



## CWSF Project Displays

<b>Policy Number:</b>	3.1.2.5
<b>Policy Section:</b>	3.1.2 Programs – Science Fairs – CWSF Participation
<b>Approved By:</b>	National Science Fair Committee, Executive Director
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<b>Related Policies:</b>	3.1.6.3 CWSF Exhibit Hall Safety; 4.2 Youth Science & Technology Research (all sections)
<b>Contact:</b>	National Science Fair Committee Chair

### 1 Display dimensions

- 1.1 Backboards, title boards, presentation and prop material and all display equipment must fit entirely within the following dimensions and restrictions:
  - i) 1.2 m wide, 0.8m deep and 3.5 m high from the floor
  - ii) No portion of the display shall project into any aisle
- 1.2 Exhibits exceeding these dimensions must be modified before they will receive safety approval.
- 1.3 The finalist may not hang any portion of the project, nor affix any posters, graphs, etc. from or to the walls or ceilings of the building in which the fair is housed. It is for this reason that finalists must provide their own backboards.

### 2 Backboard and Display Materials

- 2.1 Backboards and title boards must be constructed of the following materials:
  - i) Wood products and dimensional lumber at least 6 mm (0.25 inch) thick
    - (i) Includes fibreboard, hardboard, Masonite, particleboard, plywood and other Class III or C materials.
  - ii) Sintra, Intefoam, Intecell
    - (i) These are trade names for smooth-surfaced expanded PVC plastic foam board, up to 12 mm (0.5 inch) thick, which is chemical resistant and fire retardant with flame spread not exceeding 150.
  - iii) Flame-Rated Corrugated Products
    - (i) These are made of factory-treated, fire-retardant corrugated cardboard. Must display the certification mark of “WH (Warnock Hersey) Listed Fire Retardant Paper Product” (a UL-94 equivalent).

- iv) Metal
  - v) Plexiglas/Acrylic
  - vi) Commercially-prepared vinyl displays and banners
  - vii) Other material that meets the UL-94 standard and bears a factory-attached UL-94 label.
    - (i) UL-94 is an industrial standard measurement of flammability that measures the difficulty with which a synthetic material can be ignited. UL-94 rated material does not burn easily or keep burning once a flame is removed.
  - viii) Other material in common use as display material and that meets the requirements of local fire regulations in the CWSF host city.
- 2.2 Backboards and title boards constructed of the following materials are specifically **prohibited**:
- i) Coroplast
    - (i) Corrugated plastic (polypropylene) sheeting product.
  - ii) Foam board
    - (i) Plastic (PVC or polystyrene) foam sandwiched between sheets of paper product. Includes Foam core board, Gator Board.
  - iii) Paper products
    - (i) Includes art board, Bainbridge board, cardboard, chipboard/grey board/milboard/newsboard (recycled paper boards), corrugated cardboard, mat board, Peterboro board.
  - iv) Plastic
    - (i) Includes polyethylene sheeting (black/clear), foamed polystyrene (Styrofoam).
- 2.3 Backboard panels may be painted with any common paint. Other coating materials (e.g., fabric) must be UL-approved and proof of such approval is required.
- 2.4 Presentation information including text, graphics, photographs and other data on the backboard must be printed on bond (laser, inkjet, or standard copier), photographic or laminated paper.
- 2.5 Construction paper, Bristol board and papers listed in 2.4 may be used to outline or border presentation information or to add small decorative elements to the backboard.
- 2.6 Presentation information, including outlines, borders and decorative elements must be attached to approved backboard material so that all edges are securely fastened.
- 2.7 Anything used to raise presentation information more than 2 mm above the surface of the backboard must be constructed of approved backboard material.
- 2.8 Papers presented on the exhibit table must be secured in a binder, Duo-tang, presentation folder, plastic sleeve or other appropriate enclosure.
- 2.9 Toxic adhesives shall not be applied to project materials inside any building at the Canada-Wide Science Fair.
- 3 Fire Safety**
- 3.1 Operation of an open flame, candle, torch or any other heating device is not permitted.
- 3.2 Smoking is not permitted in the exhibit area.

3.3 Packing material shall not be stored under tables.

#### **4 Electrical Safety**

4.1 Electrical cords shall have a 3-wire conductor with ground and must be CSA approved and in good repair.

4.2 Power bars, lighting and other electrical devices shall be CSA approved.

4.3 Any modification to an electrical device negates the CSA approval and that device must not be used.

4.4 Dry cells (Alkaline, NiCad, NiMH, Lilon, etc.) and sealed lead-acid batteries (gel cells) may be used. Wet cell batteries are not permitted.

4.5 Electrical devices constructed by finalists must comply with the following requirements to be approved for display. As they cannot be CSA approved, these devices may only be connected and operated during judging.

i) Electrical devices must be protected by a non-combustible enclosure.

ii) An insulating grommet is required at the point where electrical service enters an enclosure.

iii) Electrical devices shall use as low a voltage as possible.

iv) The electric current must be limited so as not to cause any danger or discomfort if the terminals are touched.

v) A pilot light must be used to indicate when power is on.

