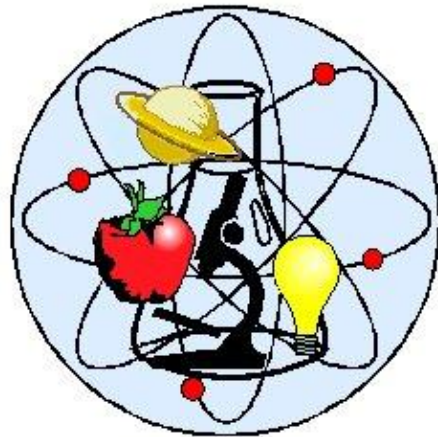


# Bluewater Regional Science & Technology Fair



## Policy, Safety & Ethics Manual



# MISSION STATEMENT

The BRSTF is a group of volunteers dedicated to promoting science and technology 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 annually at its Annual General Meeting in June of each year.



## **Bluewater Regional Science & Technology Fair**

### **ANNUAL GENERAL MEETING**

An Annual General Meeting will be held in June of each year. The following specific outcomes will be addressed at the AGM.

- Financial Issues/Successes – Treasurers Report
- Annual Process for Updating Mission Statement
- Regional Fair Attendance – Student/Project Numbers
- Number of Judges
- Sponsorship
- Policy Amendments
- Awards
- Canada Wide Science Fair Results
- Team Canada Results

A subcommittee will be formed to resolve any weaknesses. This subcommittee will report its findings to the Board in September of each year.



## Bluewater Regional Science & Technology Fair

### **VOLUNTEER TRAINING PROGRAM**

Policy Number	1.1
Policy Section	1.2
Approved By	Board
Date Approved	March 26, 2007
Date Effective	Immediately
Date last Amended	March 2012
Date of Next Review	March 2015
Related Policies	
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. 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.



## Bluewater Regional Science & Technology Fair

### **VOLUNTEER EVALUATION – CODE OF CONDUCT**

Policy Number	2.1
Policy Section	2.1.1 Evaluations – Code of Conduct
Approved By	Board
Date Approved	March 26, 2007
Date Effective	Immediately
Date last Amended	March 2012
Date of Next Review	March 2015
Related Policies	Students Code of Conduct
Contact	Chair

#### **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.



## Bluewater Regional Science & Technology Fair

### **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	March 2012
Date of Next Review	March 2015
Related Policies	
Contact	Chair, Treasurer

#### **3 Introduction**

- 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.
- 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.
- 1.3 When a member of the BRSTF finds himself or herself in a conflict of interest, that person shall declare the conflict and remove himself or herself from the meeting or situation, as the case may be.
- 1.4 Conflicts of interest that are monetary in nature should be reported to the Treasurer for consultation.



## **Bluewater Regional Science & Technology Fair**

### **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	March 2012
Date of Next Review	March 2015
Related Policies	
Contact	Chair, Safety Subcommittee

#### **4. Introduction**

- 1.1 Youth Science Canada (YSC) and the BRSTF allow students to conduct research involving hazardous materials, equipment and firearms as long as they adhere to federal and provincial/territorial regulations and guidelines that are designed to protect the safety of the researchers. The BRSTF shall form an Ethics/Safety subcommittee.
- 1.2 Any experimental design involving firearms, and/or hazardous devices, must be approved by the BRSTF or YSC Canada Ethics/Safety Committee to ensure compliance with regulations and restrictions. If necessary, the BRSTF or YSC will refer the project to the authorities cognizant of current regulations.
- 1.3 Use of hazardous equipment, dangerous goods, explosives and 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 Ethics/Safety Committee of his/her licensing and expertise in the use of a firearm, volatile substance or device, and/or explosives BEFORE the project commences.
- 1.4 When considering a project which involves the use of firearms, ammunition, dangerous goods or explosives, it is strongly suggested that students and Adult Supervisors make contact with one or more of the following agencies/government ministries: 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, federal Ministry of Mines and Resources.

#### **2 Legislative Framework**



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### 2.1 Potential violations of the Criminal Code, Explosives Act and Transportation of

Dangerous Goods Act must be considered and researched prior to experimentation: Criminal Code considerations that should be addressed by students and Ethics/Safety Committees in reviewing a project include:

- i) 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.
- ii) Unlawfully making an explosive.
- iii) Possession of a weapon dangerous to the public peace.
- iv) Unlawful storage of a firearm, ammunition or explosive.
- v) Pointing a firearm.
- vi) Careless use of a firearm.
- vii) Criminal Negligence causing bodily harm or death.
- viii) Arson or unlawfully setting fire to a substance
- ix) Fail to sign vehicle properly that a dangerous good is being transported.

