

23rd HIMACHAL PRADESH
STATE LEVEL CHILDREN'S SCIENCE CONGRESS – 2015
REPORT

FOCAL THEME: “UNDERSTANDING WEATHER & CLIMATE”



National Organiser



A programme of

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

Organised by



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

in collaboration with

Department of Education, Himachal Pradesh

at

**Padam Govt. (Boys) Senior Secondary School, Rampur, Distt. Rampur Bushahr,
Himachal Pradesh (December 14-17, 2016)**

23rd HIMACHAL PRADESH STATE CHILDREN'S SCIENCE CONGRESS-2015

Background

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 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 and Department of Education, HP 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 Idea Behind Is:-

1. To provide a forum to the children to pursue their natural curiosity and to quench their thirst for creativity;
2. To induce a change in the way science is taught and learnt at schools, by relating the learning process to the physical and social environment around;
3. To encourage children throughout the country to visualize future of the nation and help in building a generation of sensitive & responsible citizens.
4. To stimulate scientific temperament and learn the scientific methodology by data collection, observation, experimentation, analysis and finally arriving at conclusion.
5. To orient the students for competing at Nation Level Science competitions.

As a part of Nation-wide programme, it was decided to organize the 23rd Himachal Pradesh State Level Children Science Congress-2015 under the theme;"Understanding Weather and Climate". The sub-themes for the programme were:

Sub-theme-I: (a) Understanding Weather and Climate.

(b) Impact of human Activities on Weather and Climate

Sub-theme-II: (a) Weather, Climate & Eco Systems

(b) Weather, Climate, Society & Culture

Sub-theme-III: (a) Weather, Climate & Agriculture

(b) Weather, Climate & Health

Inaugural Ceremony

The 23rd Himachal Pradesh State Level Children Science Congress-2015 was inaugurated on 14th December, 2015 by Sh. Dinakar Burathoki, Director Higher Education, Department of Higher Education, Himachal Pradesh at Padam Govt. Sr. Sec. School, Rampur, District Shimla, Himachal Pradesh.

The Chief Guest, Sh. Dinkar Burthoki, 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. He said the theme of this year's children Science congress was the understanding of weather and climate which was relevant in the present situation.

About 600 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 14th - 17th December, 2015.



Sh. Dinkar Burathoki, Director Higher Education Deptt. of Education, Himachal Pradesh inaugurating the HP Children Science Congress – 2015 at Padam Govt. (Boys) Sr. Secondary School Rampur, Distt. Shimla, HP



Participants to the HP Children Science Congress – 2015 Model Exhibition (L) Students participating in Scientific Survey Report (R)

The following activities were performed during HP Children's Science Congress - 2015

1 Science Activity Corners

Science Activity corners on Physics, Chemistry, Biology, Science puzzle, Origami, Media/Communication, Mathematical Olympiad, Miracle, Computer (Information Technology), etc. were organised. The Quiz was organised 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 organised in the evening by all the participating schools.



Students participating in different activities during HP Children Science Congress -

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

110 projects reports on the theme "Understanding Weather & Climate" were presented by child scientists from different schools of the State covering 11 Districts during HP Children Science Congress - 2015.



Students presenting on Scientific Survey Report

3. Innovative Science Model

Innovative Science Models prepared by the students of different schools of the State on the theme: “Understanding Weather & Climate” were displayed during the event.



Students explaining Science Models to the Chief Guest of the inaugural ceremony, and to the

4. Science Quiz Competition

Science Quiz Competition was organised, the students selected at the District level Children’s Science Congress – 2015 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 organised during the HP Children's Science Congress – 2015. The students selected at District Level Mathematics Olympiad participated in the State Level Children's Science Congress – 2015.

6. Exhibitions by various Institutions/ Departments/ NGO's of the State

The Science exhibitions were organised by Appropriate Technology Centre, Sundernagar, India Meteorological Department (IMD), Shimla, HP Pollution Control Board, and Eco-clubs etc.



Prize Distribution/ Closing Ceremony

The prize distribution was held on 17th December, 2015. The closing ceremony was presided over by Sh. P.C. Dhiman, Additional Chief Secretary, (Home, Vigilance, IPH and Education) The Chief Guest, Sh. P.C. Dhiman, inaugurated a weather station which was installed in the Padam Govt. (Boys) Sr. Sec. School, Rampur Bushahr. Then the Chief Guest visited the science exhibitions and interacted with students and praised their efforts.



