

Bluewater Regional Science and Technology Fair Policies Manual



Last Updated – February 2024

MISSION STATEMENT

The BRSTF is a group of volunteers dedicated to promoting science, technology, engineering, and mathematics (STEM) amongst the youth of Bruce and Grey counties.

The premier event of the BRSTF is the Regional Science Fair held in April each year. All students in Bruce and Grey Counties may compete in the fair. Students include the English Public and Catholic School Boards, the French Public and French Catholic School Boards, Private schools located in the two counties and home-schooled students who reside in either county.

Students who live outside of the two Counties but attend a school located in one of the two Counties will attend the BRSTF.

Students who live in the two Counties but attend school in another County must attend the Regional Fair the school participates in.

The Mission of the BRSTF will be reviewed by the Board when required.

VOLUNTEER TRAINING PROGRAM

Policy Number	1.1
Policy Section	1.2
Approved By	Board
Date Approved	26 March 2007
Date Effective	Immediately
Date Last Amended	September 2023
Date of Next Review	September 2028
Related Polices	
Contact	Chair, BRSTF

1. Introduction

1.1 The BRSTF gains and loses Board members and Judges annually. The training of the new volunteers is an essential part of the daily business of the Board. The training of science fair judges is an ongoing effort as the rules/rubric and Youth Science Foundation requirements change.

1.2 New Board members will be trained during the year. They will be placed on subcommittees with experienced members who will mentor the new members. Records will be kept that may assist future members with their duties on their respective subcommittees.

1.3 New Board members will be given a copy of the policy manual, found on the region's website (brstf.org). They will review the policy manual and will follow policy during the execution of their duties.

1.4 The BRSTF will hold two judges training sessions a year. Each session will be held prior to the commencement of the two Regional Fairs.

1.5 Schools holding science fairs may request assistance from the Board to train science fair judges.

VOLUNTEER EVALUATION – CODE OF CONDUCT

Policy Number	2.1
Policy Section	2.1.1 Evaluations – Code of Conduct
Approved By	Board
Date Approved	26 March 2007
Date Effective	Immediately
Date Last Amendment	September 2023
Date of Next Review	September 2028
Related Policies	Student Code of Conduct
Contact	Chair, BRSTF

2. Introduction

- 1.1 The BRSTF will evaluate the effectiveness of its volunteers, subcommittees and judges on an annual basis. The evaluation will assist in improving the Regional Fair and the image of the BRSTF.
- 1.2 The Board will evaluate the effectiveness of each subcommittee. Improvements will be made where errors or omissions are identified.
- 1.3 The evaluation of the individual volunteers will be made by the Board. Positive reinforcement will be used to assist any volunteers who require help in completing his or her duties.
- 1.4 The evaluation of the judges will be made by the Judging subcommittee. The Chair of the BRSTF is responsible to bring to the attention of any judge where a problem exists, or the judge fails to properly carry out the duties of judging as outlined in the training sessions.
- 1.5 **CODE OF CONDUCT OF VOLUNTEERS:** Volunteers are expected to present themselves in a supportive and caring manner. They are expected to have a positive impact on the students at the Regional Fair. Behaviour that is contrary to these principles may be grounds for review by the Board and possible dismissal from the BRSTF.
- 1.6 **CODE OF CONDUCT OF JUDGES:** Judges are expected to render their decisions without bias or prejudice. Judges are to be supportive of the students and to leave the students with a positive attitude to the judging process and science fair overall. Bias or undue harshness may result in judges being dismissed from the judging panel. The Board will review all complaints about the judges or the judging process. The Chair, in extreme cases, may immediately dismiss a judge at any time for a violation of this policy.

CONFLICT OF INTEREST

Policy Number	3.1
Policy Section	3.1.1 Conflict of Interest
Approved By	Board
Date Approved	March 26, 2007
Date Effective	Immediately
Date last Amended	October 2023
Date of Next Review	October 2028
Related Policies	
Contact	Chair, Treasurer

3 Introduction

3.1.1 The BRSTF members are required to report any conflict of interest to the Chair and/or to the Treasurer of the Fair. The BRSTF must not only be in good standing with the community but must also appear to be in good standing. Conflicts of interest must be declared to avoid an appearance that would bring the BRSTF's image into disrepute.

3.1.2 When the Treasurer receives a conflict of interest from a volunteer or Board member, the Treasurer will as soon as practicable report the conflict to the Chair.

3.1.3 When a member of the BRSTF finds themselves in a conflict of interest, that person shall declare the conflict and remove themselves from the meeting or situation, as the case may be.

3.1.4 Conflicts of interest that are monetary in nature should be reported to the Treasurer for consultation.

USE OF FIREARMS, HAZARDOUS MATERIALS AND EQUIPMENT, USE OF PESTICIDES

Policy Number	4.1
Policy Section	4.1.1 Project/Student Safety
Approved By	Board
Date Approved	March 26, 2007
Date Effective	Immediately
Date last Amended	October 2023
Date of Next Review	October 2028
Related Policies	Firearms and Projectiles
Contact	Chair, Safety and Ethics Subcommittee

4. Introduction

4.1.1 Youth Science Canada and the BRSTF allow students to conduct research involving firearms as long as they adhere to federal and provincial regulations and guidelines that are designed to protect the safety of the students.

4.1.2 This policy applies to all firearms and projectiles, such as pellet guns, paint ball guns, slingshots, potato guns or other devices that propel an object.

4.1.3 The primary responsibility for the safety of the student and others lies with the Adult Supervisor. This person must be familiar with appropriate safety procedures, and is responsible for ensuring they are followed.

4.1.4 Federal and Provincial laws set certain standards for the use of firearms including some exceptions for minors to possess firearms without having to be licensed. Youth Science Canada requires a higher standard to ensure student, supervisor and public safety. Therefore all students aged 12 to 17 must have successfully completed the Canadian Firearms Safety Course and obtained a minor's possession certificate issued under the federal Firearms Act S.C. 1995, c. 39. This rule shall be strictly adhered to by students planning to do a STEM project involving firearms.

