

2022 SCIENCE FAIR RULES – PRIMARY

Please read completely and carefully **BEFORE** beginning your project.
Valid for all Science Fair levels.

IMPORTANT

These rules apply to the following classifications:

Juvenile 1, Juvenile 2 and Juvenile 3 and replace all previous rules.

The main 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 a responsible scientific approach. 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 professionals must in the research community.

Experiments must be conducted **PRIOR TO** the Science Fair and exhibited during the event using diagrams, photographs, slide shows, videos, simulations, etc.

For any additional information you need to prepare your Science Fair project, please thoroughly read the contents of the official Réseau Technoscience website at: technoscience.ca

Since the 2019 edition of Hydro-Québec Science Fair, exhibitors in the Primary (Juvenile) classification no longer have to produce a written report!

GENERAL RULES	2
1. APPLICATION OF THE RULES	2
2. ELIGIBILITY.....	2
3. EXHIBITORS' COMMITMENTS	3
4. INTELLECTUAL PROPERTY.....	3
5. PROJECTS USING ANIMALS OR NON-HUMAN BIOLOGICAL MATERIAL	4
6. PROJECTS USING HAZARDOUS PRODUCTS	5
7. RULES FORM	5
WRITTEN REPORT	7
8. WRITTEN REPORT.....	7
SITE-SPECIFIC RULES FOR THE REGIONAL FINALS	7
9. GENERAL RULES	7
10. GENERAL SAFETY	7
11. CHEMICAL SAFETY	7
12. ELECTRICAL SAFETY, LASERS, RADIATION, RADIOISOTOPES AND ULTRAVIOLET RAYS	8
13. EXHIBITING ANIMALS, ANIMAL PARTS AND PLANT LIFE	9
PRESENTING A PROJECT	9
14. REGIONAL FINALS – DECORATION AND VISUAL DISPLAYS	9

General Rules

1. Application of the Rules

- 1.1 The Réseau Technoscience and its affiliated organization are responsible for organizing the Science Fairs across Québec (Regional Finals and Québec Final).
- 1.2 **The Réseau Technoscience oversees** The Provincial Judging Committee, responsible for applying the rules at Québec's Science Fairs.
- 1.3 **The Provincial Judging Committee** is the only entity empowered to make a final decision regarding rules and ethics for all Expo-sciences across Québec. No third-party authorization (school, teacher, company, etc.) is admissible for using materials or methods that do not comply with Expo-sciences regulations.

In all circumstances and at its discretion after informing the exhibitor and his or her supervisor, the Provincial Judging Committee reserves the right to make a decision on any issue related to the application of these rules and on any ethical issue.

Any information request to the **Rules Application Committee** must be submitted via e-mail to reglements@technoscience.ca.

- 1.4 **ONLY the Provincial Judging Committee is empowered to disqualify a project deemed non-compliant.**
- 1.4 An exhibitor may be penalized or disqualified before, during or after the Science Fair.
- 1.6 General definitions

- A **recognized institution** is an establishment (e.g., public or private research centre or laboratory, university, hospital, secondary or post-secondary academic institution) of which one mandate is to conduct, teaching, research or technology-transfer activities. To be recognized, the institution must comply with the rules and ethical standards in effect in Canada and with these rules.
- A **scientific supervisor** is a person who holds a scientist position in a recognized institution **AND** undertakes to ensure compliance with the rules and the ethical and safety standards during the project. He/she undertakes, on behalf of the recognized institution, to justify the institution's participation in the proposed project.

2. Eligibility

- 2.1 A maximum of two persons is accepted per project team.
- 2.2 Exhibitors in the Juvenile classification are not eligible for the Québec Science Fair Final.
- 2.3 Exhibitors must attend a school affiliated with a school board in a territory covered by a Réseau Technoscience member organization, or conduct their project with an organization recognized by the Réseau Technoscience members.
- 2.4 Exhibitors may present only one project per year and may not take part in more than one Science Fair Regional Final.

- 2.5 An exhibitor in the Juvenile (primary level) classification is not allowed to present a project with an exhibitor in the Secondary/College component at the Science Fair.
- 2.6 To be eligible, a Science Fair project must adopt a scientific approach.
- 2.7 **Projects requiring the active participation of human subjects**, including intellectual and physical tests, surveys, observations and behavioural studies, **are not permitted in the Primary component.**
- 2.8 No discriminatory, hate-related or violent project is accepted at the Science Fair.
- 2.9 Projects must avoid presenting data based on false information. Statements must be supported by reliable, recognized and verifiable sources.

