



21st HIMACHAL PRADESH STATE CHILDREN'S SCIENCE CONGRESS 2013

20th – 23rd November, 2013

Govt. Boys Senior Secondary School, Dharmshala, Kangra
(Himachal Pradesh)

Focal Theme:

ENERGY: EXPLORE, HARNESS AND CONSERVE



A programme
of

State Council for Science, Technology & Environment (SCST&E), Himachal Pradesh,
in Collaboration with

National Council for Science & Technology Communication (NCSTC),
Department of Science & Technology (DST), Government of India

and

Department of Education, Himachal Pradesh



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BACKGROUND

The main objective of the State Council for Science, Technology & Environment (SCST&E), Himachal Pradesh is the popularisation of science in the state so as to develop scientific temper among school children. To achieve this objective, the SCST&E has been organising *Vigyan Mela's* (Science fairs/Competitions) for school children since, 1988. To ensure more participation in particular from rural areas, these *Mela's* were extended to Block, District and State Level *w.e.f.* 1991. The feedback and evaluation from this programme, pointed out that the programme has created an interest among science students/teachers community in the state. The National Council of Science, Technology & Communication (NCSTC-NETWORK), Department of Science & Technology (DST), Government of India also introduced a new programme Children Science Congress that is being held at National Level since 1993. Since then *Vigyan Mela* programme was restructured & renamed as ***Bal Vigyan Sammelan/ Children Science Congress*** after the evaluation of the programme. The Programme is now held every year in all the 51 Sub-divisions covering the entire state. New activities have been included so as to make the ***Children Science Congress*** more effective and useful for the students & teachers community. The programme is organised for the students of 6th to 12th class of the state in collaboration with NCSTC-NETWORK, DST and Department of Education, Himachal Pradesh as follows:

- Name of Programme** : **Children Science Congress (CSC)**
Organiser : State Council for Science, Technology & Environment (HPSCST&E),
B-34 SDA Complex, Kasumpti, Shimla-171009,
Himachal Pradesh, India.
Collaboration : National Council for Science & Technology Communication (NCSTC),
Department of Science & Technology (DST), Government of India
Department of Education, Himachal Pradesh.

Children Science Congress is organised at four different levels (Sub-division, District, State and National Level. It provides forum for the children between 10-17 years to undertake study in their locality applying the methods of science under the focal 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 of the State. The programme up to district level is organised by the Department of Education, through Deputy Director (Education), Science Supervisors/Science Consultants as per the programme guidelines.

OBJECTIVES

- ❖ To provide a forum to the children to pursue their natural curiosity and to quench their thirst for creativity,
- ❖ To effect a change in the way science is taught and learnt at schools, by relating the learning process to the physical and social environment around,
- ❖ To encourage children's throughout the country to visualize future of the nation and help in building a generation of sensitive, responsible citizens,
- ❖ To stimulate scientific temperament and learn the scientific methodology for observation, collection of data, experimental analysis and then arriving at conclusion,
- ❖ To orient the students of the state for competing in National Level Science Competitions.

ACTIVITIES

A. PROGRAMME AT SUB-DIVISIONAL LEVEL

1. Science Activity Corners

a) Methodology

In the Science Activity Corners simple experiments/activities related to Physics, Chemistry, Biology, Mathematics, Astronomy, Aerodynamics, Allied Sciences, making products from waste materials are organized. The trained resource people from various Organizations/Institutes/Departments judge the corner. The students perform activities in groups and each group of students go to every activity corner. At Sub-divisional level, minimum of ten corners are proposed that could be increased based on the availability of trained teachers. Besides this, all the science students of local schools, where Sub-divisional level function is organized can also participate in the science activity corners.

b) Participation of students from each school

The numbers of maximum students from each school who can participate at sub-division level are as follows:

Senior Secondary School	3 Students	1 Senior Secondary Group, 1 Senior Group & 1 Junior Group
High School	2 Students	1 Senior Group & 1 Junior Group
Middle School	1 Student	1 Junior Group

c) Selection of talented students for District Level

- The maximum number of students participating at Sub-divisional level in Science Activity Corner is limited to maximum of 100 students including those participating in Quiz Competitions and Science Model Competitions also. The number of Science Activity Corners at different levels are as follows:

Sub-divisional level	10
District Level	10-15
State level	15-20

- Each Science Activity Corner Co-ordinator identify maximum of 5 talented students from each category.
- All the identified talented students from all the corners judged by a panel of 3 Judges to test the talent and innovation of students.
- The best 2 performers from each category are selected to participate at the District Level Children Science Congress. Maximum 10 students from all categories can participate in District Level Children Science Congress.

