IMPORTANT

These rules apply to all Science Fair categories
(Juvenile, Junior, Intermediate, Senior 1 and Senior 2)
and replace all previous rules.

2012 SCIENCE FAIR RULES

Please read completely and carefully before beginning your project.

Some major changes have been made.
They are valid for all Science Fair levels.

The purpose of these rules is to ensure the safety of the public and the exhibitors, as well as make the latter aware of the importance of ethics in the field of scientific research. These rules do not limit the exhibitors' creativity or the scientific process; rather, they encourage participants to work in a safe and structured manner, as do professionals in the research community.

Experiments that pose risks during presentation to the general public may be conducted prior to the Science Fair and be exhibited during the event using diagrams, photographs, slide shows, videos, simulations, etc.

In applying the various sections of the rules, **the CDLS-CLS Network partners Rules Application Committee** refers to the *Guide de sécurité en laboratoire* (Laboratory Safety Guide) published by the *Ordre des chimistes du Québec*, the regulations of the American National Standard for Safe Use of Lasers, and the Canadian Council on Animal Care. The Committee also complies with codes of ethics applicable to research with codes of ethics applicable to research, and follows the regulatory framework established by Youth Science Canada for the Canada-Wide Science Fair.

For any additional information you need to prepare your Science Fair project, please thoroughly read the content of the official Science Fair website at **exposciences.qc.ca**.

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Preparing a project

All forms referred to in these rules are available from the official Science Fair website. They must be completed electronically and then uploaded as part of the regional finals online registration process. The original copies, duly signed, must be made available at the exhibitor's booth at all times.

1. Application of the rules

1. 1 The CDLS-CLS Network partners are:
- the Conseil de développement du loisir scientifique (CDLS);
- the nine regional Conseils du loisir scientifique (CLS); and
- EAST (the Educational Alliance for Science and Technology), which runs the Montreal Regional Science and Technology Fair.

Together they are responsible for the Quebec Regional Science Fairs and the Super Expo-sciences Bell, Quebec Final, and oversee the application of the rules.

1. 2 **The Rules Application Committee is the only body authorized to make a final decision**. Permission from a third party (school, teacher, company, etc.) to use materials or methods that do not comply with the Science Fair rules will not be considered valid.

1.3 The CDLS-CLS Network Provincial Ethics Committee is the only body empowered to make a final decision as to any approvals that may be necessary pursuant to these rules. Any request to the Provincial Ethics Committee must be submitted to the CDLS.

1.4 Under all circumstances and at its sole discretion, the Rules Application Committee of the CLS concerned or of the CDLS reserves the right to make a decision on any issue stemming from the application of the present rules and to disallow the use of any substance or device it deems hazardous or offensive, after informing the exhibitor and the responsible adult accompanying him/her.

1.5 Failure to respect the conditions stipulated in the present rules, or any breach of the guidelines issued by the Rules Application Committee may result in the withdrawal of the project and disqualification of the exhibitor(s).

1.6 Exhibitors may be disqualified during and after the Science Fair.

2. Intellectual property

2.1 Any project that contains any type of plagiarism, however minimal, will be disqualified.

2.2 All sources consulted for the project must be credited in the written report of the project (refer to Section 5.7).

2.3 The authors of any computer program or any type of technology, methodology or procedure that were not designed by the exhibitor must be clearly credited. Any trademarks of pharmaceutical or veterinary products must also be clearly identified.

3. Commitment

All exhibitors agree to:

3.1 Comply with the eligibility criteria stipulated by the prize donor(s), if applicable, and duly complete the project entry form and all other documents required at the time of online registration.

3.2 Be present at all stages of the event (set-up, security check, judging, exhibition to the general public, activities, awards ceremony, etc.).

3.3 Be present at their booths at all times that the fair is open to the public.

3.4 At the **Quebec Final**, the **CDLS grants a single exemption to sections 3.2 and 3.3**. That exception concerns students who must sit an entrance exam or attend a mandatory meeting to be accepted at a university or cégep. The exemption request must be accompanied by official documentation from the institution concerned. The exemption request must be submitted to the CLS, which will follow up with the CDLS. Final approval will be issued only by the CDLS.