3. Exhibitors' Commitments

- 3.1 Obey the rules of the Science Fair.
- 3.2 Be present at all stages of the event (set-up, verification of the project by the Rules Application Committee, judging, exhibitions 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 Set up and dismantle their booths during the periods set aside for this purpose in the schedule.
- 3.5 Show respect for other competitors, chaperones, members of the public, and members of the organizing committee.
- 3.6 Follow the instructions of their chaperones and the organizing committee.

- 3.7 Correctly complete the project registration form and all other documents required at the time of online registration.
- 3.8 Exhibitors are required to present complete information relative to their project, unless otherwise specified by the Provincial Judging Committee.
- 3.9 Following registration of a duo project, if either exhibitor cannot comply with these commitments, the project may become a solo project. In that event, the withdrawal or change of status form must be duly completed and returned to the regional member organization of the Réseau Technoscience.

4. Intellectual Property

- 4.1 Any project that infringes upon another person's intellectual property, including:
- any type of plagiarism or self-plagiarism
 - falsification or counterfeiting
 - an incomplete bibliography or mediagraphy
 - omission of quotation marks
 - omission of quotation marks
- will be penalized and, potentially, disqualified. The Réseau Technoscience reserves the right to use plagiarism detection software in applying this rule.
- 4.2 **ALL** photos used for decorating the booth must have a source visibly mentioned at the booth.
- 4.3 The authors of all or part of a computer program or any other type of technology, methodology or procedure not designed by the exhibitor must be clearly credited. The list of authors must be available at the booth at all times.
- 4.4 Any contribution by a mentor or any other person connected with the project must

be listed in the bibliography of the written report as well as when presenting the project.

5. Projects Using Animals or Biological Material of Non-Human Origin

Projects involving the participation of human subjects, including intellectual and physical tests, surveys, observations, behavioural studies and the use of human cells or tissues, **are not permitted in the Juvenile 1, Juvenile 2 and Juvenile 3 classifications.**

5.1 All projects using:

- **live vertebrates (excluding humans) and live invertebrates**
- cells, tissues or any other biological material from vertebrates (excluding humans)
- microorganisms including bacteria, mycobacteria, viruses, fungi (yeasts and filamentous fungi) or primitive organisms (e.g., protozoa)
- hazardous biological or chemical substances, such as, without limitation, proteins, enzymes or other macromolecules such as DNA, RNA or any substance of animal or plant origin
- any other biological material of animal origin (excluding humans)

are allowed only on the following conditions:

- 1) The project has obtained **the Certificate of Approval - Rules** of the Provincial Judging Committee **BEFORE being launched**. See section 7.
- 2) The exhibitor has performed the entire experimental part of his/her project in a recognized institution (see definition 1.6) that applies the guidelines and policies of

the Canadian Council on Animal Care (CCAC).

- 3) A recognized institution has provided the living or sacrificed vertebrates, or any other material of animal origin, or any biological substances, as defined above.

5.2 The project **MAY NOT use invertebrates with higher neurophysiological development (e.g., cephalopods) or vertebrates, or even parts of such animals, if they were sacrificed for the sole purpose of meeting the Science Fair project's requirements or if the animals' well-being is not assured**. Accordingly, the use of such animals is allowed **if and only if** the recognized institution requires them for its own research activities. Those animals, or animal parts, will thus be "shared."

5.3 The project may use **invertebrates with lower neurophysiological development (e.g., insects, shellfish, mollusks, with the exception of cephalopods) or parts of such invertebrates to the extent that they were treated with collection, sacrificing and conservation methods recognized by the CCAC and ensuring the animals' well-being.**

5.4 Animals of any type should be used only if the exhibitor and his/her scientific supervisor could not find valid alternative methods.

The exhibitor and his/her scientific supervisor are responsible for demonstrating that projects involving animals, whether sacrificed or not, use methods recognized by the CCAC that ensure the species' well-being and are used on as few animals as possible.

5.5 Projects involving the study of:

- embryonic, larval or fetal stages of vertebrates, including eggs

- rare or threatened species or some of their parts (e.g., feathers, scales, roots) **are limited to observation.**

5.6 Observation of wild animals in their natural habitat, zoo animals, living farm animals or pets is allowed. Respect for animals must be at the core of the exhibitor's approach.