2. Science Quiz Competition

The Science Quiz covers all the branches of Science including knowledge about science discoveries. There are 5 categories (*Senior Secondary, Senior Urban, Senior Rural, Junior Urban and Junior Rural*) in the Science Quiz Competition and prize shared equally by two team mates which is given in the form of some knowledgeable books or in some other form. The winners as well as each participant of Science Quiz Competition get the certificates for the same.

Instructions for organizers

- One entry (a team of two students) for Senior/Junior category sent by a school through Principal/Headmaster to the Science Supervisor/Organizer/Deputy Director of Education of the concerned district.
- District Organizer selects the number of teams through screening to be called for the competition if required.
- If the numbers of teams are more than twenty, the teams are to be short listed by a written test. A screening committee is to be formed for this purpose. The questions for screening test may be framed from Physics, Chemistry, Biology, Environmental Science, Mathematics etc.
- TA/DA of students/teachers borne by the concerned school at Sub-divisional Level. (From the Science fund/Union fund/any other fund).
- The HPSCST&E only provides grant for prizes and organization of programme at Sub-divisional Level.
- There are 5 Categories:
Senior Secondary: 10+1 & 10+2
Senior Urban: 9th & 10th
Senior Rural: 9th & 10th
Junior Urban and Junior Rural: 6th to 8th
- One student from a school can participate in one competition only
- A student coming 1st in any competition at State Level may not be eligible to compete in the same competition/category of Children Science Congress for the next year.

Guidelines/Methodology for conducting Science Quiz

- The Science Supervisor/District Organizer in consultation with Himachal Pradesh State Council for Science, Technology & Environment will identify a panel of quizmasters and submit their brief bio-data to the HPSCST&E for the district level. The quizmaster should preferably be appointed out of the panel.
- There is one visual round and one or two Science activity rounds in which talent of student is tested rather than memory.
- The quizmaster prepares the quiz cards prior to the competition, incorporating latest questions. Visual rounds may also be incorporated.
- The latest scientific developments must be incorporated while formulating the Quiz Cards.
- A set of questions asked in the Quiz competition are attached with the report of the programme.

Programme Schedule

The Science Quiz for Senior Secondary, Senior/Junior is to be organized in a number of parallel sessions. Scorer/timekeeper keeps the record.

Eligibility for participation in the District Level

The team standing first at Sub-divisional competition may participate in the District Level competition except in case of districts where the numbers of Sub-divisions are 2. In such Districts, the teams standing 1st and 2nd may participate at the District Level Quiz competition. For Senior Secondary category, there is screening.

3. Innovative Science Model Competitions

There is open competition at Sub-divisional Level. For Innovative Science Model Competition there is one category viz. students of 9th to 12th classes. "**Energy Conservation and Universe**" is the focal theme for this year Science Model Competition. The students should present working science model with a concept note in Hindi/English/Handwritten/Typed along with diagram or sketch on the prescribed format. The model should be low cost with original work. It should not repeat the conventional science principals. It should be creative, innovative and applied with the concept. Everyone seems to be researching alternative energy sources nowadays. With these energy and power, science fair projects, the participants can:

- Investigate how natural resources like sunlight, wind and water produce power and create energy to run wind turbines, heat homes and even generate electricity.

- Study fuel and convert chemicals into electricity.
- Explore energy and moneysaving ideas for computer and for gas for one's family's car.
- Create their own homemade models, such as wind turbines and geothermal plants and put them to work with wind and water power.

The following areas that have relevance with reference to Himachal Pradesh are identified for this competition or the students may have any other innovative ideas related to Energy.