3.5 Set up and dismantle their booths during the periods set aside for this purpose in the schedule.

3.6 Follow the instructions of the adults accompanying them or the organizing committee.

3.7 If the commitments cannot be respected by either of the two exhibitors who have entered a duo project, the exhibit may be changed into a solo project. If so, the exhibitors must complete and return the form provided by the regional CDLS-CLS Network partner.

3.8 If the commitments cannot be respected by the exhibitor who has entered a solo or duo project, the project may be disqualified. If so, the exhibitor must complete and return the form provided by the regional CDLS-CLS Network partner.

3.9 Obey the rules of the Science Fair.

4. Eligibility

4.1 A maximum of two persons is accepted per project team (Juvenile, Junior, Intermediate, Senior 1 and Senior 2).

4.1.1 Exhibitors in the Juvenile category are not eligible to participate in the Super Expo-sciences Hydro-Québec, Quebec Final.

4.2 Exhibitors must attend a school or be affiliated with a school board on the territory of a CDLS-CLS Network partner.

4.2.1 Exhibitors may present only one project per year.

4.2.2 The same project may not be entered in more than one regional Science Fair.

4.3 Two exhibitors from two different schools may present a duo project as long as the rules of the CDLS-CLS Network partners concerned are respected.

4.4 An exhibitor must be aged 20 or under as of April 30, 2012.

4.5 To be eligible, a Science Fair project must involve content of a scientific nature or use a scientific process.

4.6 In the event an exhibitor wishes to display the same project for a second year, he/she must comply with the following conditions:

4.6.1 Show a continuation or a more detailed version;

4.6.2 Present an abstract, using **form 4.6.A**, that clearly indicates the progression of the project and the changes made to the first-year project.

4.6.3 The written abstract of the first-year project must be submitted electronically, in compliance with the deadline specified at the time of online registration.

4.7 Exhibitors may not enter the same project, a continuation or a more detailed version, for a third year.

4.8 An exhibitor who has received a contribution from a recognized institution, whether in the form of a loan of materials or hardware, or professional support, must complete the form 6.1 A – Recognized institution.

A **recognized institution** is a private or public research centre or laboratory, a university, hospital or any academic institution that follows a recognized experimental protocol.

4.9 No violent or hate-related project or material will be accepted at the Science Fair.

5. The written report

5.1 For the **Juvenile category,**, the written report must be **at least one page and not more than three pages** long. It must contain:

- An introduction, presentation of the scientific approach and conclusion

AND

- a bibliography

The official title page and bibliography do not count toward the three-page limit.

The official title page is mandatory for the regional finals and is generated automatically by the online registration system.

5.2 In the **Junior, Intermediate and Senior categories**, the written report must contain:

The body of the written report
- maximum 5 pages -

- an introduction;
- a development or results and analysis;
- a conclusion;

AND

- a table of contents;
- a bibliography;

The official title page and bibliography do not count toward the three-page limit.

The official title page is mandatory for the regional finals and is generated automatically by the online registration system.

5.3 The written report must be presented in a format with dimensions 21.59 cm x 27.94 cm (8.5 in. x 11 in.).

For the Juvenile category, the body of the written report must be a maximum of one page measuring 21.59 cm x 27.94 cm (8.5 in. x 11 in.), **not counting** the official title page, table of contents and bibliography.

5.4 The entire written report must be set in 12-point Arial typeface or the equivalent. It must be double-spaced and all four margins must measure 2.5 cm. A report of five pages that meets these standards will have approximately 1,500 words or 300 to 900 words for the Juvenile report.

5.5 The title of the project and name(s) of the exhibitor(s) must appear at the top of **the first page of the body of the written report**.

5.6 The date, name(s) of the exhibitor(s), title of the project and page number must appear in a footnote in 8-point typeface. Here is an example:

See the model of the written report layout on the Science Fair website.

5.7 All sources of information used must be credited in the written report, by means of footnotes and a bibliography (e.g., volumes, articles, audio-visual documents, websites, interview with a scientist). Direct quotations and their sources must also be clearly indicated in the written report. Refer to the Indispensable Guide**,** available on the Science Fair website, for sample presentation standards for the bibliography.

5.8 Exhibitors of an Experimentation project must clearly indicate how they have innovated.

5.9 Graphics, tables, logs and appendices must be kept at your booth. They are not included in the five-page report and must therefore not be submitted with the written report.