4.1.5 Any experimental design involving firearms or projectiles, must be approved by BRSTF Safety and Ethics Committee or Youth Science Canada National Ethics Committee to ensure compliance with regulations and restrictions. If necessary, Youth Science Canada will refer the project to the authorities cognizant of current regulations. Note that converting a firearm to fully automatic mode and/or converting a centre fire magazine to hold more than five rounds of ammunition is a violation of the Criminal Code.

4.1.6 Use of firearms requires proper supervision by an Adult Supervisor. The Adult Supervisor must be directly responsible for overseeing student experimentation and must provide proof to the BRSTF Safety and Ethics Committee of their licensing and expertise in the use of a firearm, or device, and/or explosives BEFORE the project commences.

4.1.7 When considering a project that involves the use of firearms, ammunition, or explosives, it is strongly suggested that students and Adult Supervisors make contact with one or more of the following agencies or government ministries: RCMP, Provincial Police, Municipal Police, Federal and Provincial Justice Ministries, Provincial Ministries responsible for hunting and fishing regulations, Municipal offices regarding the use of firearms within their jurisdiction, National and Provincial hunting organizations, Natural Resources Canada.

4.2 Legislative Framework

4.2.1 The lawful use, licensing and registration of firearms is the responsibility of the federal government. The provinces regulate hunting activities. Some municipalities also enact bylaws related to the use of weapons.

4.2.2 Firearms in Canada fall into one of three classes - non-restricted, restricted or prohibited. Non-restricted firearm: any rifle or shotgun that is neither restricted nor prohibited. Most common long guns are non-restricted, but there are exceptions.

4.2.3 Any device that has the following characteristics is also classified as a firearm: a) A muzzle velocity of 152.4 metres per second or more and/or b) A muzzle energy of 5.7 joules or more.

4.2.4 Potential violations of the Criminal Code must be considered and researched prior to experimentation. Criminal Code considerations that should be addressed by students and Ethics Committees in reviewing a project include:

- a) Possess, trade, transfer or give as a gift a firearm to a person without a Possession Only Licence (POL) or a Possession and Acquisition Licence (PAL) with the proper classes of firearms.
- b) Possession of a weapon dangerous to the public peace.
- c) Unlawful storage of a firearm, ammunition or explosive.
- d) Pointing a firearm.
- e) Careless use of a firearm.
- f) Criminal negligence causing bodily harm or death.

4.2.5 Other considerations for projects involving the use of firearms, ammunition, and explosives include Provincial and Federal acts such as the Environmental Protection Act, Migratory Bird Game Act and Canada Shipping Act.

4.2.6 Prohibited weapons may NOT be used in a STEM project or displayed or worn at the BRSTF. Prohibited weapons include spiked wrist bands and neck bands, maces, martial arts throwing weapons, nunchakus or any other weapons defined by the Criminal Code as prohibited.

4.2.7 Pellet guns, paint ball guns, slingshots, potato guns or other devices that propel an object are dangerous weapons. These devices may be used with the pre-approval of the BRSTF Safety and Ethics Committee. Inspection of the device and area of use is the responsibility of the BRSTF Safety and Ethics Committee. The device shall not be displayed at the BRSTF or the Canada-Wide Science Fair.

4.3 Firearms

4.3.1 Anyone possessing a firearm, even temporarily, must have a license. Those over 18 must have a Possession and Acquisition Licence (PAL). Some over 18 will have the legacy Possession Only License (POL) which is being phased out. Persons 12 - 17 years of age may acquire a Minor's Licence which permits someone under the age of 18 to possess non-restricted firearms for the purposes of: target practice, competition, hunting, or instruction in the use of a firearm. The application forms for this type of licence can be obtained from the Ontario Chief Firearms Officer.

4.3.2 Minors cannot possess restricted or prohibited weapons.

4.3.3 All restricted and prohibited firearms must be registered. Restricted and prohibited firearms cannot be used in a STEM project. The Firearms Act prohibits the possession of a restricted and/or prohibited firearm. Section 8(4) An individual who is less than eighteen years old is not eligible to hold a licence authorizing the individual to possess prohibited firearms or restricted firearms or to acquire firearms or cross-bows. Firearms Act S.C. 1995, c. 39.

4.3.4 An individual may load a firearm or handle a loaded firearm only in a place where the firearm may be lawfully discharged in accordance with all applicable Acts of Parliament and the legislature of the province/territory, regulations made under such Acts and Municipal By-Laws.

4.3.5 Where practicable, the discharging of a firearm should be conducted at a licenced range under the supervision of a qualified range master. All available safety equipment (e.g., goggles, ear protection) should be used. Indigenous peoples and other persons residing in northern areas where licensed firearms ranges and qualified range masters are not readily available shall provide a safety protocol to the BRSTF Safety and Ethics Committee for approval before the project commences.

4.3.6 In all cases involving firearms, the Adult Supervisor must possess a POL or PAL and/or a Canadian Firearms Safety Course or equivalent, and be knowledgeable in the use of the firearms or devices that will be used in the experimentation. In all cases, the Adult Supervisor must have reached the age of majority (18 years).

4.3.7 Students wanting to use firearms must show proof of a Minors License and Canadian Firearms Safety course or equivalent. Copies of these certificates must be provided to the BRSTF Safety and Ethics Committee in advance of beginning the experiment. The BRSTF Safety and Ethics Committee shall retain copies of the documents.

4.3.8 For firearms requiring federal and/or provincial/territorial permit or registration, the student or Adult Supervisor will be expected to have the permit prior to the onset of the experimentation. A copy of the permit must be submitted to the BRSTF Safety and Ethics Committee. Only firearms/explosive devices that have federal, provincial/territorial and municipal approval may be used in a project. Proof of this approval must be presented to the BRSTF Safety and Ethics Committee with the student's proposal in advance of beginning the project.