- Scope of Wind Mills on the ridges of Himalayas
- Harnessing potential of Solar Energy for the conservation of fossils fuels
- Harnessing renewable Energy
- Exploring rivers for Hydro-electric power
- Hydro-electric power as a potential source of Energy in Himachal
- Exploring Geo-thermal Energy in Himachal.

B. PROGRAMME AT DISTRICT LEVEL

1.Science Activity Corners: Same as per Sub-divisional Level

2.Scientific Project Report Competition:

Focal Theme: “Energy: Explore, Harness and Conserve”

Sub themes:

Sub theme: I	Sub theme: II	Sub theme: III
(a)Energy Resources	(a)Energy and Society	(a)Energy Management and Conservation
(b) Energy Systems	(b) Energy and Environment	(b) Energy Planning and Modelling

3.Science Quiz Competition: Same as per Sub-divisional Level

4.Innovative Science Model Competition: Same as per Sub-divisional Level

5.Science Skit/Play Competition

This programme is held at District & State Level only.

Science Skit on any of the following themes can be presented with typed/hand written Script with names of script writer and players (5 only)

The focal theme for Science Skit Competition: **“Energy Conservation and Universe”.**

Sub Themes:

- Contribution of Indian Scientists in the field of Energy
- Conservation of Energy
- Any other issue of relevance to science.

Methodology

Time: (Maximum 15 minutes)

- The scripts for the Science/Skit Play Competition invited by the District organizer.
- Each school can send only one script of Skit/Play as per theme.
- The screening committee select only five teams from all over the district.
- The selected teams invited to compete at District Level Function.
- The screening Committee have the members with background in Science, Dramatics and Writing.
- The programme is to be conducted in the evening.
- The number of students should be 3-5 maximum. In case participants exceed to five it lead to the disqualification of team.
- The team can also be selected out of the students participating in other competitions.
- The Scriptwriter accompanies the team.
- Skit/Play on these ideas must be able to send a message and create interest among audience.
- The script of the Play has to be submitted and the title of Skit must be specific.

Eligibility for the State Level Children Science Congress

The team standing first at the District Level Children Science Congress participate at the State Level Children Science Congress. The Script of the Skit has to be submitted during State Level Children Science Congress. Non-submission of the script leads to disqualification of the team. The prize is to be shared by all the team members.

C. PROGRAMME AT STATE LEVEL CHILDREN SCIENCE CONGRESS

Open Competitions

1. **Science Activity Corners:** Same as per District Level

2. **Scientific Project Report Competition**

Focal Theme: "Energy: Explore, Harness and Conserve"

Sub themes:

Three

Sub theme-I

(a) Energy Resources

(b) Energy Systems

Sub theme-II

(a) Energy and Society

(b) Energy and Environment

Sub theme-III

(a) Energy Management and Conservation

(b) Energy Planning and Modelling

3. **Science Quiz Competition:** Same as per District Level

4. **Innovative Science Model Competition:** Same as per District Level

5. **Science Skit/Play Competition:** Same as per District Level

Details of Children Science Congress (*Bal Vigyan Sammelan*) held in Himachal Pradesh (Since 1993 onwards)