Chief Guest Sh. P.C. Dhiman (L) and inaugurating the weather station (R)

Dr. Hemant Gupta, Joint Member Secretary, HP State Council for Science, Technology & Environment (SCST&E), Himachal Pradesh during his welcome address, briefly highlighted the various activities that were organised during Children Science Congress – 2015. He appreciated the efforts of the students to express their innovative ideas.



Few Pictures from HP Children's Science Congress - 2015

NATIONAL CHILDREN'S SCIENCE CONGRESS – 2015

The 23rd National Children's Science Congress was organised at Chandigarh University, Mohali, Punjab w.e.f. 27th to 31st December, 2015. The Focal theme for the year 2015 was **“Understanding Weather & Climate”**. 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 – 2015 held at Padam Govt (Boys) Sr. Sec. School, Rampur Bushahr, w.e.f. Dec 14-17, 2015 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	Nelza Thakur	16 Yrs.	To check the feasibility of Innovative Device to reduce carbon content in air	Cambridge International School, Kullu
2	Chandrark Thukral	13 Yrs.	Impact of Urabnisation on Climate Change	Bharat Bharati Public School, Dhalpur, Kullu
3	Vidushi Sharma	13 Yrs.	Case study of the emission of Polluted gases from different types of Chullahs	GSSS, Kais, Kullu
4	Akanksha Sharma	14 Yrs.	Importance of Weather & Climate in the food production of India	Dayanand Bhartiya Public School, Jogindernagar, Mandi
5	Pooja Devi	14 Yrs.	Study of Thermal Comfort	GHS Bandhi, Mandi
6	Vibhuti Sharma	15 Yrs.	Effect of improper disposal of Bio Medical waste on weather & Climate	Him Academy Public School, Hamirpur
7	Anushka Singh	15 Yrs.	Science without religion	Him Academy Public School, Hamirpur
8	Pranshul Lakhanpal	14 Yrs.	Whatever the dangers of the action we take, The dangers of Inaction are Far greater	Him Academy Public School, Vikasnagar, Hamirpur
9	Snajeev Kumar	12 Yrs.	Case study of deteorating helath of pine fruits	GSSS Barror, Hamirpur
10	Era Kanwar	13 Yrs.	Decrease in production of Kharif Crops	Minerva Sr. Sec. School, Ghumarwin, Bilaspur
11	Yashika Dhadwal	15 yrs.	Importance of weather & Climate on health	RNT, Nagrota Bagwan, Kangra
12	Shakshi	13 Yrs.	Weed can feed	DPS Khabli, Kangra
13	Diksha Dubey	16 Yrs.	Let the Eco system stay unchanged	Guru Nanak Mission Public School, Paonta Sahib, Sirmour
14	Pritika Thakur	15 Yrs.	Demonstration and mapping of different disesases spread due to Weather & Climate changes including swine flu at Sangrah, Sirmour	GSSS, Sangrah, Sirmour
15	Kanika Negi	12 Yrs.	Solar Energy for reducing green house gas emissions	Eklavya School, Nichar, Kinnaur
16	Ritika Kashyap	14 Yrs.	Loss of Forests & Water bodies due to change in climate	B.L. Central Public Sr. Sec. School, Kunihar, Arki, Solan

Besides two students along with their escort teachers will participate in 103rd Indian Science Congress (ISC) w.e.f. 3rd to 7th January, 2015 at Mysore University, Karnataka.

<i>Projects selected for Indian Science Congress</i>					
Sl. No	Name of Gr. Leader & group members	School name & Address	District	Guide/Eacort teacher	Project title
1	Gargi Thakur	OLSS, Kullu	Kullu	Yashwant Singh Deepak	Impact of climate change on Agriculture
2	Akshay Kumar	GHS, Teuri, Una	Una	Hardeep Singh	Introduction of low tunnel Polyhouses in Una and its effect on Environment and Sonbhadra river

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23rd HIMACHAL PRADESH CHILDREN SCIENCE CONGRESS - 2015

December 14-17, 2014

Venue: Padam Govt. (Boys) Senior Secondary School, Rampur, Distt. Shimla, H.P.