4.3.9 Most bows are classified as non-restricted weapons. There are some exceptions.

4.4 Ammunition

4.4.1 All ammunition used in a STEM project must be factory loaded. Reloaded ammunition is strictly prohibited.

4.5 Boilers and Pressure Vessels

4.5.1 A pressure vessel constructed for or used in a STEM project, with a capacity greater than 42.5 litres or operated at a pressure greater than 103 kilopascals, must be inspected and certified for use by an inspector appointed under the Boilers and Pressure Vessels Act/Regulations. A certificate of inspection must be available at the project display.

4.5.2 To ensure safety, any youth-constructed pressure vessel regardless of size or pressure, should be inspected according to provincial regulation and prior to use by an engineer with certification in boilers and pressure vessels. Evidence of the inspection should be available at the project display.

4.5.3 Any pressure vessel must have a safety valve, rupture disc or similar device to limit internal pressure below the burst pressure of the vessel. The safety valve shall relieve to a safe or remote area.

4.5.4 Boilers and pressure vessels fall under the jurisdiction of provinces and territories. Therefore, youth will have to check their provincial statutes and regulating body. One piece of federal legislation deals with boilers and pressure vessels: Canada Occupational Health and Safety Regulations (SOR/86-304)

4.6 Pesticides

4.6.1 Pesticides are defined as substances used to prevent, destroy, repel, attract or control pests like insects, weeds or diseases. Major types of pesticides include:

TYPE	CONTROLS
Insecticide	Insects
Herbicide	Plants – mostly weeds
Fungicide	Fungi
Rodenticide	Rodents
Miticide	Mites
Nematicide	Nematode worms

4.6.2 Pesticides are regulated by three levels of government: federal, provincial/territorial and municipal. The federal Pest Control Products Act (PCPA) is the federal law that regulates all products used to control pests in Canada. The Pest Management Regulatory Agency (PMRA), Health Canada is responsible for administering the PCPA and its Regulations. Several other federal laws, such as the Food and Drugs Act, Fertilizer Act, Fisheries Act, Migratory Birds

Convention Act and the Canadian Environmental Protection Act also regulate the use of pesticides. Each Province sets out its own laws for the control, use, sale, storage, display, disposal, and transportation of pesticides. Several municipalities have banned the use of pesticides.

4.6.3 Students and licensed supervisors must be able to read the product label. The product label contains information such as active chemicals, spray concentrations, toxicity, safety procedures (i.e., protective clothing, dangers to wildlife, spill containment, poison/contamination procedures, medical treatment, etc.) A clean, non-contaminated copy of the product label(s) should be available at the STEM project display for safety inspection. Pesticides, even empty containers, cannot be displayed at the BRSTF or the Canada-Wide Science Fair.

4.6.4 Students using pesticides must be of provincial/territorial age for possession and use. Students must also be licenced under the provincial or territorial law that regulates pesticides. If a student is not of age to be licensed, then he/she must be supervised by a person who is licensed. The applicable licence or a certified copy must be available to safety inspectors at the BRSTF Fair or Canada-Wide Science Fair.

4.6.5 Pesticides, pesticide containers, or items that have been treated with pesticides shall not be displayed at the BRSTF fair or Canada-Wide Science Fair. Disposal of these containers must be in accordance with Provincial and Municipal regulations.

4.7 Lasers

4.7.1. Lasers can be used in STEM fair projects done at home or school only if:

- The beam is protected, so that it can never enter the eye of any observer.
- All appropriate safety precautions and eye protection are in place.
- All legal, regulatory and industry standard restrictions are observed.
- There is an adult supervisor who has sufficient knowledge to enforce safe procedures at all times.

4.7.2 Lasers cannot be brought to the BRSTF fair unless the conditions in section 1 are met.

4.7.2.1.3 Lasers may not be used as pointers at the BRSTF fair.

ANIMAL TISSUE AND BIOHAZARDS – ETHICS

Policy Number	5.1
Policy Section	5.1.1 Animal Tissue, Biohazards
Approved By	Safety and Ethics Board
Date Approved	26 March 2007
Date Effective	Immediately
Date Last Amended	November 2023
Date of Next Review	November 2028
Related Policies	Human Involved Experimentation
Contact	Chair, Safety and Ethics Committee

5. Introduction

5.1.1 The BRSTF strictly adheres to the ethical treatment of animals. The procurement of animal tissues and parts is strictly regulated.

5.1.2 Animal tissues, parts, cells and embryos must be procured from a registered science supply store or a university or private sector research lab approved to carry out animal research. Human teeth, human & animal blood and organs are included in Animal Tissues. Human teeth shall not be obtained from dentists due to infection and informed consent considerations. The BRSTF has a high standard of bio-safety that will be strictly enforced. This high standard is for the protection of our students, their families and fellow students and teachers. Animal tissues, parts, cells and embryos are not permitted to be displayed at the Regional Fairs but pictures or models are allowed. Pictures that may be offensive or have shock value shall not be displayed on the student's backboard. Judges shall be told by the student that the pictures in the student's workbook may be offensive prior to being judged. The student must prove to the BRSTF Safety and Ethics Committee that the animal tissue was procured at a registered science supply store or approved research facility by showing the documentation and receipt that comes with the samples.

5.1.3 Naturally shed tissues, such as snake skins, may be used in a science fair project. Animal skeletons and/or teeth may be used in a project provided there is no tissue on the bones and the skeleton or teeth have been sterilized in bleach. The article should be displayed in a sealed container. The BRSTF Safety and Ethics Committee should be consulted if the student/teacher is unsure if the article should/can be displayed. Owl pellets must be obtained from a science supply store and the receipt shall be at the student's project for review by the BRSTF Safety and Ethics Committee.

5.1.4 Vertebrates must not be harmed. Lower forms of life may be used to replace vertebrates except for cephalopods. Intentional torturing or unnecessary killing of test subjects will result in the project being disqualified. Vertebrates are any animal with a backbone or spinal column including fish, amphibians and reptiles. Cephalopods include octopi and squid.