6. Projects Using Hazardous Products

6.1 **Projects using biological or chemical products that pose a risk to the experimenter or his/her entourage, including, without limitation, the following products:**

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

6.1.2 **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 a gas;

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

6.1.4 **Cryogenic substances** such as liquid nitrogen or dry ice;

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

6.1.6 **Pharmaceutical or veterinary products** of any nature whatsoever;

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

6.1.8 **Any substance that is corrosive** or that may cause injury (e.g., automobile batteries).

6.1.9 **All controlled substances**, such as any type of alcoholic beverage, cannabis or any other type of product containing them.

6.2 **Projects using a product mentioned in point 7.1 are allowed only on the following conditions:**

- 1) The project has obtained the **Approval Certificate - Rules** of the Provincial Judging Committee **BEFORE being launched**. See section 7;
- 2) The project is **overseen** by a supervising scientist from a **recognized institution**;
- 3) The exhibitor has performed the entire experimental part of his/her project in a recognized institution (see definition 1.6).

7. Rules Form

7.1 The Rules Form is mandatory for projects:

- using animals or biological material (section 5 of the rules)
- using biological or chemical substances (section 6 of the rules)

7.2 Mandatory steps **BEFORE** proceeding with an experiment:

7.2.1 By **APRIL 1, 2022 AT THE LATEST**, complete the available form and attach all documents online on the platform approbation.technoscience.ca

7.2.2 During this process, You **MUST**, provide the following information, among others:

- information on your scientific supervisor;
- information on the recognized institution of your scientific supervisor;
- the research protocol;
- the risk assessment.

7.3 Following submission of the Rules Form, the Provincial Judging Committee analyses **the received documents**.

- **ONLY** if a project is deemed compliant, the Provincial Judging Committee of the Réseau Technoscience will issue the Certificate of Approval allowing exhibitors to launch their experiment.
- Once the Certificate of Approval is received, exhibitors may begin their project, i.e., begin the laboratory work.

7.4 When registering for the Regional Final, exhibitors must electronically upload the Certificate of Approval Form within the deadline prescribed during the online registration.

Written Report

8. Written Report

- 8.1 A written report **is not required** of Juvenile Science Fair exhibitors.

Rules for Regional Finals Exhibition Sites

9. General Rules

- 9.1 The organizers are not required to provide Internet connectivity on the Science Fair site.
- 9.2 The exhibitor must be able to identify **ALL** products and items that are displayed on his/her table.

10. General Safety

- 10.1 Aisles, the spaces beneath and areas surrounding booth tables must be kept clear at all times, in accordance with fire regulations.
- 10.2 Assemblies and scale models must remain on booth tables at all times and must not exceed the available space. For more size information, please consult the document [Display Standards for Booths](#).
- 10.3 Assemblies using liquid **must use only water**. The maximum quantity that can be present at the booth is 1 litre. The water must be in a fixed, leak-proof container. It will not be possible to supply the assembly with water during hours open to the public.
- 10.4 Any assembly requiring a liquid other than water must be presented in the form of photos or videos.

- 10.5 Any noise generated by a project must be of a reasonable level, such that it does not disturb other exhibitors and the public.
- 10.6 The project display as well as any assembly or part of an assembly must be free of any pointed ends posing any risk whatsoever (e.g., propeller blades, wooden sticks). All dangerous extremities must be used and covered safely.
- 10.7 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. Ideally, tubing and electrical cords should pass behind the stand or be secured on the table.
- 10.8 Vacuum pumps and any other motor-powered belt systems must be equipped with protective shielding.
- 10.9 Substances giving off odours that may cause discomfort, such as perfumes and incense, must be kept in hermetically sealed, unbreakable containers.
- 10.10 Biological material must be presented in the form of sealed lamella or plastination.
- 10.11 **Prohibited on the Science Fair site:**
- tastings
 - blood sampling and injections
 - flames or heat sources (e.g.: electric heating elements, burners, kettles, candles, hotplates)
 - data collections on members of the public from which information is retained.

The prohibitions in sections 11, 12 and 13 **also** apply.

11. Chemical Safety

- 11.1 **Prohibited on the Science Fair site are all chemicals that pose a risk to exhibitors, visitors and physical locations, including, without**

limitation, the chemicals described in section 6.

- 11.2 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., "Sodium nitrate (table salt)."
- 11.3 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).

