fvrsf.ca

General Information Booklet

The Fraser Valley Regional Science Fair

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2017-10-30

Revision History

2017-10-19	Document Initiated	CM
2017-10-30	Hyperlink updated on page 10	CM

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WELCOME TO SCIENCE FAIR!

Do you love Science and have questions about how things work?

Do you have an idea on how you could help improve a problem in the world? We are calling all students, from Grades K - 12, in the Fraser Valley area to design a Science Fair project and positively affect our world through scientific discovery.

This document will give you all the information about the fair rules and tips to help you prepare for the Fraser Valley Regional Science Fair (FVRSF).

We look forward to welcoming you to our Fair and seeing the incredible projects you have developed.

Come and Innovate Your Future!

ABOUT THE SCIENCE FAIR

The Fraser Valley Regional Science Fair (FVRSF) is the annual competition for 6 school districts in the Fraser Valley (Langley, Maple Ridge, Abbotsford, Mission, Chilliwack and Hope) as well as private schools and home schools in the area. It is open to over 75,000 students from grades K to 12. We are a non-profit organization run by dedicated volunteers. Our mission is to promote project based science and encourage youth to conduct research and experimentation in areas of science, technology, engineering, and mathematics.

Each year students in the region are selected to showcase their research and innovation at the fair. High caliber projects may be selected to advance to higher levels of competition nationally and internationally.

We encourage all students to pursue science and learn more about the world around them through scientific discovery.

Every project officially accepted from Grades 7-12 has the possibility of being selected as a Finalist for the Canada-Wide Science Fair (CWSF). In recent years, we have seen both one and two-person projects selected. The FVRSF works hard to secure financial support to send the Finalists along with adult delegates (who act as chaperones). The committee will guarantee funding (which covers registration, food, lodging, transportation and events) for one student per project.

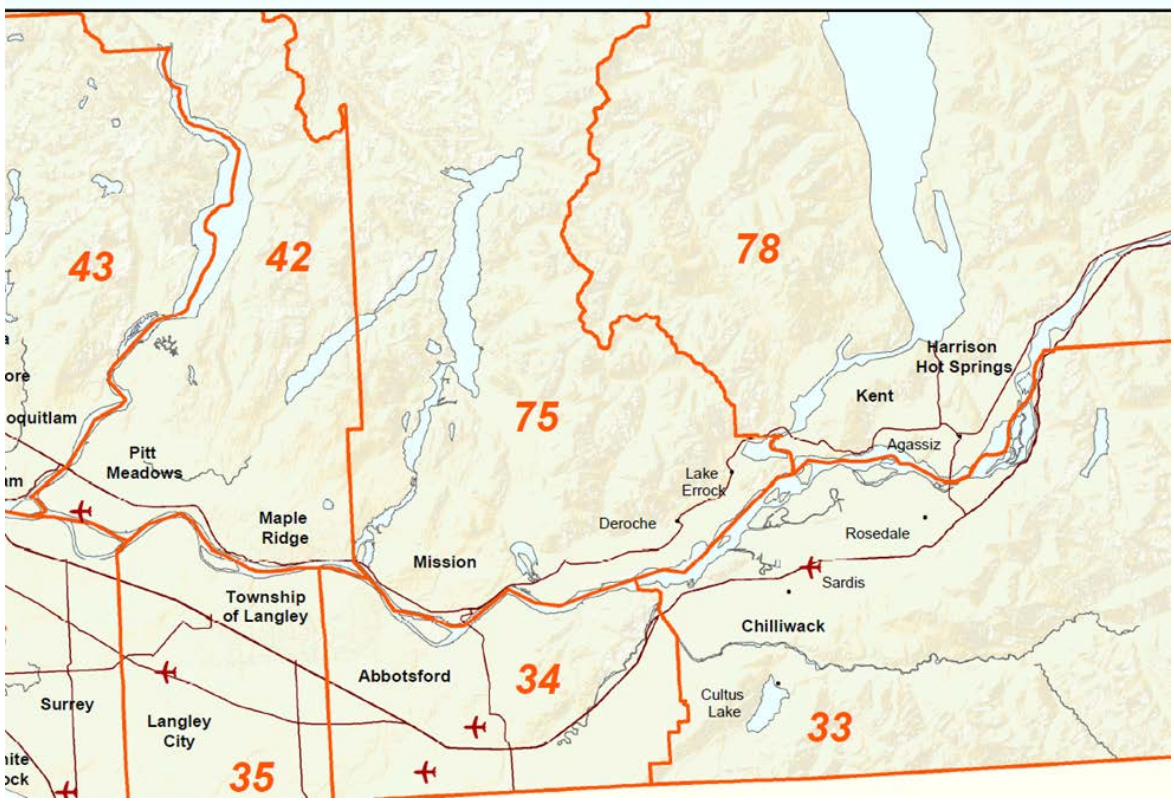
The advantages of attending a CWSF include: recognition of the Finalist's excellence in their abilities in the Sciences and communication, networking and meeting professionals and potential employers, obtaining potential scholarships to Canadian universities and other financial awards. The CWSF and the time spent with other Regional winners from every corner of Canada, literally sea-to-sea-to-sea, is consistently reported as a most memorable and rewarding experience. We may contact your school to discuss support for a second person per project being selected to attend the CWSF.

