Paonta Sahib
7	Rakesh Kumar	13 Yrs.	Evaluation of the energy efficiency of different chullahs and bio-fuels used in villages.	GSSS Panjahal
8	Shriya Pandit	15 Yrs.	Change in pattern of lifestyles and livelihoods of Gaddis in Dharamshala foothills in relation with tourism activities.	Dayanand Model Sr.Sec School Civil Lines Dharamshala, District Kangra
9	Vishal	14 Yrs.	Study of traditional chullha in village kot and innovation.	Govt. Sr. Sec. School, Kot Tungal, Kotli, Mandi, H.P. - 175003
10	Jyoti	12 Yrs.	Scarcity of bulls for ploughing in village Koon and innovation.	Govt. Sr. Sec. School, Kot Tungal, Kotli, Mandi, H.P. - 175003
11	Divya Bhandari	16 Yrs.	Drainage, ditch system for preventing landslides.	EMRS Nichar
12	Rashi Chandel	12 Yrs.	Health Hygiene	DAV Reckong Peo
13	Kamlesh Sharma	15 Yrs.	Study of traditional houses in terms of climate adaptability cost, maintenance cost, temp., type of roof, energy efficiency etc.	GSSS Gadakufri, Shimla
14	Ishita Goyal	13 Yrs.	Effects of pesticides on land quality	Shivalik Valley School, Solan
15	Saabia	15 Yrs.	Storage of food grains using natural protectants.	St. DR Public Sr. Sec. School, Gagret, Teh. Amb, Distt. Una
16	Shalini	15 Yrs.	Planning on disaster management in our area.	BL Central Public Sr. Sec. School, Kunihar, Solan, H.P.



Some picture of National Children's Science congress – 2016 at VIIT Baramati, Maharashtra

Besides two students along with their escort teachers will participate in 104th Indian Science Congress (ISC) w.e.f. 3rd to 7th January, 2017 at Sri Venkateshwar University, Tirupati.

Projects selected for Indian Science Congress					
Sl. No	Name of Gr. Leader & group members	School name & Address	District	Guide/Escort teacher	Project title
1	Samarjit Jain	Shivalik Valley School	Solan	Sapna Kumari	Effects of pesticides on land quality
2	Isha	Govt. Sr. Sec. School, Kot Tungla, Kotli, Mandi	Mandi	Anil Kumar	Study of traditional chullha in village kot and innovation.

Other prize winners are going to visit Uttarakhand Council for Science and Technology

Science Activity Corner

Sr. No.	Prize winner	School	Category	District
1.	Manav	GSSS Theog	Sr. Sec.	Shimla
2.	Mukund	Arundaya SSS Mohal	Sr. Sec.	Kullu
3.	Richa	GGSSS Bilaspur	Sr. Sec.	Bilaspur
4.	Aditaya	AVN Nahan	Sr. Urban	Sirmaur
5.	Gurleen Kaur	MRA DAV Solan	Sr. Urban	Solan
6.	Shailza	Seven Star Hamirpur	Sr. Urban	Hamirpur
7.	Devanshi	GSSS Urla	Sr. Rural	Mandi
8.	Aman	Doon Valley Nalagarh	Sr. Rural	Solan
9.	Gitika	TR DAV Kangoo	Sr. Rural	Hamirpur
10.	Nandhini	NPS Nurpur	Jr. Urban	Kangra
11.	Vinayak Bodh	OLS Kullu	Jr. Urban	Kullu
12.	Dhananjay Chauhan	GNMPS Paonta Sahib	Jr. Urban	Sirmaur
13.	Revanth	Doon Valley Nalagarh	Jr. Rural	Solan
14.	Saloni	GSSS Moginand	Jr. Rural	Sirmaur
15.	Nikhil	GSSS Ambehra	Jr. Rural	Una

Innovative Science Model Competition

Sr. No.	Prize winner	School	Category	District
1.	Manpreet	GNMPS Paonta Sahib	Sr.	Sirmaur
2.	Mohammad Gammi	GMSSS Dand	Sr.	Chamba
3.	Divyanshu	Minerva Sr. Sec. School, Ghumarwin	Sr.	Bilaspur

Science Quiz Competition

Sr. No.	Prize winner	School	Category	District
1.	Amit Kumar	GSSS Boys, Theog	Sr. Sec.	Shimla
2.	Kamal Sharma			
3.	Arushi Walia	Greenfield Public Sr. Sec. School, Nagrota Bagwan	Sr. Sec.	Kangra
4.	Apresh Kaundal			
5.	Bhumika Thakur	V. Mahavir Public Sr. Sec. School, Sundernagar	Sr. Sec.	Mandi
6.	Himani			
7.	Samriti Sharma	Aradhna Public School, Rohru	Sr. Urban	Shimla
8.	Shreya Sahjta			
9.	Tusar Kaushal	Kids Camp SS, Chowari	Sr. Urban	Chamba
10.	Shweta Chambyal			
11.	Vaishali Kundlas	Doon Valley Public School, Paonta Sahib	Sr. Urban	Sirmaur
12.	Shivani Parkash			
13.	Abhinav Sharma	LMS, Kelheli	Sr. Rural	Kullu
14.	Shiva Bhardwaj			
15.	Akashant Bhardwaj	HAPS Vikas Nagar	Sr. Rural	Hamirpur
16.	Vanshika Thakur			
17.	Atul	City Public School, Kamla Nagar	Sr. Rural	Shimla
18.	Ankit Chauhan			
19.	Ayush Katoch	NPS Nurpur	Jr. Urban	Kangra
20.	Anirudh Deol			
21.	Kanushriya	Doon Valley School, Paonta Sahib	Jr. Urban	Sirmaur
22.	Jaya			
23.	Ishika	Sr. DRSS School, Gagret	Jr. Urban	Una
24.	Chandari Atri			
25.	Sarvesh	GSSS Devamanal	Jr. Rural	Sirmaur
26.	Anish			
27.	Mrigesh Thakur	Cambridge International School	Jr. Rural	Kullu
28.	Arnav Thakur			
29.	Shweta	Greenfield Public Sr. Sec. School, Nagrota Bagwan	Jr. Rural	Kangra
30.	Riya			