TECHNICAL PROGRAMME

Day one

Monday, 14th December, 2014

Competition Name	Time	Venue	Programme Co-ordinator
I. Morning Assembly	9.30 - 10.00	Dr. Hemant Gupta, Joint Member Secretary, HPSCST&E, Shimla , State Co-ordinator, Children's Science Congress. Sh. Kamraja Kaisth, Principal Scientific Officer, HPSCST&E, Shimla – Organising Secretary Dr. Aparna Sharma, Sr. Scientific Officer, HPSCST&E, Shimla Smt. Sunanda Pathania, Scientific Officer, HPSCST&E, Shimla <u>Instructions by Programme Co-ordinator</u>	
II. Explaining Activity Kit	10.00 to 1.30 (2.30 to 05.00)	Rooms/ Exhibition area	Co-ordinator: Sh. K. Kaisth, PSO 1. Sh. Amrish, Distt. Science Suoervisor, Solan 2.
III. Science Skit Training Workshop for (Group GI)	10.00 to 1.00 pm.	Room	Co-ordinator: Sh. Ravi Sharma, Senior Scientific Assistant, HPSCST&E 1. Sh. Satish Sharma, Govt. Sr. Secondary School, Bharoli Kohala, Tehsil Jawalamukhi Pin 176036 2. Science Supervisor, Distt. Kangra- Co- ordinator 3. Time Keeper : To be appointed at venue
IV. INAUGURATION	2.30-4.00 P.M.		

V. QUIZ COMPETITION: Junior Urban & Rural (Preliminary Round)	03.30-05.30 pm	Main stage	Co-ordinator: Dr. Aparna Sharma, SSO, HPSCSTE 1. Quiz M – 1. 2. Quiz M – 2. 3. Quiz M – 3. 4. Science Supervisor, Kullu 5. Scorer: Govt. Boys Sr. Sec. School, Rampur 6. Time Keeper: -do- 7. Volunteer Students-2 Govt. Boys Sr. Sec. School Rampur.
VI. SKIT/ PLAY COMPETITION (Group G1) Evening/ cultural programme	5.30 pm - 7.30 pm	Main stage	Co-ordinator: Sh. Ravi Sharma, Sr. SA, HPSCSTE, 1. Sh. Satish Sharma, Govt. Sr. Secondary School, Bharoli Kohala. 2. Science Supervisor, District Kangra 3. Time keeper: Govt. Sr. Sec. School, Rampur 4. Volunteers: Govt. Boys Sr. Sec. School, Rampur Mike/ Lights arrangements/ stage.
VII. Science Activity Kits: i) Biodiversity Activity kits ii) Weather activity kit iii) Chemistry Activity Kit iv) Emergence of Modern Physics v) Understanding Earthquakes vi) Innovative Science Models			Co-ordinator: Dr. Neena Thakur, SSO, HPSCSTE 1. Sh. K. Kaisth 2. Sh. Ravi Sharma 3. Dr. Aparna Sharma 4. Sh. Shashi Dhar 5. Dr. S.S. Randhawa 6. Dr. Neena Thakur

Day two

Tuesday, 15th December, 2015

Morning Assembly Programmes 1. Workshop on Science Learning & Creativity 2. Science Activity Corner (10.00-5.00 pm) 3. Science Quiz (10.00-5.00 pm.)	10.00 – 5.00pm	Dr. Hemant Gupta, Joint Member Secretary, HPSCST&E, Shimla, State Co-ordinator, Children's Science Congress. Sh. Kamraja Kaisth, Principal Scientific Officer, HPSCST&E, Shimla Programme Co-ordinator, Announcements	
a) Sr. Secondary Group G1 & G2	10.30 – 11.30	Main stage/ Ground	1. Quiz Master -I 2. Science Supervisor, Kullu 3. Scorer Govt. Boys Sr. Sec. School, Rampur 4. Time Keeper: -do- 5. Volunteer Students-2