HOW DO I GET INVOLVED?

Great! You're interested in science fair. How do I enter a project? Take a look at the eligibility criteria, the steps to register, and steps to turn your idea into a science fair project!

ELIGIBILITY CRITERIA

1. Have a project idea
2. The project is the work of one or two students from start to completion. For the younger grades (ex. Grades K – 3) teachers may decide to submit a class project.
3. Be in grades K to 12, as indicated in the BC Ministry Form 1701 at the start of the school year.
4. Be registered in a public, private or independent school, or may receive home instruction (home schooling) in the following areas or school districts (SD #35, 34, 33, 42, 75 and 78).



5. The project complies with or will comply with all FVRSF rules governing ethical research and safety.
6. Have qualified for advancement from your school or district fair. This mean you …
    a. have had a teacher at your school approve your application to FVRSF,
    b. have advanced from a school or district science fair competition.

Please refer to "**Registration Rules and Regulations**" for special cases.

REGISTRATION

In order to participate in the FVRSF you must submit a complete **online application**.

It is important to carefully follow the registration steps listed to ensure your project and personal information is captured in our system. Proper registration will ensure that you (1) have a specific area to set up your project, (2) are eligible for awards, and (3) are included in the judging process.

Students who do not complete their applications by the indicated dates will not be considered to attend the fair.

STEPS TO SUBMITTING AN APPLICATION

Follow the steps below carefully!

1. Go to https://secure.youthscience.ca/sfiab/fraservalley/index.php
2. Make a **student account**
3. Receive your password in your email inbox and log into your account at: https://secure.youthscience.ca/sfiab/fraservalley/index.php
4. Enter in all of the required personal and project information.
5. Enter in a summary of your project (100 words maximum). These are used in the judging process.
6. Go through the entire ethics questionnaire, and project safety questionnaire.
7. **If you are working with a partner**, have them make an account too and add their account user name to your application.
8. Self-nominate your project for TWO (2) Special Awards. Don't be shy!
9. Read the rules and regulations carefully. See **Registration Rules and Regulations** below.
10. Complete your Signature Form. Under "Download information and Signature Form", press the big button and print out the forms. Get all of the people required to sign the forms.
    NOTE: Signatures are only available once you've completed all other parts of your application. Look for numbers in square boxes on the left side of the application page for items that you have not yet completed. Sign the application. Also get your parent and teacher to sign the consent forms.
11. Write a cheque (no cash) to the "**University of the Fraser Valley**" with *Fraser Valley Regional Science Fair* indicated in the memo section.
    NOTE: If your school is subsidizing your registration fee, follow your teacher's instructions.
12. Paperclip the cheque to the papers.
    NOTE: For partnered projects, please submit BOTH application forms and payments together.
13. Put the papers and cheque in an envelope. Address and deliver to our mailing address:

    Fraser Valley Regional Science Fair
    c/o The University of the Fraser Valley
    Faculty of Science, Office of the Dean
    33844 King Road
    Abbotsford, BC V2S 7M8
14. Print a copy of the registration papers for your records

Once you have signed and submitted your forms and payment, you can expect an email confirming your successful acceptance to participate at the Fraser Valley Regional Science Fair.

Teachers should expect to receive and email information package shortly thereafter.

RULES AND REGULATIONS

REGISTRATION

- A completed application to the Fraser Valley Regional Science Fair (FVRSF) does not imply acceptance to participate.
- A teacher's signature (or parent/educator if home schooled) is required to register a project.
- By signing the consent form, the participant(s), parent/guardians and teacher agree that the project shall follow these rules and regulations.
- Acceptance to the Fraser Valley Regional Science Fair is dependent on a valid completed application received by the Fraser Valley Regional Science Fair Administrator, space limitations, and allocation limits. Acceptance is at the discretion of the FVRSF Committee.
- Decisions of the FVRSF Committee, based on recommendations of the Chief Judge(s), are final and not subject to appeal.
- Applicants NOT accepted to participate at the FVRSF will be informed by email in late March and payment may be returned.
- Refund of payment may not be possible for withdrawal from participation after acceptance.
- If one of the students in a pair project lives or attends a school belonging to a different Regional Science Fair, the students must decide which one Regional Science Fair to apply to.
- If the students in a pair project are from different age categories, then they shall register the project in the age category of the older student.

PROJECTS

- A project worked on at any point by two students cannot register as a one student project.
- A participant may not present more than one project each year, and may not display or reuse an identical project from a previous Regional Science Fair.
- A project entered in a previous Regional Science Fair shall only be eligible for the current FVRSF if the continuing work involves a substantial expansion or extension of the previous investigation or design process. The project must only present work completed since the previous Regional Science Fair, though previous work may be referenced.
- Students must follow the Safety Rules and Ethics Standards of the FVRSF. Refer to pages 13 to 20.
- Ethics Pre-Approval is mandatory for all projects using animal and human participants.