S.N.	Year	Venue & Date of State Level	District	Number of Participants	Focal Theme	Venue & Date of National Level
1 st	1993	Government Senior Secondary School, Chamba 18-20, November, 1993	Chamba	300 Students/Teachers	LandWater/Sky and Habitat	Delhi 20-23, December, 1993
2 nd	1994	Himachal Pradesh University, Shimla 24-26, November, 1994	Shimla	400 Students/Teachers	Clean Up India	Delhi 27-31, December, 1994
3 rd	1995	Dr. Y.S. Parmar University of Horticulture & Forestry, Nauni, Solan 18-21, November, 1995	Solan	500 Students/Teachers	Clean Up India	Guwahati 27-31, December, 1995
4 th	1996	Himachal Pradesh Krishi Vishvavidyalaya, Palampur 15-18, November, 1996	Kangra	500 Students/Teachers	India of our dreams: Let us go for it	Hyderabad 27-31, December, 1996
5 th	1997	Central School for Tibetan, Paonta Sahib 27-30, November, 1997	Sirmour	500 Students/Teachers	India of our dreams: Let us go for it	Bhopal 27-31, December, 1997
6 th	1998	Government Polytechnic College, Sundernagar 9-12, December, 1998	Mandi	500 Students/Teachers	Nature: Let us Conserve, Share & Care	Chennai 27-31, December, 1998
7 th	1999	Government Boys Senior Secondary School Hamirpur 10-13, November, 1999	Hamirpur	500 Students/Teachers	Nature: Let us Conserve, Share & Care	Goa 27-31, December, 1999
8 th	2000	Government Girls Senior Secondary School, Ghumarwin 10-13, November, 2000	Bilaspur	500 Students/Teachers	Indigenous Scientific knowledge for a Better Tomorrow	Calcutta 27-31, December, 2000
9 th	2001	Government Boys Senior Secondary School, Kullu 9-12, November, 2001	Kullu	500 Students/Teachers	Indigenous Scientific knowledge for a better Tomorrow	Pune 27-31, December, 2001
10 th	2002	Government Boys Senior Secondary School, Una 27-30, November, 2002	Una	500 Students/Teachers	Food System: Towards nutrition for all	Mysore 27-31, December, 2002
11 th	2003	Government Boys Senior Secondary School, Chamba 3-6, December, 2003	Chamba	500 Students/Teachers	Food System: Towards nutrition for all	Lucknow 27-31, December, 2003
12 th	2004	Government Boys Senior Secondary School, Mandi 18-21, December, 2004	Mandi	500 Students/Teachers	Harness water resources for a better future	Guwahati 27-31, December, 2004
13 th	2005	Government Boys Senior Secondary School, Dharmshala	Kangra	500 Students/Teachers	Harness water resources for a better future	Bhubaneswar 27-31, December, 2005

14 th	2006	8-11, November, 2005 Government Boys Senior Secondary School, Nahani 17-20, November, 2006	Sirmour	500 Students/Teachers	Bio-diversity:Nurture-Nature for our future	Gangtok 27-31, December, 2006
15 th	2007	Government Boys Senior Secondary School, Manali 23-26, November, 2007	Kullu	500 Students/Teachers	Bio-diversity:Nurture-Nature for our future	Baramati 27-31, December, 2007
16 th	2008	Dr. Y.S. Parmar University of Horticulture & Forestry, Nauni, Solan 16-19, November, 2008	Solan	600 Students/Teachers	Planet Earth our Home: Explore, Care & Share	Diampur 27-31, December, 2008
17 th	2009	Government Girls Senior Secondary School, Bilaspur 24-27, November, 2009	Bilaspur	600 Students/Teachers	Planet Earth our Home: Explore, Care & Share	Ahmadabad 27-31, December, 2009
18 th	2010	Government Boys Senior Secondary School, Hamirpur 14-17, November, 2010	Hamirpur	600 Students/Teachers	Land Resources: Use for Prosperity, Save for Posterity	Chennai 27-31, December, 2010
19 th	2011	DAV Senior Secondary School, Una 24-27, November, 2011	Una	600 Students/Teachers	Land Resources: Use for Prosperity, Save for Posterity	Jaipur 27-31, December, 2011
20 th	2012	Bharti Public School, Chamba 24-27, November, 2012	Chamba	600 Students/Teachers	Energy: Explore, Harness and Conserve	Varanasi 27-31, December, 2012
21 st	2013	Government Boys Senior Secondary School, Dharmshala 20-23, November, 2013	Kangra	600 Students/Teachers	Energy: Explore, Harness and Conserve	Bhopal 27-31, December, 2013