5.10 The written report in electronic format must be submitted within the deadline mentioned when registering online.

5.11 A print version of the written report must be available at your booth. Both sides of the paper may be used but the five-page maximum (reference Section 5.3) must be respected.

5.12 Any **additional pages** in the body of the written report will be removed by the Rules Application Committee and the report will be evaluated as is.

5.13 The judges can penalize a project by up to 10 points for a report that does not comply with the regulations.

5.14 The project title indicated on the written report must match the title on all other completed documents and cannot be changed at any stage of the Science Fair.

5.15 The same report will be used at all stages of the Science Fair. No changes will be accepted.

6. Experimentation projects Animals

6.1 Projects involving experiments on live animals are permitted only if the exhibitor has conducted the experiments in a recognized institution (see definition under 4.8); form 6.1.A is mandatory.

6.2 For Science Fair projects that use vertebrate animals, cephalopods or animal tissue (e.g., cells, parts), the following forms must be completed:

- Form 6.1.A – Recognized institution;
- Form 6.2.A – Approval of the Provincial Ethics Committee.

6.3 Vertebrates: no project may make use of animals or parts of animals sacrificed for the sole purpose of meeting the requirements of the Science Fair project. That is, animals may be used if and only if they were sacrificed by the recognized institution for the purposes of its own research activities. Such animals or parts of animals will thus be “shared.”

6.4 The study of vertebrate or invertebrate embryos, larvae or fetuses, including eggs, is limited to observation.

6.5 Live specimens of certain primitive orders (bacteria, mould, insects, plants and invertebrates with elementary nervous systems) may be used in experiments.

6.6 The observation of wild animals in their natural habitat, zoo animals, farm livestock or domestic animals is permitted. In some cases, special permission from wildlife conservation services may be required to ensure that the research does not affect animal

behaviour or welfare and to confirm that the study is authorized.

Where such permission is required, a copy of the permission form **must be made available at the booth**.

6.7 Interventions involving the use of drugs and chemical products or any form of manipulation to test animal resistance may be permitted only if the experiment is conducted in a recognized institution and complies with applicable codes of ethics.

6.8 Cells, tissues and any other animal biological material used in a Science Fair project must come from a recognized supplier of biological material or a recognized laboratory. These items must be prepared and sealed (lamella, plastination) prior to exhibition. Proof of where such material was acquired (invoice or letter of certification from the supplier) must be available at all times during the Science Fair. All other biological products are prohibited in the booths (see Section 12).

Rare or endangered animal and plant species

6.9 Experimentation projects using rare or endangered species, or some of their parts (feathers, scales, roots, etc.) are prohibited.

Only science popularization projects are authorized. Exhibitors wishing to present such projects must make available at their booths a permit or letter certifying a loan from an organization authorized to distribute such species.

Exhibitors who do not have such authorization may use photographs, slides or videos and show them to the public.

Micro-organisms and biological experiments involving an element of risk (animals or plants)

6.10 Any experiment involving manipulations or substances that pose a risk to the exhibitor or the environment must be conducted in a recognized institution, and form 6.1.A – Recognized institution must be completed.

This applies especially to experimental manipulations involving the recombination of DNA molecules, animal viruses or bacteria. All biological material is prohibited from the booth.

6.11 The use of micro-organisms from prepared cultures originating from the environment (e.g., cultures prepared from soil, mouth swabs) and used for experiments is permitted during the Science Fair. In addition, bacteria and microscopic fungi may be used but they can in no way be pathogenic or cause illness to people or animals.

7. Experimentation projects Human beings

7.1 Projects may be:
- **high-risk**
- **low-risk**

7.2 Any Science Fair project requiring the participation of human subjects will be subjected to strict ethics and safety codes.
A strict approach must be followed for these projects. They must be conducted under the constant supervision of a qualified professional, a medical doctor, who is empowered to ensure application and respect of the above-mentioned ethics and safety codes. The qualified professional becomes the **scientific supervisor**.