STUDENT EXPECTATION

- Participating students are expected to be in attendance on judging day. Partial or skipped attendance may result in the reduction or loss of eligibility for awards.
- The judging criteria for two-person projects require the effective communication of BOTH students during the presentation.
- Student participants are in representation of their respective schools and therefore expectations from their school may apply at the FVRSF.

A SCIENCE FAIR PROJECT

We encourage all students to pursue science and learn more about the world around them through science and technology discovery. Any question gnawing away at the back of your mind can be turned into a project.

CREATING A PROJECT

Conducting scientific research is serious business! Whether it is a science fair project or research conducted in a research institute, there are some rules of academic integrity and ethics that all scientists must follow. Failure to follow these rules and guidelines can result in disqualification at the fair.

Make sure to read the rules and requirements on pages 8-9 before you start your project to ensure your work is conducted properly.

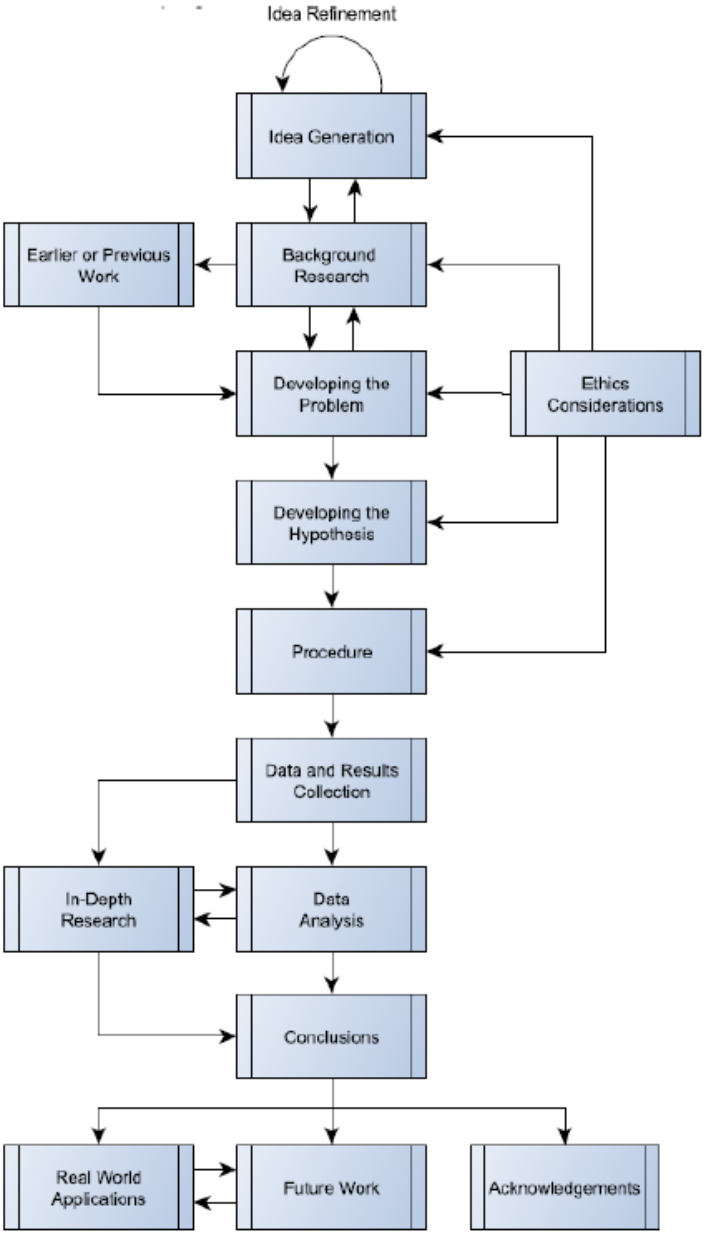
The Guide to Completing Your Science Fair Project (www.sciencefairs.ca/website/media/ScienceFairs/Guide-to-Completing-your-Science-Fair-Project-2016.pdf) can be found on the Science Fair BC's website and is a great resource for students, parents, and teachers.

Other great resources:

- https://secure.youthscience.ca/virtualcwsf/
- http://sf.youthscience.ca/

This section will discuss the following:

- Types of projects
- Grade categories
- Project categories



TYPES OF PROJECTS

The judging of "scientific thought" requires special attention since a variety of different types of projects exist. The most common types of science fair projects are experiments, innovations and studies. Projects of each type are equally capable of winning top awards at the fair, providing they meet the necessary criteria.

Experiment: This is traditionally the most common type of science fair project. A winning exhibit of this type should involve an original scientific experiment to test a specific hypothesis in which the young scientist recognizes and controls all significant competing variables and demonstrates excellent collection, analysis, and presentation of data. The judge should also realize that it is not regarded as essential that any significant positive findings result from the project. It must be recognized that it is the design rather than the results that are most important.

Innovation: A project of this type would involve the development and evaluation of new (or significant improvements to existing) devices, models, techniques or approaches in fields such as technology, engineering, or computers (both software and hardware). A winning project should integrate several technologies, inventions, or designs and construct an original innovative technological system that will have commercial application and/or human benefit. It must demonstrate how the innovation was designed or developed on the basis of a sound understanding of the scientific, engineering, or technological principles involved.