5.1.5 Students wishing to do science projects on vertebrates that are intrusive, such as the taking of blood, must send a written proposal to the BRSTF Safety and Ethics Committee. The committee will review the proposal for its scientific merit, ethics and safety procedures. The project, if passed, will then be sent to the Youth Science Canada Safety and Ethics Committee for review and approval. The National Judges Advisory Committee of YSC will also be consulted and that committee may also review the proposal. Any of these committees may make recommendations for improvement to the project or its procedure. These recommendations shall be followed by the student before final permission to start the project is given. The proper procedure and forms for the proposal may be found on the Youth Science Canada website under "Policies and Procedures". Live animals, including fish, amphibians, reptiles and cephalopods **shall not be displayed** at the Regional Fair.

5.1.6 Moulds, bacteria and viruses are not allowed at the regional fair. Pictures **shall** be used in place of the actual specimens. Students are not penalized in the judging process for having pictures. This policy is based on safety best practices. School principals may consult with the BRSTF Safety and Ethics Committee about projects that are still at the school level.

5.1.7 Live stinging or biting insects, peanut butter and any other items deemed allergenic shall not be displayed at the regional fair. Items found at the regional fair that are considered dangerous to other students will be removed from the student's desk and returned at the end of the fair.

5.1.8 Preserved and mounted stinging or biting insects may be displayed. Wasp and bees nests cannot be displayed.

HUMAN INVOLVED EXPERIMENTATION

Policy Number	6.1
Policy Section	6.1.1
Approved By	Board
Date Approved	26 March 2007
Date Effective	Immediately
Date Last Amended	November 2023
Date of Next Review	November 2028
Related Policies	Project/Student Safety
Contact	Chair, Safety and Ethics Committee, National Judging Committee, Youth Science Canada

6 Introduction

There are two types of human involved experimentations, low and high risk. The purpose of this policy is to protect the identity and health of people taking part in science projects. Ingestion projects of drugs or chemicals are not allowed unless they are performed at a research facility approved to carry out ingestion experiments.

Example: Testing which energy drink gives more energy is not allowed as they contain the drug caffeine. Testing chewing gum to see which lasts longest would be allowed.

Students wishing to do a project in this area shall consult with the BRSTF Safety and Ethics Committee first. Students put a lot of work and effort into projects. The BRSTF does not want a project disqualified due to a safety or ethics infraction.

NOTE: All Federal, Provincial and Municipal Freedom of Information and Protection of Privacy Acts shall be followed to protect the privacy of the test subjects.

6.1 Low Risk Projects:

6.1.1 A Low Risk Project - involves conditions where the risks of harm are not greater or more likely than those encountered in everyday life. A Low Risk Project is one that fits one of these five criteria:

- a) Some surveys
- b) Some food and drink projects
- c) Some caffeinated beverage projects
- d) Some absorption through the skin projects
- e) Some exercise projects

See Section 6.3 for more details.

6.1.2 All other projects involving humans are considered Significant Risk Projects and must comply with the Participation of Humans in Research – Significant Risk policy.

6.2 Definitions

6.2.1 Human Research refers to any project that involves the generation of data about persons.

6.2.2 A Student Researcher is an elementary or secondary school student who takes data, collects information, or assists in research activities involving humans, usually as part of work on a project.

6.2.3 A Participant is a person who takes part in a project or activity as a source of primary data and bears any risk as the research is being carried out. The Student Researcher may also be a Participant.

6.2.4 An Adult Supervisor is a parent, teacher, professor, scientist, or other STEM professional responsible for ensuring that the student is aware of the ethical issues involved in the project and providing guidance and advice to ensure that Youth Science Canada policy is followed. The Adult Supervisor is responsible for ensuring that the student's research is eligible for entry into a regional STEM fair, Canada-Wide Science Fair, or other youth STEM project competitions or events. Every project involving the participation of humans requires an Adult Supervisor.

Low Risk Projects

6.3 Introduction

6.3.1 Surveys of attitudes and beliefs, skill tests, or observations of behaviour

a) These are generally low risk projects. Be aware however that not all survey/skill testing studies are automatically low risk. For example, a project to measure the Body Mass Index of a class could cause considerable discomfort to students who are not comfortable with their body weight. Skill testing could be a difficult experience for a participant who scores well below the group average. It is the responsibility of the adult supervisor to ensure that participants are not put at risk, either physically or emotionally. Mechanisms such as discussion and debriefing should be used to minimize any remaining risk.

6.3.2 Food and Drink Projects

a) Projects involving the consumption of food or drink are considered low risk when they are designed only to assess the characteristics and effects of a food. Food is defined as “...any article manufactured, sold or represented for use as food or drink for human beings, chewing gum, and any ingredient that may be mixed with food”. (Food and Drugs Act (R.S.C., 1985, c. F-27) (Ref. 1)

b) The foods to be considered must be basic or common foods that contain permitted additives not exceeding Recommended Daily Intake (RDI) guidelines normally associated with those foods.

c) Evaluation of foods in youth (under the age of 19 years) must only involve participants who are not taking prescription medications, to minimize the risk of drug-food interactions.

d) Some provinces have rules that govern ingestion of food by the public; these take precedence over the rules in this section. Students doing ingestion projects must know the applicable procedures required for the safe handling of food.

6.3.3 Caffeinated Beverages

a) The daily limits of caffeine intake are:

- 1) 200 mg caffeine per day for Participants aged 13 and older.
- 2) 85 mg caffeine per day for Participants aged 10 to 12.

- 3) No research involving caffeinated foods or drinks is permitted with Participants under 10 years of age.
- b) Caffeine is found in soft drinks, coffee, tea, iced coffee, energy drinks, and many other food and drink products. It is the responsibility of the student researcher and the adult supervisor to ensure that the daily limits are not exceeded. Health Canada has expressed concerns about excessive intake of caffeine by Canadians, especially children and youth (Ref. 2). Thus, the ingestion of caffeine must be closely monitored and kept within reasonable limits according to Health Canada recommendations.

