



Frontenac, Lennox and Addington Science Fair

Safety and Your Virtual Science Fair Project

FLASF expects that all projects submitted to the 2021 Virtual FLASF Science Fair will be carried out in a safe manner. Participants must become and be familiar with every aspect of their project that relates to health, ethics and safety. Even though the fair is online, this responsibility and these requirements cannot be ignored.

As a guide, some general questions should be considered by participants. Specific and detailed information can be found in the references / links provided in this document.

In particular, ask yourself:

Can I identify any aspect of my project that could cause harm?

Do I have the knowledge required to prepare any potentially harmful aspects of my research? If not, whose help can I access?

What safety equipment will I need? Where will I get it?

Is there appropriate adult supervisors?

Do I have an appropriate workspace to create my project with the necessary supervision for the location? Home? School? University? Hospital? Plan your work carefully and have a responsible/qualified adult check your plan and ensure it is safe.

If there is any doubt, consult the Ethics and Safety Committees of the Regional Science Fair.

safety@flasf.on.ca

ethics@flasf.on.ca

If your project involves the participation of humans or the use of animals, you must follow the policies that govern such projects. Please refer to the Ethics link on the FLASF website.

Planning and Carrying out your Experiments

Experiments carried out using flammable, explosive, poisonous or corrosive materials as well as drugs, prescription drugs, medicines or biological materials and dangerous equipment such as firearms or pressure vessels should be properly supervised by an adult who understands the hazards involved. If you plan to use any of these you must follow Youth Science Canada (YSC) policies:

	In English	en francais
Use of Firearms, Hazardous Materials and Equipment	<u>Firearms, Hazardous Materials and Equipment</u>	<u>armes à feu, de matériel et d'équipement dangereux</u>
Recombinant DNA and Biotechnological Safety	<u>Recombinant DNA and Biotechnological Safety</u>	<u>securite en matiere d'ADN recombinant et biotechnologie</u>

Human and animal testing

ALL experiments involving humans (including family or fellow students) and animals must follow YSC policies and you have to complete certain forms and submit them with your registration. Please refer to the Ethics link on the FLASF website for more information and forms.

Preparing your virtual project presentation

Your project presentation at the virtual science fair is intended to show what you did, what you found out, and what it means. The judges evaluate the work you have already done. Therefore, you do not need to demonstrate exactly what you did. You are encouraged to use diagrams, models, photos, short videos, etc to illustrate what you have done.

Refer to the FLASF website for more information on Preparing your Virtual Presentation

Chemicals

While the following chemicals are prohibited from the physical fair, this list provides a guideline to issue requiring special attention even for project development in a virtual fair:

- Flammable, explosive, poisonous or corrosive materials

- Drugs or medicines
- Biological fluids (eg blood, etc)
- Biological toxins
- Radio-isotopes or compounds containing radio-isotopes at activities above normal background.
- Any materials requiring special protective equipment for handling (such as masks, gloves, eye protection) as specified in MSDS or WHMIS documents.

See for example:

EHSO - Environment, Health and Safety Online: <http://www.ehso.com/msds.php>

Chemical Safety Software: <https://chemicalsafety.com/sds-search/>

Other chemicals/materials must be used in such a way as to prevent accidental spills.

Plants & Animals

REMINDER: If your experiment involved human or animal subjects, we are required to follow the YSC guidelines. Such experiments require submission of appropriate forms on registration. Please refer to the Ethics link on the FLASF website for more information and forms.

Electrical

- 120 VAC equipment, including electrical power bars, supplies and cords and other 120 VAC equipment must be in good condition, and CSA approved. No modifications to 120 VAC equipment that would cancel the CSA approval are permitted. No exposed (non-insulated) 120 VAC conductors are permitted.
- “Home-made” 120 VAC equipment (for example wired using junction boxes, wired-in switches or similar devices) and any other non-compliant equipment if used, must be supervised and used with extreme caution
- Home-made battery powered electrical apparatus operating at 12 Volts or less are permitted and may be operated.
- Only sealed type batteries may be used.

Other information:

This link will lead you to a page that gives detailed information on the following ten topics

<https://youthscience.ca/safety-science-fair-projects>

1. Biosafety Posters
2. Boilers and Pressure Vessels
3. Chemistry Safety

4. Dangerous and Explosive Materials
5. Firearms and Projectiles
6. Laser Safety
7. Microorganisms Safety
8. Model Rocket Safety
9. Pesticides
10. Recombinant DNA and Biotechnological Safety

Contact Us:

If you have any questions about Science Fair safety policies or regulations, ask the safety coordinator at safety@flasf.on.ca or the ethics coordinator at ethics@flasf.on.ca