Study: This type of project involves the collection and analysis of data from other sources to reveal evidence of a fact, situation, or pattern of scientific interest. This could include a study of cause and effect relationships or theoretical investigations of scientific data. A winning exhibit in this area must be able to demonstrate that the methods used to obtain the original data involved sound scientific techniques and controls, and demonstrate insightful analysis.

GRADE CATEGORIES FOR DIVISIONAL AWARDS

There are 3 grade categories. The Grade Category your project shall register under is based on the grade recorded on Ministry Form 1701. Ask your teacher. For a **two-person project**, the grade category is based on the student in the higher grade.

- **Junior**: Grade 7 and 8
- **Intermediate**: Grade 9 and 10
- **Senior**: Grade 11 and 12

PROJECT CHALLENGES

Categorize your project into one of seven themed challenges relevant to the scientific world around us. These are used by judges and to help organize the projects in the exhibit hall.

Discovery: Create new fundamental knowledge based on your curiosity by asking a question and using the techniques of scientific inquiry to develop an answer.

Energy: Improve our use of current energy sources, enable the transition to alternative energy sources, or reduce our energy footprint.

Environment: Reduce our impact on, improve our understanding, and ensure the quality of water, air, soil, and the diversity of living things.

Health: Increase our understanding of the human body, or apply science and technology to improve health, control disease, or support an aging population.

Information: Enhance communication and our use of information using digital and networking technologies, or applications of new media.

Innovation: Combine scientific principles with your creativity to develop a new material, structure, device, or system to solve a problem or improve an existing solution.

Resources: Develop better ways to use our natural resources that provide sustainable sources of food, products, or prosperity.

COMPONENTS OF A SCIENCE FAIR PROJECT

The list below is a guideline to some of the things that you should consider when developing your science fair project. Note that it is only a guideline because your project type (Experiment, Innovation, or Study) may require different considerations. Refer to the evaluation rubric at: https://www.ufv.ca/media/assets/faculty-of-science/fv-regional-science-fair/FVRSF-Judge-Marking-Sheet.pdf for a better idea of what judges will be looking for. You will notice that projects are evaluated on a variety of criteria including a combination of originality and the depth of analysis in the project. Error analysis is encouraged for all projects.

- **Background:** How the project came to be.
- **Background Research:** Information you collected in order to learn more about your topic.
- **Purpose/ Problem:** Why the project was conducted and what you hoped to be achieved.
- **Hypothesis:** Proposition to be tested and anticipated results, if applicable.
- **Procedure:** A brief outline of the materials, variables, trials and methods used.
- **Results or Observations:** A summary of the results of the Experiment, Innovation, or Study.
- **Conclusions:** What can be concluded from the results and why it is important?
- **Sources of Error:** Situations/ factors that could have affected the results of your project.
- **Earlier Work:** If an earlier version of the project was submitted in a previous year, the finalist must highlight the changes and additional work done.
- **Future work:** Portions or variations of the project you would consider developing more in the future.
- **Real world application:** How your project affects the real world. Can your project be implemented? Try to consider cost, feasibility of resources, and scalability.
- **Acknowledgements:** Recognition of those individuals, institutions and businesses that provided significant assistance in the form of guidance, materials, financial support and/or facilities for this work. References and bibliography should also be kept on the table for consultation.

LOG BOOK

The log book is the rough record of your project. It is a journal containing your thoughts, actions you take, observations you see, rough data you take, and everything relating to your project. Start one at the beginning of your project and write into it any time you're thinking or working on your project.

Make sure to bring your log book with you to display at the fair.

ABSTRACT

Each project is required to submit a short abstract upon registration. The abstract should be about 100-150 words and contain background information on the project, purpose and/or hypothesis, general procedures and results, and conclusion. If the final results and analysis are not completed at the moment of writing the abstract, expected results and experiments ongoing should be mentioned.

WRITTEN REPORT

A written report is not required at the Regional Science Fair level.

But you can write one if you want. For example, the Canada-Wide Science Fair requires a 5-page report plus an additional 2 pages for references and appendices if needed. A written report is a summary of your project and is an exercise in scientific writing style, requiring you to select only information that is important and stating it in a concise way. Graphs, diagrams, and charts are useful but raw data and tables take up a lot of space. More information can be found at http://youthscience.ca/policy/cwsf-project-report

ACADEMIC INTEGRITY, ETHICS, & SAFETY

Conducting scientific research is a fun and rewarding learning experience, but it is also serious business! Whether it is a Science Fair project or research conducted in a research institute, there are some rules of academic integrity and ethics that all scientists must follow. For your safety and the safety of others attending the fair, all projects must also comply with the FVRSF safety requirements. Failure to follow these rules and requirements can result in disqualification at the fair. So, make sure to read the rules and requirements below before you start your project to ensure your work is conducted properly.

