



ATOMIC ENERGY CENTRAL SCHOOL NO.3
Anubhagya Colony, Rawatbhata-323307

ONLINE EXHIBITION

Innovation for Better Society
Science, Mathematics, Social Science, Commerce &
Teaching Aids Exhibition– Nov'2020

**Guidelines for the Preparation of Exhibits and
Participation in School Exhibition**

Registration dates
10-11-2020 to 16 -11-2020

Upload Demo Video of Project through
Google Class Room
from 17-11-2020 to 21-11-2020

Presentation and Judgement through
online mode on 25-11-2020

Participants: Students of III to XII & Teachers

**Let Your Innovative Ideas Magnify
Your Knowledge and Wisdom**

An insight into the Subjects of Exhibition

**Science without Religion is Lame, Religion without Science is Blind
– Albert Einstein**

Science helps to understand the phenomenon behind the universe and life on earth. It is a driving force in our society to lead our life in a simple and easy manner. It is blended in all the walks of everyone's life and informs our actions. It gives answers for many questions and still it has to answer for many unearthed questions. The branches of science teaches to understand components composed of world like physics deals with how mirrors work, electricity, light, to improve vision through glasses, cooking with the help of utensils be various ways of heating etc. Chemistry helps understand the concept of matter, atoms, molecules and compounds, water composition, air to breathe and so on. The study of life to understand how and why we are here, how the living things came into existence on earth is being dealt by biology.

Indians were leading the world in Mathematics for many centuries and offered many theories to the world. Maths makes a methodical and systematic man with orderly life. It nurtures the power of creativity, reasoning, problem solving, thinking and communication skills. Maths plays a vital role in everyone's life and in every profession. The proper guidance and training from the teachers and parents can make our children the future mathematicians of our country.

Social Science deals with the way of leading life in the past, present and future. It helps to learn how the institutions, traditions and ideals transformed the lives of the people in different periods. It teaches how to live in society in groups and to help each other. Geography is the way to learn climates, forests, rain, land, earth structure and what not? By Economics, students can learn the four factors of production such as land, labour, capital, entrepreneurship and managing finances of self and setting the career goals.

The teaching learning process can be made effective with the help of teaching aid as it helps to retain the concept permanently. The main objectives of teaching aids are to motivate the students, to make the concepts very clear, to discourage cramming, to make class room live and active. These aids can be made in the form of Visual aids, Audio aids and Audio -Visual aids.

**Dr.Kamlesh Kumar
Principal**

Objectives of Exhibition at AECS-3, Rawatbhata

**“Nothing in life is to be feared, it is only to be understood.
Now is the time to understand more, so that we may fear less.” — Marie Curie**

AEES being an autonomous body under Department of Atomic Energy, Govt. of India, it always envisages the growth of our country through Science. DAE is one of the leading science based technology provider in the country by the way of Nuclear Technology. It is our moral duty to impart the scientific temperament among students to inculcate the habit of inquisitive mode of learning through projects. Hence it is a great platform to show the talents of young students in the exhibition. Some of the purposes and objectives of organizing exhibitions are

- ✓ It helps to experience the science and other subjects as first -hand to learn advancements in the respective field.
- ✓ It builds confidence, creativity and the knowledge in Science and other subjects so that they can perform research on various issues.
- ✓ It gives fair chance to exhibit the models, methods, techniques and the material developed by the students and teachers and to interact with various people.
- ✓ It encourages the problem solving approach and the output of the projects can be applied for the development of new technology for people and society.
- ✓ It creates healthy competition among peer groups
- ✓ It brings the young talents close to the community and the society.
- ✓ The young citizens will be made to know their responsibility for the growth of the society, nation and mankind.
- ✓ It makes learning a joyful activity.
- ✓ It fosters team spirit among students
- ✓ People can be made aware of practical application and utility of science in day to day life.
- ✓ It creates awareness on socio -economic and sustainable development of the country.
- ✓ It promotes Scientific Skills and leads to inculcate the analysis & synthesis with reasoning.
- ✓ It leads to better understanding of the objectives of subjects for the humanity.

