CENTRAL BOARD OF SECONDARY EDUCATION
SHIKSHA KENDRA, 2 COMMUNITY CENTRE,
PREET VIHAR, DELHI-110092

CBSE/DIR(ACAD)/Sc.Exh. /2005/ **7th March.2005**
Circular No. 15/2005

To
All the Heads of the Institutions
Affiliated to CBSE

SUB: Regional level CBSE Intel Science Exhibition Competition

Dear Principal,

You may be aware that Central Board of Secondary Education organized its first Regional level and National level Science Exhibition in the preceding year. The response and participation of the schools all over the country was immensely encouraging and satisfying. These exhibitions are aimed at sensitizing the learners to the applications of Science and Technology in today's society and increasing the awareness of the role of Science & Technology in the service of mankind.

You will be glad to know that the Board has again decided to organize Regional level and National level Science Exhibition in collaboration with Intel India. The main theme and sub-theme for models/exhibits/projects for this year's exhibition are as under:-

Main Theme - Recent Trends in Science & Technology

Sub Theme -
1) Agriculture
2) Energy & its conservation
3) Industrial Development and Environment
4) Educational Technology
5) Technology in Health
6) Mathematical Modeling

The Models/Exhibits/projects 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
- **Research-based investigatory study projects**

The following will be the key parameters of the competition:-

a) Every participating school will represented by two exhibits/projects and a maximum of three students. These exhibits may include **working models or research based projects**. The participating students may be studying in any of the classes from IX to XII.

b) Every participating school will submit an advance report/synopsis of 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) Every participating school will pay a nominal fee of **Rs.100/- towards registration fee**. Payment should be made in the form of a **demand draft in favour of Regional Officer, CBSE** payable at **respective Regional Office**. Besides, the schools will bear the entire expenditure for lodging/ boarding/ traveling expenses incurred during participation in the competition.

d) The said exhibition will be organized at regional level by the Board at the identified centers.

e) The participating schools will be informed about the same shortly. The selected few schools at the regional level will be eligible to participate in the National level exhibition.

f) The Registration form (Form A) along with the brief report/synopsis (Form B) and the demand draft is to be submitted to the respective Regional Office. In no case this form be sent to Headquarters.

g) The last date for registration for the competition is **July 15, 2005.**

h) The Regional level competition is likely to be held in the month of August. The participating schools will be informed through CBSE website as well as

individually. A brief information about the themes and sub-themes is enclosed for your convenience and reference.

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

Yours faithfully,

(G.BALASUBRAMANIAN)
DIRECTOR(ACADEMIC)

Regional level and National level CBSE Science Exhibition Competition

Main Theme and Sub-Themes for Exhibits

Brief Description

Main Theme : Recent Trends in Science and Technology

This theme aims at

i) making the children realise the ways in which Science and Technology is affecting everyday life.

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

iii) laying emphasis on the development of science and technology as a major instrument for achieving goals of self-reliance and socio-economic development.

iv) emphasizing the role of science and technology for producing good quality materials for the use of society.

v) highlighting the role of science and technology in the exploration of new incognition of the mind.

Sub-Themes

I **Agriculture**

The main aim of this sub-theme is to make our school children and teachers realize the need of studying and removing the constraints responsible for 'Knowledge Gap' on rural professions. It further aims at conveying the message how a knowledge revolution is now necessary to enhance our agricultural competitiveness.

The exhibits in this sub-theme may pertain to :

1. indigenous designs of farm machinery, agricultural implements and practices.
2. issues related to the animal health and food safety
3. ecologically sustainable farming methods
4. innovative/inexpensive/improved/ indigenous technology/conservation and transport of agricultural and animal products and food materials.
5. rainwater harvesting and storage
6. waste water treatment and recycling.
7. river water sharing, efficient and equitable use.
8. application of biotechnology, microbiology, genetic engineering for improved and high yielding varities.

II **Energy and its conservation**

The main objective of this sub-theme is to make the students realise the need to study and analyse various aspects of energy generation, transmission, distribution and management.

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

1. Working models of production of electrical energy from mechanical sources.
2. design of fuel-efficient engines, machines etc.
3. mechanism of extraction, storage and processing of fossil fuels.
4. active and passive solar energy system.
5. design of solar heating devices.
6. Principles and design of solar panels and solar still.
7. study of propeller designs for wind generators
8. effects of landscaping and architecture on energy consumption.
9. methods of heat retention in materials.