7.3 All exhibitors of projects requiring human participation must first write an **experimental protocol** describing in detail the purpose of the experiment and the proposed experimental approach (protocol, procedure, number of human subjects involved, type of data expected to be collected or tests planned, etc.). The protocol must then be submitted to the scientific supervisor for evaluations of the risks involved in the project (**high risks** or **low risks**). The scientific supervisor must then complete Scientific supervisor approval form **7.3** depending on the risk level determined for the project.

High-risk projects

7.4 The experimental protocol and Scientific supervisor approval form **7.4.A** **must then be submitted to the CDLS-CLS Network Provincial Ethics Committee for final authorization BEFORE** the experiment can proceed. Form **7.4.B** must also be completed. No modification to the experimental protocol of any kind will then be permitted without authorization from the Provincial Ethics Committee.

7.4.1 Exhibitors of all **authorized high-risk projects** must provide the following forms:

- Scientific supervisor approval form **7.3**;
- Provincial Ethics Committee approval form **7.4.B**;
- Free and informed consent form **7.4.C**.

If the project involves a survey, a copy of the blank survey form must be submitted electronically at the time of online registration.

Low-risk projects

7.5 The experimental protocol and the duly signed Scientific supervisor approval form **7.3** do not require the approval of the CDLS-CLS Network Provincial Ethics Committee.

7.5.1 Exhibitors of all low-risk projects must provide the following forms:

- Scientific supervisor approval form **7.3**;
- Free and informed consent form 7.5.C.

If the project involves a survey, a copy of the blank survey form must be submitted electronically at the time of online registration.

Presenting a project

8. Specific rules for the regional finals: Booths, decoration and visual displays

8.1 Exhibitors must contact their regional CDLS-CLS Network partner for information on the specifications of the booths (structure or framework).

8.2 For decorative purposes, posters may be affixed to the booth. They must be applied directly to the booth in order to avoid a chimney effect (air pockets must be minimized).

8.3 No decorative items may be affixed permanently or in a manner that would modify the booths.

8.4 Elements not affixed to the booth may be placed on the table.

8.5 Corrugated cardboard, foam core, Styrofoam, foam rubber and coroplast are prohibited for decorating and for use in scale models.

8.6 The table may not be partially or totally covered with a cloth. If necessary, you

can obtain a special covering from the organizing committee.

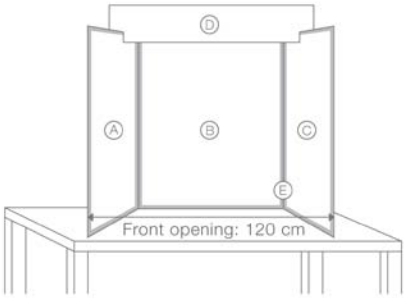
8.7 No roof, dome, fabric or other method of covering the top or sides of the booth will be accepted.

8.8 The project display may include pictures of participants if prior permission has been obtained.
See the model of the authorization form on the Science Fair website.

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. Specific rules for the Quebec final: booths, decoration and visual displays

9.1 The only booths authorized will be in black InteFoam (structure or framework) and will be provided by the CDLS.



A - Display area 68 (L) x 112 (H) cm
B - Display area 92 (L) x 112 (H) cm
C - Display area 68 (L) x 112 (H) cm
D - Area reserved for CDLS
E - Shaded areas must be left empty.

Above, formats of the display area and booths for the Quebec Final. **Note that area D is reserved for the exclusive use of the CDLS and may not be used for the project title.**

9.2 Booths will be set up on tables with the project displayed on the front.

9.3 The project title must be displayed **inside** the display areas mentioned in Item 9.1.

9.4 Projects (all elements combined) must not exceed the dimensions specified in Item 9.1.

9.5 All signs affixed to the booths must be **plastic-coated** (Sticky tape will be provided by the CDLS). You must affix them in accordance with the specifications that will be sent to you during the set-up phase. We suggest that you first stick your signs onto a large piece of cardboard before laminating them before the Québec finale.
For decorative purposes, posters may be affixed to the booth. They must be applied directly to the booth in order to avoid a chimney effect (air pockets must be minimized).

9.6 No decorative items should be affixed permanently or in a manner that will modify the booths.

9.7 Elements not affixed to the booth may be placed on the table in the space described in Item 9.1.

9.8 Corrugated cardboard, foam core, Styrofoam, foam rubber and coroplast are prohibited for decorating and for use in scale models.

