CENTRAL BOARD OF SECONDARY EDUCATION

SHIKSHA KENDRA, 2, COMMUNITY CENTRE,
PREET VIHAR, DELHI-110092

CBSE/DIR/(ACAD)/Text/2004/ **30th April, 2004**
Circular No:23

To

All the Head of Institutions
Affiliated to CBSE

SUB: Regional level and National level CBSE - INTEL Science Exhibition Competition

Dear Principal,

You are aware that Central Board of Secondary Education has been taking several initiatives to provide additional academic inputs to bring greater academic vibrance among its affiliated schools. Keeping in view the fact that the current calendar year 2004 has been designated as the year of scientific awareness, the Board has decided to organize different activities related to the subject of Science and Technology. One such activity relates to conduct of regional level and National level CBSE - INTEL Science Exhibition Competition from the current academic year culminating into participation of the selected schools in the Jawaharlal Nehru National Science Exhibition for children organized by National Council of Educational Research and Training, New Delhi in the month of November. The Board is also organising an exhibition on Science projects in collaboration with Intel India. The following will be the key parameters of the competition.

a) Every participating school will be represented by not more than two exhibits/ projects and two/three students. The exhibits/models may include working models or simulations/schematic designs. The students may be studying in any of the classes from IX-XII.

b) Every participating school will submit an advance report/synopsis on the project/ model in the enclosed format on any one of the given sub-themes. The format of the report synopsis is enclosed alongwith the registration form.

c) The participating school will pay a nominal fee of Rs. 100/- (Rupees One hundred) per exhibit towards registration fee. Payment should be made in the form of demand draft in favour of Regional Officer, CBSE payable at respective centre. Besides, the school will bear the entire expenditure for lodging/boarding/travelling expenses incurred during participation in the Science fair.

d) The said exhibition will be organized at Regional/National level by CBSE. The selected few schools at the national level will be nominated to participate in the annual Jawaharlal Nehru Science Exhibition organized by NCERT in the month of November.

e) The registration form alongwith the brief report/synopsis and the demand draft is to be **submitted to the respective regional officer.**

f) The last date for registration for the competition is **July 15, 2004.**

g) The regional level competition is likely to be held in the 2nd/3rd week of August. The participating schools will be informed through website as well as individually. The selected schools will participate in the national level exhibition of the Board in the month of September 2004.

h) The main theme and sub-themes for preparing working models/exhibits/projects for the exhibition are as under:

Main Theme	:	Science and Technology in the changing World
Sub Themes	:	Food and Health
	:	Energy
	:	Information Technology
	:	Industry
	:	Transport and Communication
	:	Biotechnology

The models/exhibits may include :

- Working model to demonstrate
- Schemes/Designs of devices or machines
- Simulations/Schematic designs
- Indigenous designs of devices/machines
- Schemes/designs to reduce production cost
- Working models of equipment to control and measure
- Improved/Improvised models
- Applications of basic principles.
- Models of equipment/devices/gadgets/Techniques
- Innovative/inexpensive designs and techniques.

It may be noted that every participating school should prepare the model/exhibits on any one of the sub-themes which may satisfy any or more of the above parameters.

A brief report of themes and sub themes is enclosed for your convenience and support.

Yours faithfully,

(G. BALASUBRAMANIAN)
DIRECTOR (ACAD.)

Regional level and National level CBSE Science Exhibition competition

Main Theme and Sub Themes for Exhibits

Brief Description

Main Theme : Science and Technology in the Changing World

This theme aims at :

i) highlighting the role of science and technology in improving upon the quality of life in view of the fast changing world scenario;

ii) developing awareness about the importance of science and technology in the national development vis-à-vis the global changes;

iii) emphasizing the role of science and technology in producing good quality materials for the use of the society;

iv) making the children realize the ways in which science and technology have helped in the development of such areas as agriculture, energy, transport and communication, industry and spread of information technology.

v) Providing an opportunity to get acquainted with different kinds of equipment, devices, gadgets and techniques that science and technology have helped to develop.

Sub-themes :-

I FOOD AND HEALTH

The main objective of this 'sub-theme is to make the children appreciate how improved agricultural practices have made the world, specially our country, self-sufficient in the production of food grains, besides bringing about a general improvement in the quality of life of the people.