We recommend that participants read the full Youth Science Canada policies prior to entering the fair:

- **Academic Integrity** (Policy 1.5.5 http://youthscience.ca/policy/academic-integrity-finalists),
- **Code of Conduct** (Policy 1.5.1 http://youthscience.ca/policy/code-conduct) and
- **Discipline** (Policy 1.5.2 http://youthscience.ca/policy/discipline-policy).

Here are some specific examples of violations of academic integrity:

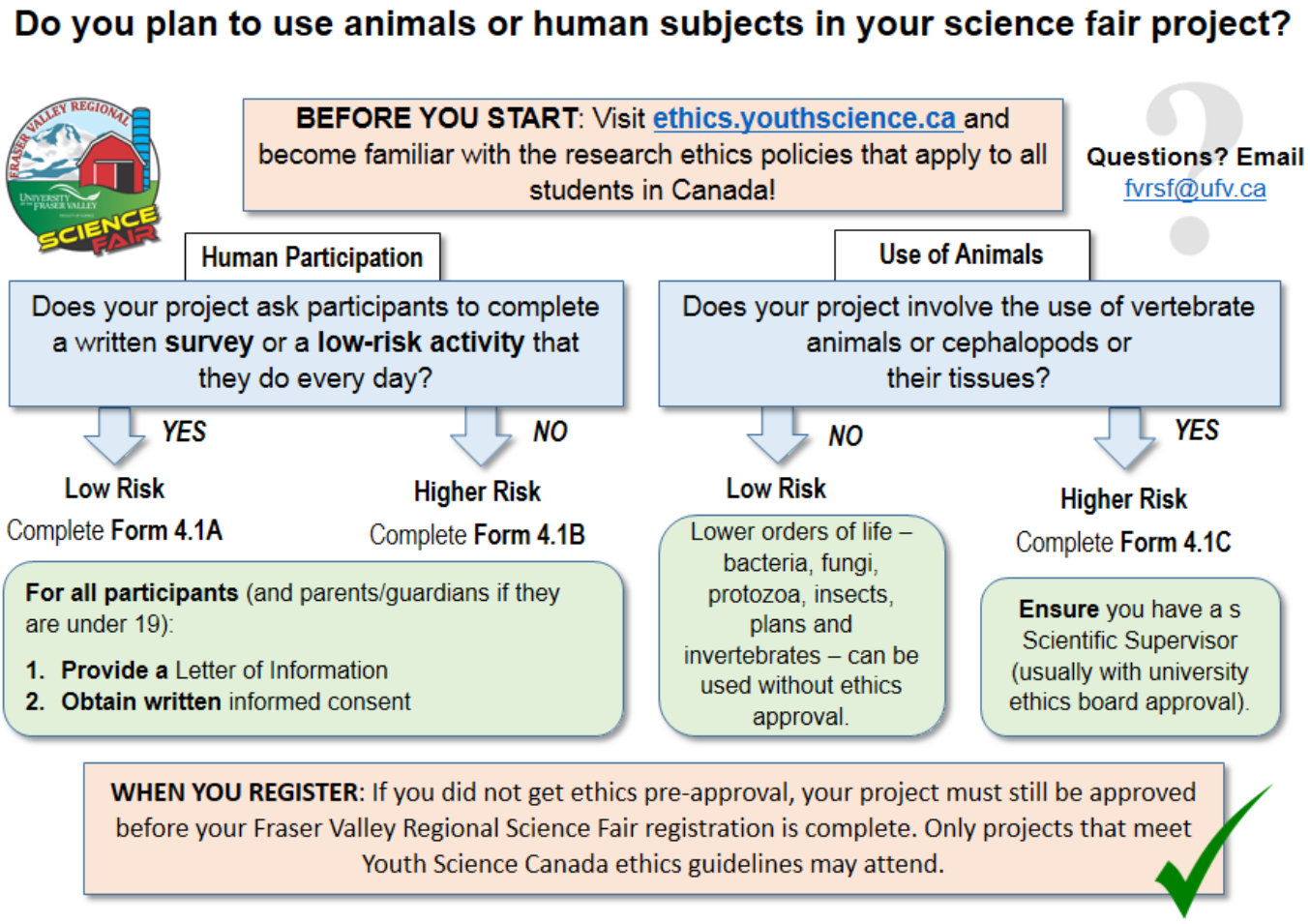
- Plagiarism – presenting the work of others as your own without acknowledging the source. In this case, "work" means scientific results, conceptual development of a topic and substantive formulation or reformulation of a problem. This includes work done by a family member or a mentor.
- Fabricating and/or falsifying data

- Fabricating and/or falsifying registration information
- Forging signatures
- Entering a project that is either derived from a previous project, or a continuation or revision of a previous project by the student (or by another), without documentation of the previous work.

Are you a returning Science Fair participant? Make sure that your project for this year is different from your previous one, or ensure that it is a significant expansion or extension from your first project! The project must only present work completed since the previous fair. We recommend documenting in detail your previous work and having it with you at this year's Fair for reference. A project that is substantially the same as a project exhibited by the finalist(s) at any previous Canada-Wide Science Fair will not be eligible.