9.9 The table may not be partially or totally covered with a cloth. A tablecloth will be provided by the organizing committee.

9.10 No roof, dome, fabric or other method of covering the top or sides of the booth will be accepted.

9.11 The project display may include pictures of participants if prior permission has been obtained.

Proof of such permission must be made available at the booth.
See the model of the authorization form on the Science Fair website.

Projects dealing with forensic science topics must preserve the anonymity of any human victims, and project displays must avoid sensational or gratuitous, macabre images.

Site-specific rules for the regional finals and Quebec final

10. General rule

10.1 No means of communication (Internet, cellular telephone, video, cable, etc.) between the booths and outside the site is allowed nor provided by organizers during the event.

11. General Security

11.1 Assemblies using glass parts must not be handled by visitors and must therefore not be accessible to them. Glass parts may occupy a maximum space of 40 cm x 40 cm x 40 cm. In addition, glass parts and assemblies must be held in place by a supporting bracket affixed to the demonstration table.

11.2 The maximum quantity of liquid that can be present at the booth is 1 litre. Any assembly requiring a demonstration exceeding this volume of liquid must be in the form of photos or video.

11.3 Any noise generated by a project must be of a reasonable level, such that it does not disturb other exhibitors and the public.

11.4 Any pointed ends, assemblies or parts of an assembly (e.g., propeller blades) posing any risk whatsoever must be placed out of reach and shielded so that no one can touch them.

11.5 All rubber tubing and electrical cords must be in good condition, as short as possible and anchored so that no one can accidentally trip on them.

11.6 Aisles, the spaces beneath and areas surrounding booth tables must be kept clear at all times, in accordance with fire regulations.

11.7 Vacuum pumps and any other motor-powered belt systems must be equipped with protective shielding.

11.8 Sampling demonstrations of any kind are prohibited.

11.9 Substances giving off odours that may cause discomfort, such as perfumes and incense, must be kept in hermetically sealed, unbreakable containers.

11.10 Highly Perishable products of vegetable or animal origin exhibited at the Science Fair must be kept in hermetically sealed, unbreakable containers and must not decompose during the exhibition period.

11.11 The taking of blood samples and the administration of injections are prohibited.

11.12 Compressed gas tanks are prohibited.

11.13 No flames or heat sources, such as electric heating elements, burners, kettles, candles or hotplates, are permitted.

12. Chemical products

12.1 The following groups of chemical substances are **prohibited** on the Science Fair site:

12.1.1 Carcinogenic, mutagenic or teratogenic substances such as benzenes and PCBs (polynuclear hydrocarbons), dioxins or highly toxic substances such as arsenic or its derivatives, cyanides and polyaromatic hydrocarbons (PCBs), mercury, etc.

12.1.2 Explosive substances such as acetylenes, compounds containing mutually linked heteroatoms such as perchlorates, peroxides, ethers, polynitrates or any other chemical compound belonging to a class of substances that pose a risk of spontaneous or exothermic reactions or produce gases;

12.1.3 Highly inflammable substances, e.g., volatile solvents such as acetone, methanol, ethanol, ethers; reactive metals or their derivatives such as sodium or magnesium; inflammable gases such as alkanes, e.g., propane; or corrosive and highly reactive gases such as chlorine, hydrogen and oxygen;

12.1.4 Cryogenic substances such as liquid nitrogen or dry ice;

11.1.5 Chemical substances or mixtures producing strong odours, e.g., volatile sulphur derivatives such as hydrogen sulphide or thiols;

12.1.6 Pharmaceutical or veterinary products of any nature, in sealed or unsealed packaging;

12.1.7 Substances that are illegal under the Food and Drug Act (e.g., amphetamines, barbiturates, etc.) and the Narcotics Control Act (e.g., cocaine, morphine, codeine, etc.).

12.2 In the event an exhibitor decides to substitute a prohibited substance with a harmless one, he/she must clearly indicate on the container the exact nature of the substitute, e.g., "simulated sodium nitrate (table salt)".