#### **5 Structural and Mechanical Safety**

5.1 Exhibits must be sturdy, self-supporting and sufficiently stable to prevent accidental tipping.

5.2 Sharp edges or corners of prisms, mirrors, enclosures and glass or metal plates that may be contacted by the public must be removed or protected to prevent injury.

5.3 Dangerous moving parts, such as belts, gears, pulleys and blades, must be provided with a guard to prevent access to the moving parts.

5.4 An in-running nip hazard of any part of a motor, device or thing that may be a danger shall be guarded to prevent contact with the pinch point.

5.5 A certificate of safety inspection must be displayed if a project involves the construction or use of a boiler or pressure vessel with a capacity greater than 42.5 litres or operated at a pressure greater than 103 kilopascals. Evidence of inspection by an engineer with certification in boilers and pressure vessels should be displayed when the project involves any finalist-constructed pressure vessel, regardless of size or pressure. Such vessels may be displayed, but must not be pressurized at any time.

5.6 Compressed gas cylinders shall not be displayed.

5.7 Moving exhibits (e.g., radio-controlled vehicles, robots) shall be restricted to the regulation display space. The Host Committee may, at its discretion, provide an area to safely demonstrate projects that require more than the regulation display space.

#### **6 Chemical Safety**

6.1 The following materials shall not be displayed:

- i) Flammable, toxic or dangerous chemicals
  - ii) Prescription drugs and over-the-counter medications
- 6.2 Photographs or empty packages of prohibited materials may be displayed.
- 6.3 The display of chemicals is discouraged; however, other substances can be used to simulate chemicals for display purposes.
- i) Table salt can be used to simulate many chemicals, such as ammonium nitrate.
  - ii) Water can represent alcohol, ether and many other liquids.
  - iii) Molasses can be used to simulate petroleum products.
- 6.4 When chemicals are simulated, they should be identified with the name of the substance they represent, preceded by the word "simulated." Any WHMIS labels (supplier or workplace) should be attached to show understanding of safe work practices.
- 6.5 The total quantity of liquids displayed at a project shall not exceed 1 litre. Photographs and/or video should be used to demonstrate processes requiring larger quantities of liquid.

## **7 Biohazards**

- 7.1 The following materials shall not be displayed:
- i) Biological toxins
  - ii) Cell or tissue samples including blood and blood products, except on sealed microscope slides, which may be displayed
  - iii) Plants or plant tissue
  - iv) Soil containing organic material
  - v) Cultures - photographs or simulated cultures may be used.

## **8 Human Subjects**

- 8.1 The project display may include pictures of participants if prior permission has been obtained. Projects dealing with forensic science topics must preserve the anonymity of any human victims, and project displays must avoid sensational or gratuitous, macabre images.

## **9 Animals and Animal Parts**

- 9.1 Live animals (microorganisms, non-vertebrate and vertebrate) shall not be displayed.
- 9.2 The only parts of vertebrate animals that may be displayed are those that are either naturally shed by an animal or parts properly prepared and preserved. For example, porcupine quills (safely contained), shed snake skin, feathers, tanned pelts and hides, antlers, hair samples, skeletons and skeletal parts are permissible, while cell and tissue samples are not, as indicated in 7.1 ii).
- 9.3 Photographs of animals, animal parts or organs may be used on the display and in the Project Report; however, finalists and Regional Science Fair committees must be aware that other exhibitors and members of the public might find such photographs offensive. Finalists are encouraged to choose their photographs in accordance with the accepted norms of the community.

## **10 Firearms, Hazardous Materials and Equipment**

- 10.1 Firearms (even if appropriately locked), ammunition, dangerous goods or explosives shall not be displayed. The manner in which such materials were used in a project may be conveyed through text, photos, video, computers or simulation.
- 10.2 Images of humans or animals that have been injured by the use of firearms or explosives shall not be displayed. Such images are deemed unsuitable for general public viewing and do not contribute to the scientific value of a project.
- 10.3 X-ray or hazardous radiation-producing equipment may be displayed but must not be operated at any time.
- 10.4 Radioisotopes or compounds containing radioisotopes at activities above normal background shall not be displayed.

## **11 Display Equipment and Damage**

- 11.1 The finalist or his/her RSF must supply all display equipment. Upon special request, at the finalist's expense and if the Host Committee specifically offers such a service, display equipment may be supplied by or rented from the Host Committee.
- 11.2 It will be the finalist's responsibility to:
  - a) ship or bring all light bulbs, switches, motors, fans, or other apparatus or material necessary for the final presentation of the project (other than whatever the Host Committee may be willing to secure, when formally requested in advance to do so).
  - b) assemble the project at the fair, in as short a time as is practicable (provisions cannot be made for the redesign, completion, or rebuilding of projects at the fair).
  - c) repair or replace anything in the project which fails during the fair (wherever possible, spare parts should be packed with the project).
  - d) provide all specialized tools, equipment or material necessary for assembly
- 11.3 Although every effort will be made to prevent damage to exhibits, Youth Science Canada, the Host Committee or other sponsoring organizations or co-operating groups will accept no responsibility for loss or damage to any exhibit or part thereof.

## **12 Infractions**

- 12.1 Any exhibit infraction shall be pointed out to the delegate responsible for that finalist. Required changes shall be the delegate's responsibility.