6.3.4 Absorption through the skin

- a) Projects that involve absorption through the skin must satisfy the rules for a low risk project and involve a risk of harm no greater than that encountered in everyday life. Thus, research comparing different ways of removing bacteria using different brands of hand sanitizer would be permitted. Research that involves putting a toxic substance like benzene on the skin would not.

6.3.5 Exercise Testing

- a) All exercise testing beyond normal everyday activities is considered Significant Risk and must comply with the Participation of Humans in Research – Significant Risk policy.

6.3.6 Drugs

- a) Definition of a "drug": "drug" includes any substance or mixture of substances manufactured, sold, or represented for use in:
 - 1) the diagnosis, treatment, mitigation or prevention of a disease, disorder, abnormal physical state, or its symptoms, in humans or animals,
 - 2) restoring, correcting, or modifying organic functions in humans or animals;
 - 3) disinfection in premises in which food is manufactured, prepared, or kept. (Ref. 3)
- b) All projects involving Drugs are considered Significant Risk and must comply with the Participation of Humans in Research – Significant Risk policy.

6.4 Informed Consent

6.4.1 Human participants must be assured that they are safe, that they are treated with respect and dignity, and that the information they provide will be kept confidential. These ethical safeguards are primarily the responsibility of the Student Researcher and their Adult Supervisor. The process of providing this information is called "Informed Consent".

6.4.2 The Adult Supervisor is responsible for supervision of ethical as well as scientific aspects of a low-risk project, and for signing the Human Participants - Low Risk form ensuring that the essential elements of ethics review: consent, confidentiality, and the right to withdraw have been considered.

6.4.3 Participants must give informed consent before taking part in any Human Research. The research and their participation in it must be explained to children in words they will understand. It must also be explained to children that they do not have to participate unless they want to, even if their parents have approved. Agreement to participate (assent) must be documented for each participant. Children over 9 years can be invited to indicate their assent by co-signing the

same form their parent signed. Younger children can provide assent orally, but the researcher must document it.

6.4.4 If the Participant is under the age of majority (18 or 19 depending on the province/territory), then the parent or guardian must also sign the Informed Consent Permission Form.

6.4.5 If the Participant is over the age of majority (18 or 19 depending on the province/territory) but is unable to consent for themselves, the Participant's legal guardian must sign the consent form. Assent of the Participant must also be documented.

6.4.6 In the case of activities that are clearly of very low risk such as observational surveys or having participants listen to music, informed consent may be assumed by the simple act of agreeing to participate. Parents or guardians must still be provided with the Letter of Information beforehand, even though their signed informed consent will not be sought. The teacher or other supervising adult is responsible for deciding if signed informed consent is required for these types of projects.

6.4.7 Signed informed consent forms are mandatory for all food and drink projects because the risk of allergic reactions is unknown.

6.4.8 Informed Consent - Letter of Information

a) Answers to questions 1 to 11 must appear in the Letter of Information to ensure that Participants have been properly informed of all appropriate ethical issues:

- 1) What is the name(s) of the Student Researcher(s); school; project title; Adult Supervisor's name, email address and telephone number.
- 2) What is the purpose of this research?
- 3) What are the benefits to the Participant from participating?
- 4) What are the risks to the Participant from participating?
- 5) What time commitment is required?
- 6) What remuneration or reward will be provided? It is the policy of Youth Science Canada that incentives shall not be offered for participation in Student Research.
- 7) How will the confidentiality of the data be guaranteed?
- 8) Is the right to withdraw clearly communicated? Explain in the Letter of Information that the participant has the right to withdraw at any time for any reason without consequences of any kind.
- 9) How does the participant communicate a decision to withdraw from the study?
- 10) How will the results of the research be communicated to the participant?
- 11) Are there any other issues that need to be included in the Letter of Information?

b) A sample Informed Consent - Letter of Information is available for download from the Youth Science Canada Policy Portal.

6.4.9 Informed Consent - Permission Form

a) The Informed Consent - Permission Form is a short document that contains:

- 1) The printed name and signature of the Participant.
- 2) The printed name and signature of the person requesting informed consent.

- 3) The signature of a parent or guardian.
 - 4) A statement that the Participant has received and understood the Informed Consent - Letter of Information.
 - 5) The date.
- b) A sample Informed Consent - Permission Form is available for download from the Youth Science Canada Policy Portal.

6.4.10 Confidentiality

- a) The confidentiality and anonymity of all participants must be maintained. Use coded systems of references; no identifying information may be used. Appropriate safeguards for storage and access to data must be planned. The date all identifiable data will be destroyed must be given.

6.5 Display

- 6.5.1 The project display may include pictures of participants only if prior permission has been obtained in writing.

6.6 Forms

- 6.6.1 An Approval of Low Risk Projects Form must be submitted to the Regional STEM Fair and Canada-Wide Science Fair at registration for any low risk project, along with any applicable Letter of Information, Blank Permission Form, and Sample Survey.

Significant Risk Projects:

6.1.1 Introduction

6.1.1.1 A Significant Risk Project involves conditions where the risk of harm is greater, or is potentially greater, than that encountered in everyday life. Low Risk projects are defined in the Participation of Humans in Research – Low Risk policy. All other projects are, by definition, Significant Risk Projects.

6.1.1.2 The implementation of this policy is described on the web site of the Youth Science Canada National Ethics and Safety Committee. This material must be read by both students and their supervisors.

6.1.1.3 All students must submit a Research Plan to the Chair of the BRSTF STEM fair Ethics Committee before starting their experiments.

6.1.2 Definitions

6.1.2.1 Human Research refers to any project that involves the generation of data about persons.

6.1.2.2 A Student Researcher is an elementary or secondary school student who takes data, collects information, or assists in research activities involving humans, usually as part of work on a project.