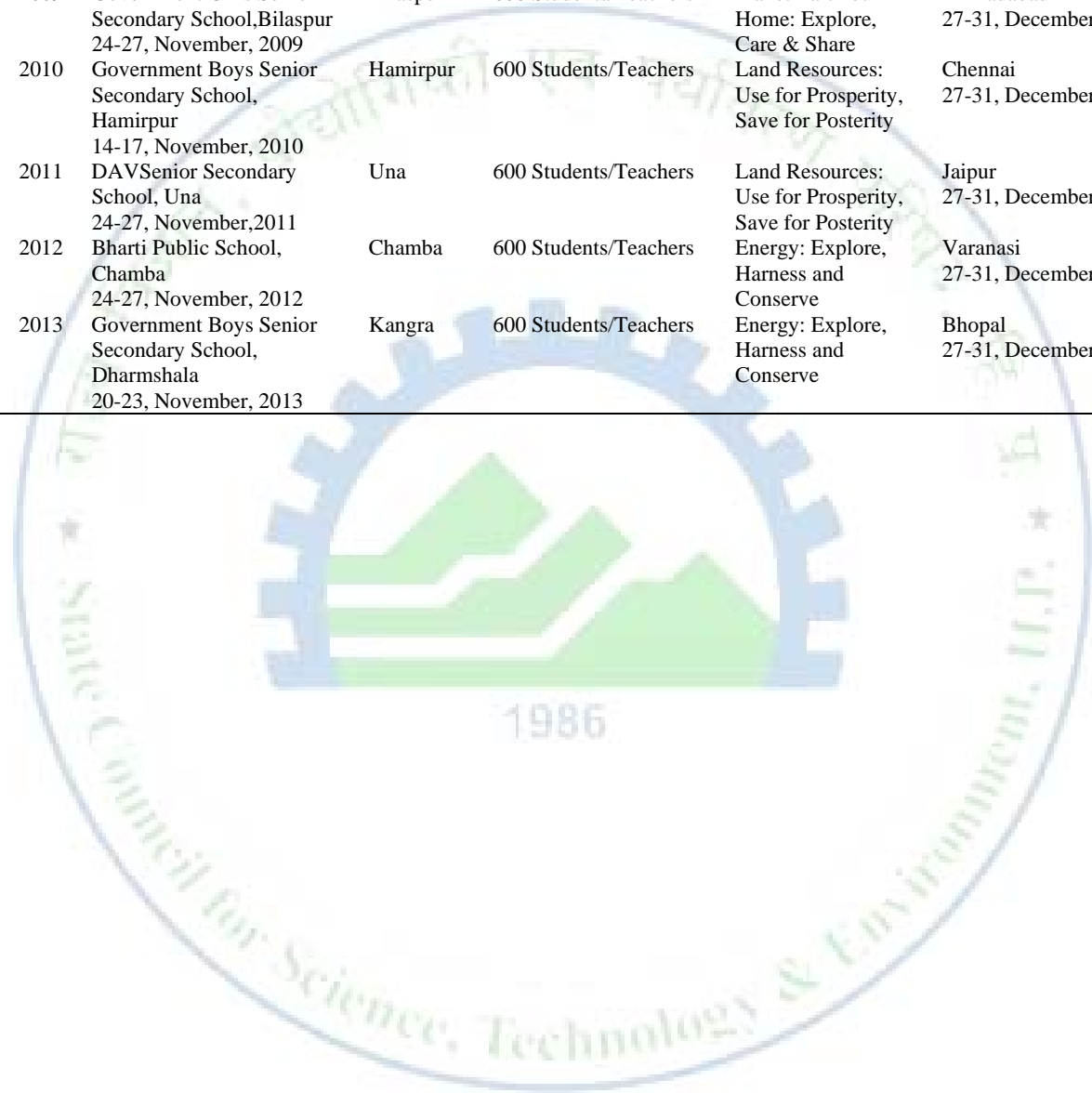