ETHICS SCREENING

When conducting a science project, you might come across some hazardous or dangerous material. To ensure that all Science Fair projects are performed and presented in a safe manner, a safety check will be performed once you arrive at the Fair with your project. If your project involves animal or human research, it is mandatory that you pay special attention to the ethics project screen and the ethics flow chart. To avoid any surprise, review the following guidelines before you start working on your project and before you prepare your display for the fair!



For a more detailed answer regarding the eligibility your project based on the YSC ethics guidelines, please refer to the table on the next couple of pages. Answer every question in the table by checking the 'yes' or 'no' box. If your project involves human participants completing a written survey or participating in a low-risk activity that they do every day, complete form 4.1A. If you answered 'yes' to a box with '4.1B' or '4.1C', please fill out those forms.

Refer to Youth Science Canada's ethics page for more information: http://youthscience.ca/node/835

Human subjects (YSC policy 4.1.1.1, 4.1.1.2) - Review form 4.1A (low risk), or 4.1B (high risk)	**Yes**	**No**
Was informed consent obtained from all participants, or from their parents if they were under 19? Was a signed consent form obtained with the following information (unless consent implied as specified in Letter of Information): 1. The printed name and signature of the Participant and the person obtaining the Informed Consent. 2. A statement that the Participant has received and understood the *Informed Consent - Letter of Information*. 3. The date.		
Was a Letter of Information provided to participants or their parents with answers to the following: 1. What are 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? How will the results of the research be communicated to the participant? 3. What are the benefits to the participant from participating? What are the risks? What time commitment is required? How will the confidentiality of the data be guaranteed? 4. No remuneration or reward will be paid. 5. The participant has the right to withdraw at any time for any reason without consequences of any kind. How does the participant communicate a decision to withdraw from the study?		
Is the confidentiality and anonymity of all participants maintained?		
Did the project test drugs in humans? (note: licensed Natural Health Products, energy drinks, & alcohol not permitted)	**4.1B**	
Did the project test any of the following ingested substances? 1. Articles not manufactured, sold or represented as food or drink for human beings 2. Foods that contain additives exceeding the Recommended Daily Intake 3. Foods not considered to be basic or everyday foods and for which health benefits are claimed	**4.1B**	
If the project involved exercise testing, was it supervised by a mentor with training in exercise physiology, and does it follow American College of Sports Medicine guidelines?		
Does the project pose anything MORE than a low level of risk to subjects (low risk: no greater than that encountered in daily life, e.g. surveys of attitudes and beliefs, skill tests, or observations of behavior)	**4.1B**	

Non-human animals (YSC 4.1.2) - Review form 4.1C (vertebrate animals)	**Yes**	**No**
Does the project involve vertebrate animals (i.e. fish, amphibians, reptiles, birds, and mammals) or cephalopods (e.g. squid, octopus, cuttlefish)?	**4.1C**	
If vertebrates were involved, were any studies conducted other than (1) observational studies, and (2) behavioural experiments with positive rewards in which the animal does not suffer stress?	**4.1C**	
Did the project lead directly to the death of a vertebrate animal?		

Hazardous materials (YSC policy 4.2.1) - If yes, documentation of license, certification, or inspection required	**Yes**	**No**
Does the project use firearms?		
Does the project use other weapons (pellet guns, paint ball guns, slingshots, potato guns or other propulsion devices)?		
Does the project use volatile or explosive materials?		
Does the project use boilers or pressure vessels > 42.5 L or 103 kPa?		
Does the project use pesticides?		

Recombinant DNA and Biotechnology (YSC policy 4.2.2)	**Yes**	**No**
If the project uses DNA, animal viruses, or animal cells/tissue, is there written evidence of qualified supervision (supervisor's name, institution, qualifications)?		
If the project uses animal tissue, is it taken either from a continuously maintained tissue culture line or from animals used in an institutional research project?		
Is there documentation of the source of animal tissues and cells?		
If students were involved in cell culture or animal work – have they taken the appropriate institutional courses and received certification (e.g. Biosafety or Animal Care)?		

CWSF eligibility (YSC policy 3.1.2.1)	Yes	No
Is the project the work of ONLY one or two students from start to completion (i.e. there was never more than two students involved in the project work)?		
Is the student(s) in grade 7-12 in a Canadian school and under 21 years of age?		
If entered in a previous CWSF – is the project a substantial expansion or extension of the previous investigation or design process?		

Colour coding for survey results	
GREEN	Project can be approved
YELLOW	Refer to student's documentation for further information
RED	Project not eligible

ETHICS FORMS

- **Human participation** – Low risk forms http://youthscience.ca/node/95
- **Human participation** – Significant risk forms http://youthscience.ca/node/8197
- **Vertebrate animals** – forms - http://youthscience.ca/node/75

SAFETY REQUIREMENTS

Read through and follow these safety requirements carefully when preparing your display for the fair!

The following items are NOT PERMITTED and shall be removed from your display.

Tip: Take pictures and bring photos of your project or experiment instead!

Fire Hazards

- Flames, candle, torch, or any heating device such as a hot plate
- Excessive packing material under the table

Electrical Hazards

- Inappropriately grounded electrical plugs or sockets
- Modifications of CSA approved electrical equipment
- Wet cell batteries such as lead acid
- Dry cell batteries such as alkaline, NiMH, or Lithium ion.