6.1.2.3 A Participant is a person who takes part in a project or activity as a source of primary data and bears any risk as the research is being carried out. The Student Researcher may also be a Participant.

6.1.2.4 An Adult Supervisor is a parent, teacher, professor, scientist, or other STEM professional responsible for ensuring that the student is aware of the ethical issues involved in the project and providing guidance and advice to ensure that Youth Science Canada policy is followed. The Adult Supervisor is responsible for ensuring that the student's research is eligible for entry into the BRSTF or the Canada-Wide Science Fair. Every project involving the participation of humans requires an Adult Supervisor.

6.1.2.5 A Scientific Supervisor, who will usually have an advanced degree, must be involved in a Significant Risk project, which often takes place in a university, institutional, industrial or government laboratory. The Scientific Supervisor is responsible for ensuring that

- (a) all provincial and federal laws governing safety, handling of materials, and procedures are followed;
- (b) that all applicable policies concerning research ethics and the participation of humans are known to the student and adult supervisor and are followed. The Scientific Supervisor may be the Adult Supervisor.

6.1.3 Significant Risk Projects

6.1.3.1 Drugs

a) Definition of a "drug": "drug" includes any substance or mixture of substances manufactured, sold, or represented for use in:

- 1) the diagnosis, treatment, mitigation or prevention of a disease, disorder, abnormal physical state, or its symptoms, in humans or animals,
- 2) restoring, correcting, or modifying organic functions in humans or animals;
- 3) disinfection in premises in which food is manufactured, prepared, or kept. (Ref. 1)

b) Drugs may be used in a Human Participant experiment exhibited at a STEM fair only if carried out in a Hospital, University, Medical or other similar Laboratory under the direction of a Scientific Supervisor. The study must be approved by the appropriate Scientific Review Committee that reviews the research at the Institution, and this must be documented by a letter that forms part of the application to the School, Regional or Canada-Wide Science Fair, or any event organized by, or coming under the auspices of Youth Science Canada. No other studies involving the use of Drugs on human participants, as defined above by Federal Regulations, may be exhibited at any STEM fair or similar event.

6.1.3.2 Invasive Procedures and Bodily Tissues

a) Invasive procedures, such as taking blood or tissue samples, or use of human bodily tissue or other bodily fluids, are permitted in an experiment exhibited at a STEM fair only if carried out in a Hospital, University, Medical or other similar Laboratory under the direction of a Scientific Supervisor. The project must be approved by the appropriate Scientific Review Committee that reviews the research at the Institution, and this must be documented by a letter that forms part of the application to the BRSTF, Canada-Wide Science Fair, or similar YSC event.

6.1.3.3 Ingestion Projects

a) Projects involving ingestion of food or drink, defined as consumption through eating or drinking, are considered Significant Risk when they involve:

- 1) articles not manufactured, sold or represented as food or drink for humans.

- 2) foods that contain additives exceeding the Recommended Daily Intake (RDI) normally associated with those foods.
 - 3) foods not considered to be basic, common, or everyday foods.
 - 4) products that are licensed Natural Health Products. These products are identified by a Health Canada Natural Product Number (NPN) or Exemption Number (EN) and are listed in the Health Canada Natural Health Product Database (Ref 2).
- b) Significant Risk Ingestion projects are allowed only if carried out under professional supervision at a laboratory with its own internal Ethics Review Committee, such as a university or hospital laboratory.
- c) Some provinces have put in place rules that govern ingestion of food by the public, and these take precedence over the rules in this section. Students doing ingestion projects must know the applicable procedures required for the safe handling of food.

6.1.3.4 Cannabis

- a) It is illegal for anyone under the age of 18 to possess cannabis. Any project that requires a student to possess cannabis is not permitted at a STEM fair.

6.1.3.5 Ingestion Projects – Forbidden

- a) The following ingestion projects are not eligible to participate in any event sponsored by Youth Science Canada:
- 1) Projects that involve the consumption of alcohol.
 - 2) Projects that involve the consumption of cannabis.

6.1.3.6 Exercise

- a) Projects involving exercise beyond normal everyday activities are Significant Risk projects. They require a Scientific Supervisor with a degree in medicine or with training in exercise, such as a degree in kinesiology or appropriate coaching qualifications. All participants in projects involving physical exercise beyond normal everyday activities must submit the Physical Exercise Permission Form, which is based on the recommendations of the American College of Sports Medicine. (Ref.3)

6.1.3.7 Permitted Exceptions

- a) The projects listed in this section are eligible for presentation at STEM fairs and are permitted exceptions to the rules above.
- 1) Tests on saliva, sweat, tears and urine.
 - 2) Taking of cheek swabs.
 - 3) Projects investigating commercial antiperspirant, mouthwash, sunscreen, or toothpaste.
 - 4) The following exception is permitted only when a qualified health care practitioner (such as a physician, nurse, dentist, or pharmacist) is supervising the project: Blood testing data collected using personal glucose monitors commonly available at pharmacies.

6.1.4 Informed Consent

- 6.1.4.1 Human participants must be assured that they are safe, that they are treated with respect and dignity, and that the information they provide will be kept confidential. These ethical

safeguards are primarily the responsibility of the Student Researcher and their Adult Supervisor. The process of providing this information is called "Informed Consent".

6.1.4.2 The Adult Supervisor is responsible for supervision of ethical as well as scientific aspects of a Significant Risk project, and the Scientific Supervisor is responsible for ensuring that all applicable policies concerning research ethics and the participation of humans are known to the Student and Adult Supervisor and are followed. Both the Adult Supervisor and Scientific Supervisor must sign the Human Participants – Significant Risk Form ensuring that the essential elements of ethics review: consent, confidentiality, and the right to withdraw have been considered.