III **Industrial Development and Environment**

The main objective of this sub-theme is to help us understand to think less about conquering nature and more about learning to work with nature.

The exhibits and projects on this sub-theme may pertain to :-

1) Models of improved versions of various types of machines and manufacturing plants.
2) schemes/ designs to help reduce production cost and conservation of raw materials
3) use of eco-friendly innovations that may help in increasing the industrial production.
4) innovative methods of exploration and processing of minerals, crude oil etc.
5) plans for proper management of natural resources and environment
6) devices or methods that control pollution
7) impact of pollution on living and non-living.
8) preservation, conservation and management of soil
9) awareness about various aspects of environment and disposal of harmful effluents.
10) experiments with biodegradability.

IV **Educational Technology**

The prime aim of this sub-theme is create awareness about suitable indigenous technology that can be developed for designing and fabricating educational aids for teaching different subjects.

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

1) designing and fabrication of effective educational models by using indigenous raw materials.
2) innovative and inexpensive models of audio-visual equipment (especially multi-media)
3) low cost educational toys and games
4) curriculum based low cost demonstrations
5) use of internet and computers
6) applications in education using the computer as an educational tool : simulations in science and non-science areas etc.

V **TECHNOLOGY IN HEALTH**

The main theme of this sub-theme is to make our children realise that how the advancements in science and technology have revolutionized the medical sciences in improving the general public health.

The exhibits in this sub-theme may pertain to :-

1. Creating awareness about symptoms/ carriers/causes of common diseases/ailments.
2. improved methods of sanitation and appropriate technology for waste disposal, both biodegradable and non-biodegradable.
3. need for appropriate measures for family welfare.
4. need for developing low-cost nutritious food
5. general awareness about occupational hazards and innovative techniques to overcome them.
6. general awareness about community medicines.
7. improved aids to visually impaired and physically handicapped person.
8. need to curb menace of alcohol consumption, drug addiction and smoking.
9. genetic studies.

VI **MATHEMATICAL MODELLING**

The main aim of the sub-theme is to create awareness amongst the learners about the mathematical modeling methods and their role in the present day technology-based society. It encompasses all applications of mathematics, computer technology etc. to real life situation.

The exhibits/ models/ projects in this sub-theme may pertain to :-

1. Mathematical models related to environment.
2. Mathematical models of heart, brain, kidney, language, bone etc.

3. computer diagnosis of human diseases.
4. probability for the accuracy of calculators and computers.
5. applications of mathematical equations used in understanding various nuclear and sub-nuclear processes.
6. mathematical models of physical geography such as rotation and revolution of earth etc.
7. applications of mathematical equations to biological solutions.
8. studies of storage and retrieval techniques for computer systems.
9. statistics and random number problems.

CBSE – INTEL SCIENCE EXHIBITION

PROFORMA FOR RESEARCH BASED PROJECT REPORT/ SYNOPSIS

FORM B
(To be filled only if the school is submitting Research based Project

(To be submitted to respective Regional Officer along with Form A)

1. Name of the School----------
(with complete address)
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2. Name of the participants ----------
(with class)

1. ----------

2. ----------

3. Title of the Project ----------

4. Name of the sub-theme
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5. Objective of the Project

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6. Brief description of the Project (In not more than 250 words)

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7. Further Scope (Brief)

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8. Unique features of the Project

Declaration

I/we hereby state that the above project has been originally designed by me/ us with the help of ---------- and that it has not been copied from any source.

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Signature (Participant 1) Signature (Participant 2)

Name and Signatures of the Principal
of the school (with seal impression)

CBSE – INTEL SCIENCE EXHIBITION

REGISTRATION FORM

FORM - A

1. Name of the School ----------

2. CBSE Affiliation Number ----------

3. Complete Postal Address of the School (with Pin code) ----------

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4. School Phone Number (with STD/ISD code) ----------

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5. School Fax No. ----------

6. School E.mail Address. ----------

7. Title of the Working Model/ Exhibit ----------

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i) ii)

8. Amount and details of the draft ----------

9. Signature of Principal (with school seal & date) ----------

Mail to :

Regional Officer

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