

Lambton County 2017 Science Fair



Project Display and Safety Regulations

2017 Lambton County Science Fair

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2017 Lambton County Science Fair Project Display and Safety Regulations

(Adapted from the YOUTH SCIENCE FOUNDATION CANADA FOUNDATION)

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

2. Backboard and Display Materials

2.1 Presentation information, including outlines, borders and decorative elements must be attached to approved backboard material so that all edges are securely fastened.

2.2 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.

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2.3 Papers presented on the exhibit table must be secured in a binder, Duo-tang, presentation folder, plastic sleeve or other appropriate enclosure.

2.4 Toxic adhesives shall not be applied to project materials inside any building at the Lambton County 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 Executive 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.

The policies are too extensive to be included in this booklet, but they are available for download from the YSF Canada web site as follows:

Use of Human Subjects

http://www.ysf-fsj.ca/files/PDF/governance/policy/4.1.1_Humans.pdf

Failure to comply with YSF Canada ethical standards could result in your project being declared ineligible for participation for the Canada Wide Science Fair.

9. Animals and Animal Parts

- 9.1 Live animals (micro-organisms, 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, science fair entrants must be aware that other exhibitors and members of the public might find such photographs offensive. Science fair entrants are encouraged to choose their photographs in accordance with the accepted norms of the community.

The policies are too extensive to be included in this booklet, but they are available for download from the YSF Canada web site as follows:

Use of Animals

http://www.ySF-fsj.ca/files/PDF/governance/policy/4.1.2_Animals.pdf

Failure to comply with YSF Canada ethical standards could result in your project being declared ineligible for participation for the Canada Wide Science Fair.

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 are not to 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 Although every effort will be made to prevent damage to exhibits, Lambton County Science Fair or other sponsoring organizations or co-operating groups will accept no responsibility for loss or damage to any exhibit or part thereof.