6.1.4.3 Participants must give informed consent before taking part in any Human Research. The research and their participation in it must be explained to children in words they will understand. It must also be explained to children that they do not have to participate unless they want to, even if their parents have approved. Agreement to participate (assent) must be documented for each participant. Children over 9 years can be invited to indicate their assent by co-signing the same form their parent signed. Younger children can provide assent orally, but the researcher must document it.

6.1.4.4 If the Participant is under the age of majority (18 or 19 depending on the province/territory), then the parent or guardian must also sign the Informed Consent Permission Form.

6.1.4.5 If the Participant is over the age of majority (18 or 19 depending on the province/territory) but is unable to consent for themselves, the Participant's legal guardian must sign the consent form. Assent of the Participant must also be documented.

6.1.4.6 Informed Consent - Letter of Information

a) Answers to questions 1 to 12 must appear in the Letter of Information to ensure that Participants have been properly informed of all appropriate ethical issues:

- 1) What is the name(s) of the investigator(s); school; project title; the Adult Supervisor's name, email address and telephone number.
- 2) What is the purpose of this research?
- 3) What are the benefits to the participant from participating?
- 4) What are the risks to the participant from participating?
- 5) What time commitment is required?
- 6) What remuneration or reward will be provided? It is the policy of Youth Science Canada that incentives shall not be offered for participation in Student Research.
- 7) How will the confidentiality of the data be guaranteed?
- 8) Is the right to withdraw clearly communicated? Explain in the Letter of Information that the participant has the right to withdraw at any time for any reason without consequences of any kind.
- 9) How does the participant communicate a decision to withdraw from the study?
- 10) How will the results of the research be communicated to the participant?
- 11) Are there any other issues that need to be included in the Letter of Information?

12) Has the project been reviewed and received ethics approval from the appropriate committee? (A positive answer is mandatory for Significant Risk projects.)

6.1.4.7 Informed Consent - Permission Form

- a) The Informed Consent - Permission form is a short document that contains:
- 1) The printed name and signature of the Participant.
 - 2) The printed name and signature of the person obtaining the Informed Consent.
 - 3) The signature of a parent or guardian.
 - 4) A statement that the Participant has received and understood the Informed Consent - Letter of Information.
 - 5) The date.

6.1.4.8 Confidentiality

- a) The confidentiality and anonymity of all participants must be maintained. Use coded systems of references; no identifying information may be used. Appropriate safeguards for storage and access to data must be planned. The date all identifiable data will be destroyed must be given to the participants.

6.1.5 Display

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

6.1.6 Forms

- 6.1.6.1 A Participation of Humans- Significant Risk Approval Form must be submitted to the Regional STEM fair and/or Canada-Wide Science Fair at registration for any Significant Risk project, along with any applicable Letter of Information, Blank Permission Form, and Sample Survey.

STUDENT, DELEGATE AND PARENT/GUARDIAN RULES OF BEHAVIOUR FOR THE CANADA WIDE SCIENCE FAIR

Policy Number	7.1
Policy Section	7.1.1
Approved By	Board
Date Approved	21 March 2011
Date Effective	Immediately
Date of Last Amendment	November 2023
Date of Next Review	November 2028
Related Policies	Youth Science Canada Code of Conduct – Finalists and Parents, BRSTF Code of Conduct
Contact	Chair, BRSTF

7.1 Introduction

This policy is created to give our CWSF students the most enjoyable experience at the national championships possible. Our policy and rules are made pursuant to the YSC Code of Conduct, Criminal Record Check Policy and CWSF Agreement Contract signed by the BRSTF Chair. The rules are also created to ensure that the reputation of the BRSTF, its school boards, schools, the CWSF and its sponsors are not brought into disrepute by unacceptable behaviour by Team Bluewater and parents of finalists.

7.1.1 Delegates and finalists must strictly adhere to the YSC Code of Conduct as outlined in YSC policy.

7.1.2 Any Delegate at the CWSF may recommend to Youth Science Canada that any finalist be sent home for any violation of the YSC Code of Conduct. The parents are responsible for the cost of their child being sent home.

7.1.3 The Team Bluewater Delegates may send a BRSTF student home for a YSC Code of Conduct violation, insubordination, behaviour that is contrary to the good order and conduct of the Team or any other behaviour that warrants expulsion from the fair. The parents/guardians of the student will be responsible for the cost of returning the student home. All and any awards will be forfeited by the student. The student's school and school board will be advised of the incident. Depending on the severity of the incident, the student may be summarily banned from participation in any further regional, national or international science fair as a representative of the BRSTF. The student(s) may also be disciplined by their school or school board in concert with or in addition to the discipline of the BRSTF.

7.1.4 Cellphones and Personal Technology: It is expected that Finalists will use cell phones and any other devices appropriately and within the rules, responsibilities, and requirements of the BRSTF and Youth Science Canada codes of conduct. The devices will be turned off during judging and any other times as stated by the Delegates. The inappropriate use of any device may result in the device being confiscated by the Delegates or other consequences as stated in rules, regulations, and codes of conducts as stated by the BRSTF and/or Youth Science Canada. The device will be returned when the time is appropriate for its use.

7.1.5 Parents and Guardians are welcome at the Awards Ceremony and to view the projects during public viewing. Parents and Guardians cannot attend any activities that are not deemed “open to the public” for safety and supervision purposes.

7.1.6 Finalists are not allowed to stay with parents/guardians off of the venue. A violation of this YSC rule may result in the student being expelled from the CWSF and any awards shall be forfeited.

7.1.7 Parents/Guardians are not allowed to be in the judging hall during judging. Communicating with a student during judging will result in the student being expelled from the CWSF and any awards shall be forfeited. Family emergencies should be directed to the BRSTF Delegates and/or Youth Science Canada.

7.1.8 The shadowing of students by parents/guardians is not permitted. Examples of shadowing are but not limited to:

- Showing up in the residence
- Following tour buses
- Showing up in cafeterias during meals
- Loitering around the judging hall
- Loitering around the campus
- Having non-authorized meetings with a student on or off the venue

Any parent/guardian who violates this rule may be escorted from the premises by security and could face trespassing charges. A violation of this rule may also cause the expulsion of the student from the CWSF by the BRSTF Youth Science Canada.