12. Electrical Safety, Lasers, Radiation, Radioisotopes and Ultraviolet Rays

- 12.1 No homemade assembly or portion thereof (created for Science Fair Purposes) may be powered by more than 36 V (direct or alternating current). The current must not exceed 5 amps.
- 12.2 Homemade assemblies may be powered by non-modified electrical adapters within the current limits specified in 12.1. A grommet is required at the point where the power cord passes through the casing.
- 12.3 Homemade assemblies may be powered by batteries. Only batteries of 9V or less are accepted for powering all or part of the assembly, up to 36 V in total. The use of non-modified batteries for commercial electric devices is allowed within the current limits specified in 12.1.
- 12.4 Any homemade electrical wiring or assembly must be covered, i.e., protected and not accessible to the touch. In addition, an electrical blueprint of the

assembly must be available, whether visible or not.

- 12.5 Any commercial electrical device that is part of a homemade assembly must retain its full integrity (no modification allowed).
- 12.6 Devices or assemblies using electric lightbulbs must be LED (electroluminescent) and not use more than 10 watts of power **in total**. Bulbs must be protected to avoid accidents.
- 12.7 Only three-pronged electrical extension cords and multi-outlet power bars that are grounded and in good condition are permitted on sites.
- 12.8 Any commercial electrical device must be equipped with its original power cable.
- 12.9 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.

Prohibited on the Science Fair site:

- 12.10 Instruments emitting any form of X-rays (microwaves, X-rays, infrared lights) freely into the atmosphere.
- 12.11 All laser pointers.
- 12.12 Experiments based on radioisotopes or ionizing radiation, and any radioactive substances.

**During the judging period
ONLY:**

- 12.13 An assembly using a laser beam is allowed if the emitting source is controlled (set) and stationary so that the beam cannot hit the eye of the exhibitor or authorized persons on the site during the judgment period. The power of any laser used on the site must not exceed 2.0 mW and must not surpass Class 1, as specified in

Standard ANSI Z 136.1-1993 (American National Standard for Safe Use of Lasers).

- 12.14 The power of sources emitting UV-rays must not exceed 25 watts. They must be commercial devices and their emitting specifications must be available on request at the booth during the judging period.

13. Exhibiting Animals, Animal Parts and Plant Life

Prohibited on the Science Fair site:

- 13.1 Live vertebrates or invertebrates.
- 13.2 Human and animal fetuses, dissections, non-plastinated products from previous dissections, as well as specimens preserved in formalin or any other preservation substance.
- 13.3 The following biological substances or materials:
- 14.3.1 Petri dishes containing agar;
 - 14.3.2 Biological toxins;
 - 14.3.3 Bacterial, viral or fungal cultures;
 - 14.3.4 Cells or tissues infected by animal or human viruses;
 - 14.3.5 Bodily fluids (e.g., urine, serum, blood, sperm) and fecal matter.
- 13.4 Known allergenic plants (ragweed, poison ivy, etc.).
- 13.5 Highly perishable products of plant or animal origin.

The following may be displayed on the Science Fair site:

- 13.6 Appropriate photographs, slides and videos of the animals may be exhibited at the booth.
- 13.7 Hermetically sealed collections (insects, etc.).
- 13.8 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.
- 13.9 Mounted animals, treated skins, skeletons and parts of skeletons that have been properly cleaned and preserved and come from a recognized source 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.

Presenting a Project

14. Regional Finals – Decoration and Visual Displays

- 14.1 Exhibitors must contact their regional Réseau Technoscience member organization for all information regarding booth specifications. The project (all elements combined) must not exceed the booth size.
- 14.2 Booths will be set up on tables with the project displayed on the front.
- 14.3 For decorative purposes, posters must be applied directly to the booth.
- 14.4 No decorative items may be affixed permanently or in a manner that would alter the booths.

- 14.5 Elements not affixed to the booth may be placed on the table.
- 14.6 Corrugated cardboard and Coroplast are prohibited for decorating and for use in scale models.
- 14.7 The table may not be partially or totally covered with a cloth. If necessary, you can obtain a special covering from the Organizing Committee.
- 14.8 No roof, dome, fabric or other method of covering the top or sides of the booth will be accepted.
At a Regional Final, fill-in lighting may be prohibited; exhibitors must check with their regional Réseau Technoscience member organization.



technoscience.ca

Réseau Technoscience
2022 Science Fair rules_primary
Revised version: August 27, 2021