School Level Exhibition and Evaluation Procedure

The exhibition for the year 2020 is going to be conducted through online mode. Students from classes III to XII can participate in any one of the subject/topic individually. There will be five prizes for each class comprising of all the projects irrespective of subjects depending upon the number of participants in each group. The number of prizes are subject to revision by the panel of judges.

The project/model will be evaluated by the panel of judges based on the guidelines given by NCERT. Hence the evaluation of projects/model at school level may also follow the same procedure. The weightage of various parameters for the evaluation are as follows.

S.No.	Parameter	Weightage
1.	Presentation	10%
2.	Creativity and Imagination	20%
3.	Scientific thought/ Principle	15%
4.	Technical Skills	15%
5.	Application	15%
6.	Economic/ Portability/ Durability	10%
7.	Innovations	15%
Total		100%

The participating students need to prepare in the above areas so that they can present their project/ model in an effective manner. The main theme of the exhibition is “**Innovation for Better Society**” aims to cover the major areas such as health, industrial pollution and environment degradation, agriculture, transport and communication, innovations in renewable resources for sustainable environment, innovations in food production and food security, mathematical solutions in every day life, Maths and machines, Maths magic and logic, India and the contemporary in World, Growth of a city, tourism, Judicial system, Economic and globalization, occupational pattern, disaster management etc.

TOPICS FOR PRIMARY CLASSES

CLASS III

Students can make still model or charts, for example Braille script, soil pots, water cycle, sources of water, different types of animals, means of transport, identification of herbs, shrubs, climbers, creepers and trees etc.

CLASS IV

- 1.) Volcano
- 2.) Water harvesting
- 3.) Water purification
- 4.) Geometrical shapes
- 5.) Traffic signals
- 6.) Health
- 7.) Energy conservation
- 8.) Safety
- 9.) Green / clean environment
- 10.) Soluble / insoluble in water
- 11.) Subtraction and checking by addition
- 12.) Any other topic can also be chosen

CLASS V

1. Multiplication
2. Fractions
3. Geometrical shapes
4. Conservation and purification of water
5. Uses of solar energy
6. Fire and safety
7. Different types of food
8. Seasons in our country
9. Conservation of natural resources
10. Any other topic can also be chosen

TOPICS FOR CLASSE VI TO X SCIENCE

1. Innovations in renewable resources for sustainable environment

- i) Ecological studies of plants and animals;
- ii) Efficient methods of harvesting and preserving marine resources
- iii) Recycling of water, materials, solid wastes, etc;

2. Transport and Communication

- i) Improvised/ Indigenous models for efficient transport and fast communication especially mobile and internet for communication in rural areas;
- ii) Working models of fuel efficient/ pollution -free designs of automobiles / other Vehicles;

3. Industry

- i) Design and development of automatic devices for various applications in industries;
- ii) Schemes/ designs to help reduce production cost and conservation of raw materials

4. Health and diseases

- i) Factors affecting the health and resulting ailments in the body;
- ii) Infectious and non-infectious diseases, relationship with causative factors and their sources;
- iii) Innovative preventive measures to control diseases at different levels/ roles of various agencies;
- iv) Demonstration and use of traditional methods of medication;

5. Innovations in Food Production and Food Security

- i) Effect of climatic change on agriculture and its mitigation and adaptive techniques/ methods
- ii) Sustainable biofuels;

Mathematics-Mathematical solutions in everyday life

The main aim of this sub -theme is to make our school children and teachers aware and realise about various mathematical ideas and tools to solve problems confronting the society thereby leading to a quality life. The exhibits/ models in this sub-theme may pertain to Landmarks in Mathematics, Inventions in Mathematics (Historical Background), Mathematical Ideas, contributions of Mathematics for Economic Growth, Mathematical applications, Vedic Mathematics. Some of the indicative areas in mathematics are