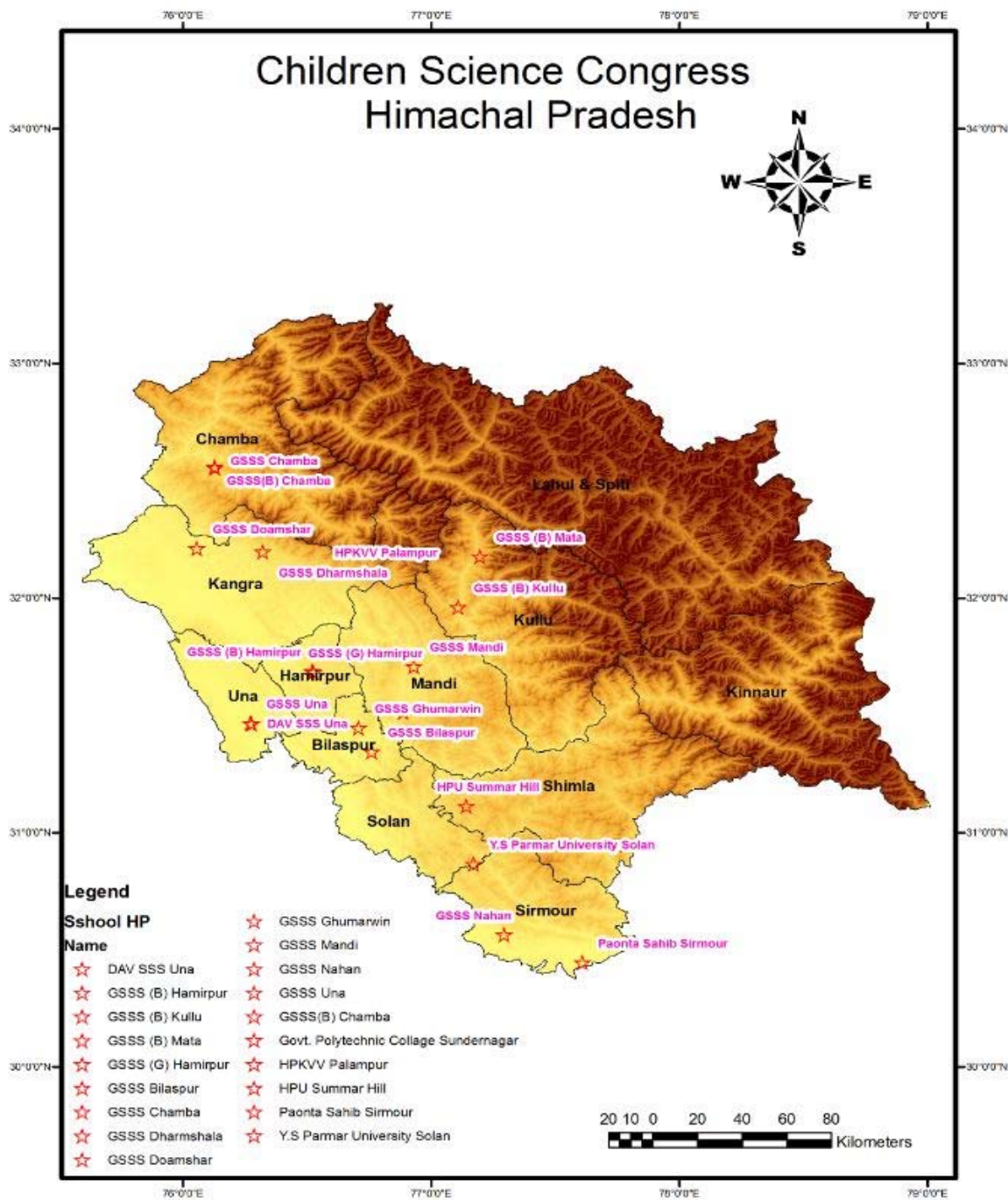