2.2 Other considerations for projects involving the use of firearms, ammunition, dangerous goods or explosives include Provincial and Federal acts such as the Environmental Protection Act, Migratory Bird Game Act and Canada Shipping Act. Students and the BRSTF and YSC Ethics/Safety Committees are responsible for knowledge of and adherence to all Municipal, Provincial and Federal laws governing the materials and the use of those materials.

2.3 Prohibited weapons may NOT be used in a science fair experiment or be displayed or worn at a science fair. Prohibited weapons include spiked wrist bands and neck bands, maces, martial arts throwing weapons, nanchakus or any other weapons defined by the Criminal Code as prohibited.

2.4 Weapons include all firearms or anything else that may be used as a weapon. Pellet guns, paint ball guns, slingshots, potato guns or other devices that propel an object are, for the purposes of subsection 2.1.iii and 2.1.vii, dangerous weapons. These devices may be used with the pre-approval of the Regional Science Fair Safety Committee. Inspection of the device and area of use is the responsibility of





## **Bluewater Regional Science & Technology Fair**

the Regional Science Fair Safety Committee. The device is not to be displayed at the Regional Science Fair or the Canada Wide Science Fair.

### **3 Firearms**

- 3.1 As of January 1, 2001, anyone possessing a firearm, even temporarily, must have a POL or PAL. Persons under 18 years of age may acquire a Minor's Possession Certificate and can possess non-restricted weapons only. All handguns are restricted or prohibited weapons, all crossbows are restricted weapons and any firearm with a barrel length less than 470mm or overall length less than 660mm are restricted weapons.
- 3.2 Minors cannot possess restricted firearms or cross bows.
- 3.3 As of January 1, 2012, firearms used for any purpose, including science projects are no longer required to be registered.
- 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.
- 3.5 The discharging of a firearm shall be conducted at a licenced range under the supervision of a qualified range master. All available safety equipment, i.e. goggles, ear protection, should be used.
- 3.6 In all cases involving firearms, the Adult Supervisor must possess a POL or PAL and/or a Canadian Firearms Safety Course 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).
- 3.7 Students wanting to use firearms must show proof of a Hunter Safety Course/POL or PAL and/or Canadian Firearms Safety course or equivalent. Copies of these certificates must be provided to the BRSTF Ethics/Safety Committee in advance of beginning the experiment.
- 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 Ethics/Safety Committee. Only firearms/explosive devices, which have federal, provincial/territorial and municipal approval, may be used in experimentation. Proof of this approval must be presented to the Ethics/Safety Committee with the student's proposal in advance of beginning the experiment.



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### **4 Volatile and Explosive Materials**

- 4.1 Volatile materials must be handled and transported pursuant to the federal Transportation of Dangerous Goods Act and provincial legislation. The person handling the material must be properly trained. Explosives must be acquired, stored and handled pursuant to the federal Explosives Act.

### **5 Boilers and Pressure Vessels**

- 5.1 A pressure vessel constructed for or used in a 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.
- 5.2 Any student-constructed pressure vessel, regardless of size or pressure, should be inspected according to provincial regulation prior to use by an engineer with certification in boilers and pressure vessels to ensure the safety of the young scientist. Evidence of the inspection should be available at the display.
- 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.

### **6 Pesticides**

- 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 are:

TYPE	CONTROLS
Insecticide	Insects
Herbicide	Plants – mostly weeds
Fungicide	Fungi
Rodenticide	Rodents
Miticide	Mites
Nematicide	Nematodes – wormlike creatures



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6.2 Pesticides are regulated by three levels of government

- Federal
- Provincial/Territorial
- 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. A number of 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. A number of municipalities have banned the use of pesticides.

6.3 Students using pesticides must be of Provincial age (16 yrs) for possession and use. Students must also be licenced under Provincial law that regulates pesticides. If a student is not of age to be licenced, then he must be supervised by a person who is licenced. The student and supervisor must be able to read the pesticide product label including the safety precautions and first aid instructions. That licence or a certified copy must be available to the Ethics/Safety inspectors at the Regional and/or YSC Wide Science Fair.

6.4 Pesticides, pesticide containers or substances that have been treated with pesticides shall not be brought to the BRSTF Regional Fairs and/or YSC Wide Science Fair.

## **7 Lasers**

7.1 Lasers, laser pointers and other focused high energy light emitting devices will not be allowed at the regional fairs. The school Boards already have policy on the use of lasers in the classroom. Those policies will be strictly adhered to by the students. This policy is designed to prevent eye damage to students, teachers, the committee and the public.

7.2 Laser projects may be completed with the prior approval of the Safety Committee of the BRSTF. The student must provide the specific design of the laser including the wattage, wavelength and class of laser. Any federal legislation that covers the use or creation of a laser must be provided to the Safety Committee. Laser projects must be done under the direct supervision of a person who is qualified to carry out such research.