- Policies, programs and schemes in mathematics that have a significant impact on human life;
- Mathematical applications that have a wide ranging impact on issues such as agriculture, energy, health, environment, space, industry, communication, education, etc.;
- Effective and efficient ways of communicating an experiment that revolutionize mathematical ideas;
- Cost effective demonstration of known facts and research in mathematics;
- Impact of mathematical ideas on other subject areas such as science, medicine, psychology, social science etc;
- Contribution of mathematics for economic growth, mass literacy, eradication of poverty and malnutrition, etc.
- Mathematical ideas to solve various problems of our everyday life/ environment related problems;
- Mathematical models to predict orbital path of comets, meteors and other minor planets;
- Mathematical models to show how disease might spread in human in the event of epidemics/ bioterrorism;
- Mathematical models to predict the devastating effects of wars/ nuclear explosions;
- Mathematical models to show spread of forest fire depending on the types of tree, weather and nature of the ground surface;
- mathematical models to demonstrate the action of medicines in human system;

- using mathematical tools and (The exemplar points listed so far are to computer simulation to improve trigger ideas and give directions for preparing
- cancer therapy/ wound healing/ tissues formation/ corneal wound healing;
- mathematical tools to describe traffic flow/ stock market option;
- mathematical tools to show the effect of climate change/ global warming;

Social Science

History

- Nationalism in India
- River valley civilization
- Mughal Architecture

Disaster Management

- Common Human induces Hazard / Disaster and how they can be averted
- Possible risk reduction measures that need to be taken to avoid any disaster

Civics

- Institutions-The role of institutions in furthering both continuity and change in governments, families, schools and communities
- Secularism and its importance at present
- Rural Development and Panchayat Raj and its importance
- Unity in Diversity.
- Community Health & Environment.

Geography

- Environment and Climate
- Natural Vegetation
- Agriculture- Irrigation Types and Development, Development of farming.
- Conservation of water and soil
- Power Resources / Energy - Any form

Economics

- Consumer Awareness
- How consumer is exploited /Factors causing exploitation of consumer
- Rise of consumer awareness
- Role of Government in consumer protection.
- Globalization and its impact on developing countries

TOPICS FOR XI AND XII

- Industrialization
- Scientific Revolution and The Origins of Modern Science
- Changing consumption pattern during Corona Crises
- Harappan Civilization
- Glimpses inside Mughal Imperial Household

- Reconstruction of the History of Vijaynagara through the Archeology of Hampi.
- Conservation of water and soil
- Globalization and its Impact
- India's Population
- Modern Banking practices
- Marketing
- GST
- Aids to trade
- Import/ Export Procedure
- Stock Exchange
- Money Market
- Insurance
- Active and Passive Voice
- Tenses
- Physiographic divisions of India
- Resources Land, Water, Mineral & Energy resources and Industries

Guidelines:

- The competition will be class wise for the classes III to XII
- Students have to prepare working models (preferably)
- Along with the model there should be a video demonstrating the project for 2-3 minutes and upload the video as per the schedule
- A student can participate in one subject only.
- From each class there will be five prizes i.e. First, second, third and two consolation prizes. The consolation prizes from each class will depend upon the number of entries from that class. i.e., No of prizes will be proportionate to the entries from a particular class.
- There will be an overall evaluation and not subject wise from each class.
- Students will have to register online to participate in the exhibition. A registration form will be uploaded in Google classroom.
- After registration students will start preparing the projects and can upload the video/project through the link that will be provided through google classroom.
- Final evaluation will be done on 25-11-2020. Schedule will be communicated later.

Contact Details

S.No	Name of the Staff	Contact Nos. (WhatsApp)	Remark
1.	Shri.P.Narasimman Vice Principal	9323886948	General Queries from Secondary & Sr.Secondary
2.	Shri.Pawankumar Headmaster	9571923319	General Queries from Primary
3.	Shri.B.R.Meshram	9783915506	History & Social Science
4.	Shri.Appa D Awaghade	9892225409	Commerce
5.	Smt.Manisha Tiwari	9461609620	Mathematics
6.	Smt.Dipali Dubey	9413108356	Science
7.	Kum.Pragya Mittal	8126373777	Social Science
8.	Shri.V.Kaushik	9314074455	Primary (III)
9.	Smt.Anora Xess	9571212842	Primary (IV)
10.	Smt.Sarita Yadav	9414437856	Primary (V)

Note: Students can also contact any other teacher for guidance

Website

www.aecsrbt3.ac.in

Find more details about Exhibition through the link

<http://aecsrbt3.ac.in/htmldocs/onlineeducation.html>

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