7.2 Delegates, Chaperones, and Support Adults

7.2.1 Support persons may be accommodated by the Chair of the National Science Fair Committee. **This is a rare exception to the rule.** Support persons must make application, through the regional coordinator and Youth Science Canada well in advance of the CWSF. The support person or the parents/guardians are responsible for the cost of the support person. The BRSTF and YSC take all measures to assure that finalists with specific disabilities are accommodated including the need for support persons. This is dealt with on a case by cases basis.

7.2.2 Support persons are allowed at the regional fair with the permission of the BRSTF Chair. Support persons shall adhere to the Code of Conduct at the BRSTF and the CWSF.

7.2.3 In addition to the responsibilities listed in the BRSTF Code of Conduct, all adult delegates and chaperones at all events shall:

- a) Ensure a safe environment by selecting activities and establishing controls that are suitable for the age, experience, and background of the finalists in their charge;
- b) Ensure that the expectations for behaviour and conduct are made clear to the finalists in their charge;
- c) Provide supervision for youth in their charge in a manner that fulfills what a judicious parent/guardian would expect (in loco parentis). While delegates are not expected to be physically present with finalists 24 hours a day, finalists should have physical access to their delegate or stand-in 24 hours a day;
- d) Provide supervision and/or assistance to other youth at events when the need arises or if help is requested by a finalist, or another delegate;
- e) Communicate and cooperate with the parents/guardians of participating finalists and ensure that parent/guardians are aware of the expectations for their children and the range of consequences for misbehaviour;
- f) Understand the consequences of serious misbehaviour as described in BRSTF and Youth Science Canada Codes of Conduct.

7.3 Finalist Expectations

7.3.1 It is expected that all finalists will:

- a) Support and cooperate with all members of their regional team;
- b) Adhere to the expectations set out in writing by their regional delegates;
- c) Attend and participate in all programs, activities, tours, and events that are part of the CWSF;
- d) Be punctual at all programs, activities, and events;
- e) Attend their displays at all designated times during the period of the CWSF;
- f) Ensure that their delegates know at all times where they are and with whom;
- g) Obtains their delegate's explicit permission before leaving a group;
- h) Respect all curfews established by their delegates;
- i) Get sufficient sleep;
- j) Properly represent themselves and not attempt to enter an event or activity for which they are not eligible, by reasons of age, classification, or other reasons;
- k) Understand the consequences of serious misbehaviour as described in the BRSTF and Youth Science Canada Codes of Conduct;
- l) Comply with the Youth Science Canada Academic Integrity Policy.

7.3.2 Finalists shall not:

- a) Enter any area that is declared off limits;
- b) Engage in any activity that brings the moral tone of any BRSTF and Youth Science Canada event or team into disrepute;
- c) Buy, possess, consume, or distribute alcohol; or
- d) Buy, possess, consume, or distribute tobacco products, illegal substances, and materials (including drugs) as prescribed by local and applicable laws.

7.3.3 By agreeing to being a member of Team Bluewater at the Canada Wide Science Fair, it is expected that Finalists will fully participate in all Team Bluewater, Canada Wide Science Fair,

and Youth Science Canada events. These expectations include attending all team meetings before the Canada Wide Science Fair, travelling with the team members from Grey and Bruce Counties (Finalists and Delegates) to and from the Canada Wide Science Fair (which includes to an airport or other travel pickup/drop off location as determined by the BRSTF or Youth Science Canada), and all activities at the Canada Wide Science Fair.

7.4 Travel Deviations

7.4.1 There are instances where a travel deviation to and from the Canada Wide Science Fair is required and appropriate. In situations where a travel deviation or change in travel plans are required, the following will take place:

- a) A request for a travel deviation is made in writing to the Chair of the BRSTF stating:
 - i) the purpose or reason for the travel deviation;
 - ii) the details of the proposed travel deviation (the date and time when the travel deviation is taking place, where, the adult(s) responsible for the care of the Finalist, when the deviation ends);
- b) The Chair of the BRSTF will acknowledge the request, make a ruling, and will forward any appropriate forms and paperwork to the Finalist that are required to be completed by Youth Science Canada if approved;
- c) If approved by the BRSTF, the official request for a travel deviation will be made by the Chair of the BRSTF to Youth Science Canada for approval.

7.4.2 The Finalist will be responsible for all extra costs associated with changing transportation arrangements (including airline tickets) as part of the travel deviation process.

7.4.3 Any requests for a travel deviation must be made within 5 days of Team Bluewater selection or the Senior Bluewater Regional Science and Technology Fair.

7.4.4 Finalists will be responsible for the travel cost to and from Grey and Bruce Counties to the Youth Science Canada appointed travel departure site.

7.5 Finalists Cost to Attend Canada Wide Science Fair (CWSF)

7.5.1 The Bluewater Regional Science and Technology Fair Committee works on a yearly basis to fundraise to run exceptional regional science fairs and events, as well as provide funding for Team Bluewater as they compete at the Canada Wide Science Fair. Finalists that are students in a homeschooling program, a private school, or are not students at a school with the Bruce Grey Catholic District School Board (BGCDSB) or the Bluewater District School Board (BWDSB) or Conseil Scolaire Catholique Providence will be responsible for the full cost of attending the Canada Wide Science Fair. Situations where financial support is needed will be considered on an individual basis by the BRSTF committee.

YOUTH SCIENCE CANADA POLICIES, PROCEDURES, RULES, AND REGULATIONS

It is the responsibility of each participant at regional, national, and international fairs and events to be aware of the policies, procedures, rules, and regulations of the BRSTF and Youth Science Canada. Youth Science Canada policies, procedures, rules, and regulations can be found at <https://youthscience.ca/policies/>