NOTE: Electronic equipment created by participants are permitted if they have:

- As low a voltage and electric current as possible
- A non-combustible enclosure
- An insulating grommet at the point where the electrical service enters the enclosure
- All exposed terminals must be covered
- Pilot light to indicate when device is powered

Biohazards

- Biological toxins
- Cell or tissue samples (including blood and blood products, except on sealed microscope slides)
- Plants or plant tissue
- Soil containing organic material
- Cultures – Petri dishes containing media, Ziplocs with spores, etc.

Images of Humans

- Sensational or offensive images of humans on project display

Animals and Animal Parts

- Live animals or micro-organisms
- Items naturally shed by an animal or parts properly prepared and preserved (eg. quills, shed snake skin, feathers, tanned pelts and hides, antlers, hair samples, skeletons or skeletal parts).

Firearms, Hazardous Materials, and Equipment

- Firearms, ammunition, dangerous goods, or explosives
- Images of humans or animals injured by firearms or explosives
- Functional X-ray and radiation producing equipment.

Structural and Mechanical Safety

- Any structurally unsound backboard or display
- Sharp edges such as the corners of prisms, mirrors, glass, or metal plates that are not in a case
- Dangerous exposed moving parts such as belts, gears, pulleys, and blades
- Motors that do not contain safety shut-offs
- Pressurized vessels or compressed gas cylinders
- Moving exhibits (such as robots) that are using more than their allocated space

Chemical Safety

- Flammable, toxic or dangerous chemicals
- Prescription drugs or over the counter medications
- More than 1 L of liquid being displayed
- Radioactive sources and materials (for example, smoke detector sources)

Note: Any chemicals on display other than water or table salt are **not recommended.**

Tips:

- Water, salt, and molasses can be used to simulate other materials. Write “simulated X” on the material.
- Use food colouring and water to simulate chemicals if necessary.

If you have questions of what you can or cannot have at your display, please email us at fvrsf@ufv.ca

PREPARING TO PRESENT YOUR PROJECT

Now that you've worked hard performing tests, collecting data, and analyzing your results, how do you tell others about it?

It is important to capture the attention of your audience so that they will want to read your display board, listen to what you have to say about your project and understand what you have learned. This section provides information on how to prepare your backboard and oral presentation.

POSTER AND DISPLAY AREA

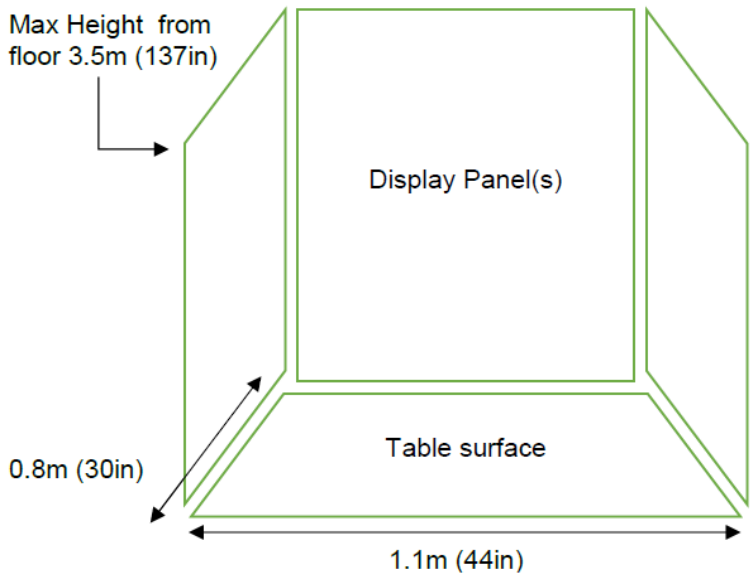
At the fair, you will need to present your project to the public (friends, parents, teachers and visitors) and to the judges. It is important to make sure your display area is well-prepared and organized so it is dynamic and represents what you have done. Visitors looking at your backboard should be able to quickly understand what the project is about, what you did, and what you concluded.

Be creative. You can use pictures, models, and even demonstrations as long as they fit within your display area and do not conflict with the ethics section and safety guidelines. Your poster should capture the most important parts of your project, and contain enough information to tell someone walking by what you did.

Each project will get a specific spot allocated for their display. Please build your display to the specifications below. No additional room will be given so ensure all your material fits within the allotted space.

SIZE AND FORMAT RESTRICTIONS

Your project display must fit within the following dimensions: 1.1m (44in) wide x 0.8m (30in) deep x 3.5m (137in) high from the floor.



Your project display must be **free standing** (stands up on its own). Three fold displays are the easiest, but other combinations are possible.

Non-free standing displays will not be permitted.

There are additional specific display requirements that are required when participating in the national level Canada-Wide Science Fair (CWSF). Projects created with the national Science Fair requirements will be accepted in the FVRSF, but are not required.

TIPS FOR MAKING A GREAT PRESENTATION

Here are some tips to help you with preparing a presentation.