Fig. 1.Venue of Children Science Congress held in Himachal Pradesh (Since 1993 onwards)



List of District Co-ordinators

S. N.	District's Name	Name of District Co-ordinator	Profession	Correspondence Address	Contact No.
1	Bilaspur	Sh. Amrit Mahajan	Science Supervisor	Science Supervisor O/o Deputy Director of Elementary Education, Bilaspur, District Bilaspur, Himachal Pradesh	+91 94180-47143
2	Chamba	Sh. Yogshwar	Science Supervisor	Science Supervisor O/o Deputy Director of Elementary Education, Chamba, District Chamba, Himachal Pradesh	+91 94183-13114
3	Hamirpur	Sh. Ashwani Chambayal	Science Supervisor	Science Supervisor O/o Deputy Director of Elementary Education, Hamirpur, District Hamirpur, Himachal Pradesh	+91 94180-73781
4	Kangra	Smt. Neena Katoch	Science Consultant	Science Consultant O/o Deputy Director (Higher Education) Dharmshala District Kangra, Himachal Pradesh	+91 94180-05093
5	Kinnaur	Sh. Ganesh Kumar	Science Supervisor	Science Supervisor O/o Deputy Director of Elementary Education, Recong-Peo, District Kinnaur, Himachal Pradesh	+91 88941-38432
6	Kullu	Sh. Parmod Arora	Science Supervisor	Science Supervisor O/o Deputy Director of Elementary Education, Kullu, District Kullu, Himachal Pradesh	+9194180-70577
7	Mandi	Sh. Yudh Singh	Science Supervisor	Science Supervisor O/o Deputy Director of Elementary Education, Mandi, District Mandi, Himachal Pradesh	+91 94187-24087
8	Shimla	Sh. Thakur Sen Bisht	Science Supervisor	Science Supervisor O/o Deputy Director of Elementary Education, Shimla, District Shimla, Himachal Pradesh	+91 98170-18107
9	Sirmour	Sh. Hardev Thakur	Science Supervisor	Science Supervisor O/o Deputy Director of Elementary Education, Nahan, District Sirmour, Himachal Pradesh	+91 97365-20789
10	Solan	Sh. Anil Bali	Science Supervisor	Science Supervisor O/o Deputy Director of Elementary Education, Solan, District Solan, Himachal Pradesh	+91 98161-10008
11	Una	Sh. Anuj Kumar	Science Supervisor	Science Supervisor O/o Deputy Director of Elementary Education, Una, District Una, Himachal Pradesh	+91 94184-95244

Details of tentative budget allocated for Sub-division and District Level Children Science Congress during 2013

S.N.	District	Amount (in Rs.)
1.	Deputy Director, Higher Education, Dharmshala, District Kangra	1,14,870
2.	Deputy Director, Elementary Education, RecongPeo, District Kinnaur	62,145
3.	Deputy Director, Elementary Education, Mandi, District Mandi	1,03,440
4.	Deputy Director, Elementary Education, Bilaspur, District Bilaspur	80,580
5.	Deputy Director, Elementary Education, Una, District Una	86,295
6.	Deputy Director, Elementary Education, Hamirpur, District Hamirpur	92,010
7.	Deputy Director, Elementary Education, Kullu, District Kullu	92,010
8.	Deputy Director, Elementary Education, Nahan, District Sirmour	92,010
9.	Deputy Director, Elementary Education, Solan, District Solan	92,010
10.	Deputy Director, Elementary Education, Chamba, District Chamba	1,03,440
11.	Deputy Director, Elementary Education, Shimla, District Shimla	1,09,155

State level Children Science Congress programme – 2013

- I. Science Activity Corners
- II. Scientific Project Report Competition
Focal Theme for 2013: “Energy: Explore, Harness and Conserve”
Sub themes: Three
- Sub Theme-I. (a) Energy Resources
(b) Energy Systems
- Sub Theme-II. (a) Energy and Society
(b) Energy and Environment
- Sub Theme-III. (a) Energy Management and Conservation
(b) Energy Planning and Modeling
- III. Science Quiz Competition:
Eligibility for participation in the State level CSC programme:
The team consisting of 2 students standing first in each Distt. Level CSC in each category will participate in the State level Competition.
- IV. Science Skit/Play competition: This programme will be held at District & State level only.
Categories: There will not be any Senior / Junior Categorization. Student from Class 6th to 10+2 can participate.
- V. Innovative Science model Competition (9th class to 12th class):
There will be only one category viz. students of 9th class to 12th class. This completion will be held at Sub-division, District and State Level Children’s Science congress.
- VI. Mathematical Olympiad competition for participating students (No Urban/Rural)
Categories: There will be Sr. Secondary, Senior & Junior Categorization.
- VII. State Level Science Activity Corner, Training of teachers, Workshop for participating teachers (Two days) Science Activity Corner workshops for participating teachers will be organized in tow groups. Each participating teacher has to participate in the Science Activity Corner workshop.
- VIII. Science exhibitions CSC.
- Science Activity Corner, Training workshop for participating teachers
 - Astronomy Awareness Programmes (sky watching)
 - Science Exhibitions by different organisations
 - Interaction of Eminent Scientist with students/ teachers Science Activity Corners on Miracle explaining
 - Popular Science lectures.
 - Earth quake resistant house by Appropriate Technology Centre, Sunder Nagar
- IX. Cultural Heritage: Cultural evening by participates from different districts.

For more information please contact:

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