12.3 Exhibitors must be able to identify all products displayed on their tables.

12.4 In all cases, when the use of hazardous substances (e.g., mercury) is unavoidable, these substances must be an integral part of a commercially available device (e.g., thermometers) and comply in all respects with generally approved safety standards regarding their use in public places (e.g., CSA [Canadian Standards Association] approval).
During the judging period only:

12.5 Exhibitors may handle solutions containing acids, bases, oxidants, reductants and other reagents whose concentrations are less than 0.5 mole/litre. The name of the acid and the mole/litre concentration must be clearly indicated. These solutions' exact composition and their formulas must be displayed (e.g., on a signboard) at all times.

The presence at the booth and handling of such substances will be subject at all times to the approval of the Verification Committee. Entrants should check beforehand with their regional CDLS-CLS Network partner.

13. Electrical devices

13.1 No portion of exposed wiring may be powered by more than 36 V (direct or alternating current) compared with the reference (ground, power supply, casing). The current must not exceed 5 amps.

13.2 Any assembly that may generate magnetic fields whose amplitude is damaging must receive approval from the regional CDLS-CLS Network partner.

13.3 Devices or assemblies using electric light bulbs may total no more than 40 watts. They must never present a burn hazard.

13.4 Only three-pronged electrical extension cords that are grounded and in good condition are permitted on sites.

13.5 All electrical devices must be equipped with a three-pronged power cord and be grounded or CSA-approved.

13.6 All home-made electrical devices must be equipped with a grommet at the point where the power cord passes through the casing.

13.7 Participants must ensure that all electrical devices and multi-outlet power bars, as well as computers used for their projects, are turned off at the end of each day.

13.8 Wet cells that contain acid, such as automobile batteries, are not permitted.

14. Lasers, radiation, radioisotopes and ultraviolet rays

The following are prohibited on the Science Fair site:

14.1 Instruments emitting any form of X-rays (microwaves, X-rays, infrared lights) freely into the atmosphere.

14.2 All laser pointers.

14.3 Experiments based on radioisotopes or ionizing radiation and radioactive substances.

During the judging period only:

14.4 Devices that operate with laser or ultraviolet rays may be used during the judging period only. However, such devices are permitted on the Science Fair site only on condition that their emissions are contained and maintained within the following standards:

14.4.1 The assembly from the laser's emitting source to the receiver must be controlled (set) so that the beam cannot hit the eye of an observer, a passer-by or the exhibitor. It must not surpass Class 1, as specified in Standard ANSI Z 136.1-1993 (American National Standard for Safe Use of Lasers). The power of any laser device used on site must not exceed 2.0 mW;

14.4.2 The power of UV-ray emitting sources must not exceed 25 watts. They must be commercial devices and their emitting specifications must be available on request.

15. Exhibiting animals and animal parts

The following are prohibited on the Science Fair site:

15.1 Living micro-organisms, vertebrates or invertebrates.

15.2 Human and animal fetuses, dissections and products from previous dissections, as well as specimens preserved in formalin or any other substance.

15.3 The following biological substances or materials:

15.3.1 Biological toxins;

15.3.2 Bacterial, viral or fungal cultures;

15.3.3 Cells or tissues infected by animal viruses;

15.3.4 Bodily fluids (e.g.: urine, serum, blood, sperm) and fecal matter.

15.4 Known allergenic plants (ragweed, poison ivy, etc.).

The following may be displayed on the Science Fair site:

15.5 Appropriate photographs, slides and videos of the animals may be exhibited at the booth.

15.6 Mounted animals (birds, etc.) and hermetically sealed collections (insects, etc.).

15.7 Bacterial, viral or fungal cultures set and sealed between the blade and lamella of a microscope.

15.8 Parts of vertebrates that have been lost through natural causes (shells, porcupine quills, cast-off skin, feathers, hair, antlers, etc.) may be displayed at the booth.

15.9 Treated skins, skeletons and parts of skeletons that have been properly cleaned and preserved are permitted. Proof of acquisition and proper taxidermy (invoice or letter from the supplier or lending institution) must be available at the booth during the Science Fair.

16. Plant life

16.1 Plant tissue and soil may be exhibited at Quebec Science Fairs, but may not be displayed at fairs in other parts of the country, in accordance with Chapter 22 of the federal Plant Protection Act, because of the danger that some organisms may spread. Participants who have developed projects involving such samples and who qualify for participation in the Canada-wide Science Fair must adapt their projects accordingly.

Réseau CDLS-CLS

exposciences.qc.ca

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