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### **ANIMAL TISSUE AND BIOHAZARDS - ETHICS**

Policy Number	5.1
Policy Section	5.1.1 Animal Tissue, Biohazards - Ethics
Approved By	Board
Date Approved	26 March 2007
Date Effective	Immediately
Date last Amended	April 2012
Date of Next Review	March 2015
Related Policies	Human Involved Experimentation
Contact	Chair, Safety Sub-Committee

#### **5. Introduction**

- 1.1 The BRSTF strictly adheres to the ethical treatment of animals. The procurement of animal tissues and parts is strictly regulated.
- 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 Ethics/Safety 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.
- 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 Ethics/Safety 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 Ethics & Safety Committee.
- 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



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- 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.
- 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 Ethics/Safety committee. The committee will review the proposal for its scientific merit, ethics and safety procedures. The project, if passed, will then be sent to a Scientific Ethics Review Committee at a research university or a hospital for review. 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 YSC web site in the policies 4.12 section.
  - 1.6 Live animals, including fish, amphibians, reptiles and cephalopods **shall not be displayed** at the Regional Fair.
  - 2.0 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 Officer about projects that are still at the school level.
  - 3.0 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.
  - 3.1 Preserved and mounted stinging or biting insects may be displayed. Wasp and bees nests cannot be displayed.



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### **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	April 2012
Date of Next Review	April 2014
Related Policies	Project/Student Safety
Contact	Chair, Safety Sub-Committee, Nation Judges Advisory Committee, YSC 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 Sub-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.

#### **1 Low Risk Human Involved Experimentation**

- 1.1 Low risk human experimentation projects include surveys and testing apparatus. Surveys and testing data must be anonymous. A numerical identification system shall be used. The test subject will be given his test number. Items such as age or gender may be asked on the survey or test protocol. A test subject may withdraw from the project at any time either verbally or in writing. The original survey or test data will be returned to the test subject. The student must have his informed consent information sheet reviewed by the BRSTF Safety & Ethics Committee to ensure compliance to this policy.
- 1.2 Low risk human experimentation projects that are going to compete in the Canada Wide Science Fair must have the Low Risk YSC forms completed before the Regional Fair. The low risk project shall be reviewed to by the BRSTF Chair and/or Safety & Ethics Committee to ensure the project is low risk. The Ethics Review Committee of the National Judges Committee, YSC, shall be the final arbiter of whether or not the project is low risk.



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### **2 High Risk Human Involved Experimentation**

- 2.1 High Risk Human Experimentation Projects include projects where surveys are taken, bodily fluids, rigorous physical testing is performed or any other procedure that is deemed high risk by the BRSTF Chair, Safety Sub-Committee, National Judges Committee or YSC.
- 2.2 High Risk Human Experimentation Projects must first be passed by the BRSTF Chair/Safety Subcommittee before further qualification proceeds. The safety of the test subjects is paramount. The student must present the safety protocols, benefit to scientific investigation and ethical standards to the Chair/Safety Subcommittee. Once the project has been passed at this level, the procedure and protocols must be reviewed by a university ethics and safety committee or an ethics review committee at an approved hospital. If and when one of these committees has passed the project, then the project will be submitted to the National Judges Committee for final review.
- 2.3 Deficiencies that are identified at any review level may be resolved by the student and resubmitted for further review.
- 2.4 All of the YSC High Risk Human Experimentation forms must be completed before the project is allowed to begin. These forms may be found on the YSC website in policy section 4.

### **3 Legislative Framework**

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



## Bluewater Regional Science & Technology Fair

# STUDENT, DELEGATE AND PARENT 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 last Amended	
Date of Next Review	March 2014
Related Policies	Youth Science Canada Code of Conduct-Finalists & Parents
Contact	Chair BRSTF

## 7. 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.

- 1.1 Delegates and finalists must strictly adhere to the YSC Code of Conduct as outlined in YSC policy.
- 1.2 Any Delegate at the CWSF may recommend to the National Science Fair Committee 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.
- 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 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.
- 2.1 **CELL PHONES/IPADS:** The use of communication devices will be dictated by the Delegates. Students are encouraged to call home at least twice in the week. These calls should be made at prearranged times. The devices will be turned off





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- during judging, ceremonies, meals, tours and other times as stated by the Delegates. The inappropriate use of any device may result in the device being confiscated by the Delegates. The device will be returned when the time is appropriate for its use.
- 3.1 Parents are welcome at the Awards Ceremony and to view the projects during public viewing. Parents cannot attend tours, banquets or other CWSF activities.
  - 3.2 Finalists are not allowed to stay with parents 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.
  - 3.3 Parents 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 the National Science Fair Committee.
  - 3.4 The shadowing of students by parents 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 venueAny parent 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 or the National Science Fair Committee.
  - 3.5 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, to the NSFC well in advance of the CWSF. The support person or the parents 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.
  - 3.6 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 Regional Fair and the CWSF.