b) Sr. Group G1 & G2(Urban)	11.30-12.30	Main stage/ Ground	1. Quiz Master-II 2. Science Supervisor, Shimla 3. Scorer: Govt. Boys Sr. Sec. School, Rampur 4. Time keeper: -do- 5. Volunteer Student-1
c) Sr. Group G1 &G2 (Rural)	12.30-01.30	Main stage	1.Quiz Master - III 2.Science Supervisor, Sirmour 3.Scorer: GSSS (Boys), Rampur 4. Time keeper: -do-
d) Junior Group (Urban & Rural)	02.00-03.00	Main stage	Quiz master-I 2. Science Supervisor, Kinnaur 3. Scorer: GSSS (Boys), Rampur 4. Time keeper: -do-
II. SCIENTIFIC SURVEY REPORT PRESENTATION (PRESENTATION) Theme I, II, III Focal Theme: "Understanding Weather & Climate"	10.00-5.00	Rooms –	(Sub-Theme-I): Co-ordinaotr: Dr. R.S. Thapa, PSO, Dr. Neena Thakur, Sr. SO (Sub-Theme-II) (Sub-Theme-III) (Junior)
Senior Category: SUBTHEME – I: a) Weather, Climate and Health, b) Weather, Climate and Agriculture			
a) Senior Secondary	10.30-12.30	Room	1
b) Senior (Urban)	12.30-1.30	-do-	Same team
c) Senior (Rural)	2.00-3.00	-do-	Same team
SUBTHEME –II: (a) Weather, Climate – Society and Culture (b) Weather, Climate and Ecosystem			
a) Senior Secondary	10.30- 12.30	Room	1.
b) Senior (Urban)	12.30-01.30	-do-	Same team
c) Senior (Rural)	02.00-03.00	-do-	Same team
SUBTHEME –III: (a) Understanding Weather and Climate around you (b) Impact of Human Activities on Weather and Climate			

a) Senior Secondary	10.30-12.30	Room	1
b) Senior (Urban)	12.30-01.30	-do-	Same team
c) Senior (Rural)	02.00-03.00	-do-	Same team
Junior Category: (Urban & Rural) No subtheme wise categorization.	10.30-01.30 02.00-04.30	Room	
II. QUIZ COMPETITION Continuous Main stage Same Team			
a) Sr. Secondary Group G1 & G2 Preliminary round	10.30-11.30	Main stage/ Ground	Quiz Master: I. Science Supervisor, Solan
a) Sr. Group G1 & G2(Urban)	11.30-12.30	Main Stage/ Ground	Quiz Master: II Science Supervisor, Shimla
b) Sr. Group G1 & G2 (Rural)	12.30-01.30	-do-	Quiz Master III Science Supervisor, Sirmour
c) Junior Group (Urban & Rural)	02.00-03.00	-do-	Quiz Master - I. Science Supervisor, Kinnaur
VI. MATHEMATICAL OLYMPIAD (Screening Test) , Sh. Ramesh Kumar, HPSCST&E, Shimla (Coordinator)			
a) Senior Secondary	04.00-05.00	Hall	
b) Senior Group	04.00-05.00	do	Same team
c) Junior Group	04.00-05.00	do	Same team
V. SKIT/ PLAY COMPETITION (Group G2 (L& Spiti,Kullu, Mandi, Shimla, Sirmour, Solan & Dharamshala	5.30 - 7.30	Main stage	Co-ordinator: Sh. Ravi Sharma, Sr. SA, HPSCSTE, 1. Sh. Satish Sharma, Govt. Sr. Secondary School, Bharoli Kohala. 2. Science Supervisor, District kangra 3. Time keeper: Govt. Sr. Sec. School, Rampur 4. Volunteers: Govt. Boys Sr. Sec. School, Rampur
VI. Science Activity Training for Teachers (2 days):	3.00-5.00	Room No.	Dr. Hemant Gupta, Joint Member Secretary, HPSCSTE: Co-ordinator Science Supervisor, Kinnaur