The exhibits/models under this sub-theme may include :

1) Innovative/improved designs of farm machinery;

2) Inexpensive and improved techniques of farming;

3) Working models of major irrigation projects and designs/plans for improving irrigation facilities;

4) Working models of fertilizers, biofertilizers and pesticides manufacturing plants and improved pits for producing manure by vermiculture;

5) Innovative/inexpensive improved techniques/methods of storage/preservation/ conservation/transport of agricultural inputs/products and related materials;

6) Application of biotechnology for the improvement of breeds of seeds, plants and animals and processing of various food products;

7) Improvement in the quality of livestock;

8) Working models of diagnostic tools against major diseases of animals and plants.

II ENERGY

The main purpose of this sub-theme is to make the students feel a need to study and analyze various aspects of energy generation, transmission, distribution and management.

The exhibits in this sub-theme may include ;

1 Working models to demonstrate structure and working of different types of power plants, such as thermal, hydel, nuclear, solar, geothermal, tidal and windmills.

2 Schemes/designs of devices or machines to harness energy from non-conventional sources;

3 Schematic designs/working models of fuel-efficient engines/machines/hearths/ chullahs.

4 Working models/simulation/designs of devices for harnessing energy from non-conventional sources.

5 Simulations/schematic designs to demonstrate the use of new materials (like super-conducting material, nanomaterials, optical fibres etc.)

III INFORMATION TECHNOLOGY

The exhibits in this sub-theme may include:

1. Working models demonstrating the principle and functioning of modern devices of communication, such as television and radio (AM/FM), E-mail, Internet, etc.

2. Working models/exhibits to show how the information in any of the areas mentioned earlier can be accessed;

3. Working models showing the use of information technology for presentation and conservation of soil; water management and mapping of world's water resources;

4. Models showing application of information technology for improving upon the quality of seeds of fruits; vegetables and flowers.

5. Working models showing the use of information technology in developing improved designs of machineries for textiles, engineering goods, machine tools, chemicals, drugs and pharmaceuticals and plastics and eco-friendly materials;

6. Demonstrating the use of information technology in developing improved designs/indigenous designs/working models of devices;

7. Working models to show the use of multimedia in making the teaching-learning process more interesting and effective.

8. Development of such software which may help individual students to learn at their own pace.

9. Development of design/models of multimedia, equipment/materials.

IV INDUSTRY

The exhibits/models in this sub-theme may include:

1. Use of innovations/improvements that may help in increasing production in various industries, such as textiles, engineering goods, machine tools, chemicals, drugs and pharmaceuticas including life-saving drugs, vaccines and devices;

2. Working models of improved versions of various types of machines and manufacturing plants;

3. Improved/indigenous design/working models of devices which may be used on small scale for production/manufacture of utility items of daily life;

4. Schemes/designs to help reduce production cost.

5. Working models of devices/equipment to demonstrate the control and measurement of noise, air, water and soil pollution.

V TRANSPORT AND COMMUNICATION

The exhibits/models in this sub-theme may include:

1. Indigenous/Improvised/Improved devices for world-wide communication of verbal/printed/Pictorial information.

2. Improvised/indigenous models for efficient transport and fast communication.

3. Working models of fuel efficient/pollution-free designs of automobiles.

4. Innovative ideas for efficient management of road; rail, water and air transport systems.

5. Models showing preparedness for disaster.

6. Working models of devices for recording and reproduction of audio-visual material.

7. Working models of printing technology.

VI BIOTECHNOLOGY

The exhibits/models under this sub-theme may include innovative working models on :

1. Application of micro-organisms, systems or processes to manufacturing and service industries;

2. The use of living organisms and their components in substantial agriculture, food, industrial process and health;

3. Genetically modified crops/food; Recombinant proteins and single cell protein;

4. DNA finger printing;

5. Protein synthesis.

CBSE - INTEL SCIENCE EXHIBITION

REGISTRATION FORM

1. Name of the School .....
2. CBSE Affiliation Number .....
3. Complete Postal Address .....

   of the School (with Pin Code) .....
4. School Phone Number .....

   (With STD / ISD Code) .....
5. School E-mail Address .....
6. School Fax No. .....
7. Title of the Model / Exhibit(s) .....
8. Amount and details of the draft .....
9. Signatures of Principal .....
   (with school seal & date)

Mail to :

Regional Officer

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Important : The last date for submission of report / synopsis of the exhibit is **15th July, 2004**