

NEHRU SCIENCE CENTRE
(National Council of Science Museums)
Ministry of Culture, Govt of India
Dr. E. Moses Road, Worli, MUMBAI – 400 018
State Level Entry Form WESTERN INDIA SCIENCE FAIR 2024 – 2025

Students' Project (Team)

1. Name(s) of the student(s) : I. _____
(In Block Capital Letters) : II. _____
2. Whether member of any Science Club? : Yes / No
If yes, write the name of the Science Club : _____
3. Name of the Guide Teacher : _____
4. Name & Address of the School: _____
: _____
E-mail: _____
Phone No.: _____ Fax: _____
5. Name of the Project : _____
6. Scientific Theme of the Project: _____
7. Material/Apparatus used : _____
8. Brief Description : Maximum 500 words, Attach separate sheet please.
(Please highlight uniqueness of the project) : _____
a) Working details (250 words) : _____
b) Synopsis (250 words) : _____
9. Diagram : Attach separate sheet/s
10. Application/usage : _____
11. Approximate cost of the Project: _____
12. Requirement of display : Area _____ X _____ mm Power: AC/DC
Maximum space available : Table 1220 mm x 750 mm with a panel on backside
13. Special requirements, if any (e.g. water, darkroom etc.) : _____
14. Signature of the student : I. _____
: II. _____
15. Signature of the Teacher : _____

(Seal of the School)

(Signature of the Principal / HM)

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TEACHING AID

- 1.Name of the Teacher : _____
(In block capital letters)
- 2.Whether member of any : _____
Any Science Club : Yes / No
If yes, write the name : _____
of the Science Club
- 3.Name & Address of the School : _____

E-mail: _____
Phone No.: _____ Fax : _____
- 4.Name of the Teaching Aid : _____
- 5.Scientific theme of the Teaching Aid: _____
- 6.Material/Apparatus used : _____
- 7.Brief Description : Maximum 500 words, Attach separate sheet, please.
(Please highlight uniqueness of the project):
a) Working details (250 words) : _____
b) Synopsis (250 words) : _____
- 8.Diagram : Attach separate sheet/s
- 9.Application/usage : _____
- 10.Approximate cost of the Teaching aid: _____
- 11.Requirement of display : Area: _____ X _____ m Power: AC/DC.
Maximum space available : Table 1220 mm x 750 mm with a panel on backside
- 12.Special requirements if any : _____
(e.g. water, dark room etc.)
- 13.Signature of the Teacher : _____

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GUIDELINES:

Topics for the Fair:

- **Physics:**

Theories, principles and laws governing energy and the effect of energy on matter – solid state, optics, acoustics, particle, nuclear, atomic, plasma, super conductivity, fluid and gas dynamics, thermodynamics, semiconductors, magnetism, quantum mechanics, biophysics etc.

- **Computer Science:**

Study and development of computer hardware, software, engineering, internet networking and communications, graphics (including human interface), simulations/ virtual reality or computational science (including data structures, encryption, coding and information theory).

- **Mathematics:**

Development of formal logical systems or various numeral or algebraic computations and the application of these principles – calculus, geometry, abstract algebra, number theory, statistics, complex analysis and probability.

- **Engineering:**

Technology, projects that directly apply scientific principles to manufacturing and practical uses – civil, mechanical, aeronautical, chemical, electrical, photographic, sound, automation, marine, heating and refrigeration, transportation, environmental engineering, etc.

- **Environmental Science:**

Study of pollution (water and land) sources and their control, ecology etc.

- **Bio-Chemistry:**

Chemistry of life processes – molecular biology, molecular genetics, enzymes, photosynthesis, blood chemistry, protein chemistry, food chemistry, hormones etc.

- **Chemistry:**

Study of nature and composition of matter and laws governing it – physical chemistry, organic chemistry (other than biochemistry), inorganic chemistry, materials, plastic, fuels, pesticides, metallurgy, soil chemistry etc.

- **Earth & Space Sciences:**

Geology, Minerology, Physiography, Oceanography, Meteorology, Climatology, Astronomy, Speleology, Seismology, Geography etc.

- **Botany:**

Study of plant life-agriculture, agronomy, horticulture, forestry, plant taxonomy, plant physiology, plant pathology, plant genetics, hydroponics, algae etc.

1. **Who can Participate?**

Students from standard VIII to XII from Indian schools (All Boards) can participate in the Western India Science Fair 2019–2020 through the District/State/ UT level competitions.

2. **What is Expected?**

Considering the high level of competition at various stages and prestige of the Fair, the projects must have **innovation, uniqueness, originality**, quality and research potential which would reveal something new. It must be **investigatory** in nature. The researcher must maintain a diary of stages of experimentation and data. Help of a research scientist, teacher or parent could be taken as a guide.

3. **How to Conceive a Project?**

- (i) **Selection of topic:** Pick up a subject out of the given topics and pick a problem/idea you want to study/investigate or develop.
- (ii) **Literature Review:** Go to libraries or Internet, if you have, and learn everything you get on your problem/idea. Observe related events and look for unexplained or unexpected results. Discuss with professionals in the field.
- (iii) **Organise:** Arrange everything you have learnt and narrow down your hypothesis.
- (iv) **Guide:** choose your guide/sponsor/qualified scientist who could guide you in your project.
- (v) **Make a Timetable:** Make a strict calendar of your activity with the help of your guide. Enough time should be given to experimentation.
- (vi) **Plan Experiment:** Once the research plan has been drawn, write your researching procedure, exactly describing your method of experiment, steps etc. Discuss with your sponsor/guide.
- (vii) **Experimentation:** After a careful thought of experimental design, keep notes of every experiment, measurement and observation. Try all variable possibilities.
- (viii) **Examine Results:** After completion of experimentation organize your findings. If you got expected results as per your hypothesis, analyses the data and draw conclusions.
- (ix) **Modify Experimental set up/project:** After you have succeeded, put up your project in presentable form for the Fair. Display information, results and write the research paper, give title, contents, experiments, explanation, conclusion, acknowledgement and references.

4. **Project Parameters: Display & Safety Regulations**

Maximum Size: 122 x 75 x 244 cms.

ELECTRICAL REGULATIONS

- (i) Participant requiring 220 Volt AC electrical circuits must bring his / her own an ISI mark 3 – wire extension cord which is no more than nine feet in length and which might be appropriate for the load and equipment.
- (ii) Electrical power supplied to projects and, therefore, the maximum allowed for projects is 220 Volt, AC single phase, 50 cycles only. Maximum circuit amperage/wattage available is determined by the electrical installation capacities of the exhibition hall and may be adjusted on site by the competent authority of the Centre.

5. Hints for good Project Presentation

- a) Choose a Good Title
- b) Display Photographs
- c) Organize your presentation
- d) Make your display eye catching
- e) Correctly present your well-constructed project

6. Project Report

Each project must be supplemented by a research report giving (i) Purpose of experiment, (ii) hypothesis, (iii) Procedures used, (iv) data, (v) conclusion, (vi) usefulness of the experiment, (vii) references, (viii) acknowledgement.