Day – Three
Wednesday, 16th December, 2015

Morning Assembly Programmes	10.00 - 0.15	Sh. Dr. Hemant Gupta, State Co-ordinator, CSC, HPSCSTE/ Programme Co-ordinator, Sh. Kamraja Kaisth, Principal Scientific Officer, HPSCST&E, Shimla – Organising Secretary Dr. Aparna Sharma, Sr. Scientific Officer, HPSCST&E, Shimla Smt. Sunanda Pathania, Scientific Officer, HPSCST&E, Shimla <u>Instructions by Programme Co-ordinator</u>	
1. Science Activity Corner Science Quiz (Final rounds)	10.00- 5.00pm		
2. Face to face interaction with Eminent Scientists	10.30- 11.30 a.m.		
a) Sr. Secondary Group	11.30- 12.30	Main stage	Quiz Master – I
b) Sr. Group G1 & G2(Urban)	12.30- 01.30	Main stage/ Ground	Quiz Master – II
c) Sr. Group G1 & G2 (Rural)	02.00- 03.00	Main stage	Quiz Master – III
d) Junior Group (Urban & Rural)	03.00- 04.00	Main stage	Quiz Master – I
II. Scientific Survey Report Presentation (continued) Theme -I, II&III	10.30- 05.00	Same rooms	Same Team
III. Mathematical Olympiad (Final)			
a) Senior Secondary	04.00-5.00	Room	Same Team
b) Senior Group	04.00- 05.00	Room	Same Team

c) Junior Group	05.00-06.00	Room	Same Team
a) Senior Secondary	09.00-10.00	Room	Same Team
b) Senior Group	09.00-10.00	Room	
c) Jr. Group	09.00-10.00	Room	
IV. SKIT/ PLAY COMPETITION (G2 Continue)	05.30-07.30	Main stage/ Auditorium	Same Team
V. CULTURAL PROGRAMME (During Inauguration/ closing also)	Schedule to be finalized		Co-ordinator: Sh. Ravi Sharma 1. To be appointed at the venue

Day – Four

Thursday, 17th December, 2015

I. Morning Assembly	10.00-10.30 am.	<p>Dr. Hemant Gupta, State Co-ordinator, CSC, HPSCSTE & Programme Co-ordinators</p> <p>Sh. Kamraja Kaisth, Principal Scientific Officer, HPSCST&E, Shimla – Organizing Secretary</p> <p>Dr. Aparna Sharma, Sr. Scientific Officer, HPSCST&E, Shimla</p> <p>Smt. Sunanda Pathania, Scientific Officer, HPSCST&E, Shimla</p> <p><u>Instructions by Programme Co-ordinator</u></p>
II. SCIENCE MIRACLE SHOW	10.05-11.00 am.	
III. Children/ Scientists: Interaction	10.15-11:15	
IV. Results Compilation	09.30- 11.00 am.	
V. Prize Distribution Function	11.45 - 1.30 pm.	

VI. Science Exhibitions	<p>Co-ordinator: Dr. S.S. Randhawa, SSO, HPSCSTE, Shimla</p> <ol style="list-style-type: none"> 1. Science Activity Corners 2. Miracle Explaining Scientifically (Sh. Saju Ram Bharati,) 3. Exhibition of Solar Technologies by Himurja 4. HFRI, Shimla 5. IMD, Shimla 6. NBPGR, Phagli, Shimla 7. Department of Horticulture 8. Department of Agriculture 9. Forest Department, Publicity Wing
VII. Local organising committee/ Boarding & Lodging of Students, Reception, Inauguration/ Closing	<ol style="list-style-type: none"> 1. Sh. Dalip Singh Negi, SDM, Rampur Bushahar 2. Sh. Som Dutt, DSP, Rampur Bushahar 3. Sh. Mukesh Sharma, Tehsildar 4. Sh. Rakesh Kumar, Deputy Director (Ele. Edu), Distt. Shimla 5. Sh. Shyam Singh, Deputy Director (Higher Edu), Distt. Shimla 6. Sh. B.D. Kashyap, Principal, Padam G (Boys) SSS, Rampur Bushahar 7. Sh. Mehar Chand Thakur, Principal, G (Girls) SSS, Rampur Bushahar 8. Sh. T.S. Bisht, Distt. Science Supervisor, o/o DDEE, Shimla 9. Sh. Rajesh Gupta, Superintendent, o/o DDEE, Shimla
VIII. Student & teacher Affairs discipline, Reception/ Science Activity training for Teachers, Science Exhibition	<p>Sh. Amrit Mahajan, Distt. Science Supervisor, Bilaspur</p> <p>Sh. Ajay Sharma, President HPSMA</p>
IX. Boarding & Lodging of Students & Teachers, linkage with organizing committee & Quiz competition	