Be confident and excited

- This is your work and you know it best!! The hard work of creating your project is already done. You've spent many hours coming up with a problem and working through your project. Presenting your project is just an opportunity for you to share what you did and what you learned with the judges and visitors. You've done great work and we want to hear all about it!

Be organized in your explanations

- Ensure your presentation follows a logical order. Remember, although you've been working on your project for many hours, the judges and visitors are new to your work. Try to take your listener step by step through your project and your thinking so they can easily follow along.
- Some students start with an introduction of themselves and a description of what their project is about. You could consider discussing why you chose your specific project, what you are trying to investigate, and why it is important.
- If you've done an experiment, walk the judges through each part of the scientific process (what materials did you use, what procedures did you follow, how many trials did you perform and what variables were involved). It's important to discuss what you did but also WHY you did it.

Be prepared

- Plan what you are going to present and practice. You'll need to budget your time. Plan to present for 10 minutes and leave 5 minutes for questions.
- If you are working with a partner decide in advance who will be saying what and when. Each student should talk for the same amount of time and both of you should be prepared to answer any of the judge's questions.
- Practice your presentation in front of someone that doesn't already know about your project. Try to take note of the questions they ask. If they are a bit confused you may want to adjust a couple of sections. Or, they may ask you questions you hadn't thought of before. Incorporate what you learn in these practices into your final presentation.
- Practice your presentation several times until you feel comfortable.
- Try not to read any notes. If you need to refer to notes to keep you organized that's ok, but try and just talk to the judge and explain what you've done rather than reading a script.

Have Fun – Enjoy yourself. The more fun you have, the more fun the judges will have!

JUDGING CRITRIA

During the judging periods, you will have 15 minutes to discuss with each of your divisional judges and your special awards judges (depending on which special awards you have self-nominated for during your registration). Below is a summary of what the judges will be evaluating you on. Don't worry, you will have plenty of breaks for you to rest between your judging interviews.

Scientific Thought (45%): The judges will evaluate your scientific thought on the design, the procedures and the analysis of your experiments, data and/or innovation. New, original experimental research will get a higher mark than projects that duplicate existing technology.

Creativity (25%): The judges will evaluate your project higher if it shows a novel approach and uses creativity in its design. Did you think outside the box to answer your research question or develop a new prototype, or was limited imagination put into the project?

Communication (30%): This includes your visual display, oral presentation, background research, and log book. The display of your project is important to help you explain what you did. The judges will evaluate your backboard to see if it is well constructed and reflects your scientific skills. Your layout should be logical and self-explanatory. You don't need to be an artist to make a good scientific presentation, however having an attractive display can catch the eyes of your visitors! Doing science is great; communicating in an effective way what you did is also very important so that the results of your research are understood and shared amongst the community. The judges will evaluate you on your ability to answer questions, as well as on the clarity of your presentation. Being enthusiastic about your project is always a plus. Remember that you will show your scientific thought and creativity through your presentation.

AWARDS AND PRIZES

Divisional Awards (Grades 7-12)

Gold, Silver and Bronze medals, and Honourable Mentions will be awarded to the overall best entries in each age division. As well, entries to the Fraser Valley Regional Science Fair are eligible for Provincial Awards.

The British Columbia Provincial Awards Program is administered by the Science Fair Foundation BC and is available to all participants of British Columbia Regional Science Fairs.

As selected by the Judging Committee, the top Regional Science Fair entries will be invited to an expense-paid week at the Canada-Wide Science Fair in May.

Special Awards (Grades K-12)

Additional prizes to be awarded include scholarships and cash awards.

PROJECT JUDGING FORM

Fraser Valley Regional Science Fair

PART A: SCIENTIFIC THOUGHT – 45%		MARK _____ / 45
Experiment Undertake an investigation to test a scientific hypothesis by the experimental method. At least one independent variable is manipulated and extraneous variables are controlled.	**Innovation** Develop and evaluate new devices, models, theorems, physical theories, techniques, or methods in technology, engineering, computing, natural science, or social science.	**Study** Case studies or analysis of data taken by others, are examples of legitimate scientific inquiry that are neither Experiments nor Innovations, Field study methods or correlations are often used.
LEVEL 1 (low) Mark Range 6 to 15		
Replicate a known experiment to confirm previous findings.	Build a model or device to duplicate existing technology or to demonstrate a well-known physical theory or social/behavioural intervention.	Existing published material is presented, unaccompanied by any analysis.
LEVEL 2 (fair) Mark Range 16 to 25		
Extend a known experiment with modest improvements to the procedures, data gathering and possible applications.	Improve or demonstrate new applications for existing technological systems, social or behavioural interventions, existing physical theories or equipment, and justify them.	Existing published material is presented, accompanied by some modest analysis.
LEVEL 3 (good) Mark Range 26 to 35		
Devise and carry out an original experiment. Identify the significant variables and attempt to control them. Analyse the results using appropriate arithmetic, graphical or statistical methods.	Design and build innovative technology; or provide adaptations to existing technology or to social or behavioural interventions; extend or create new physical theory. Human benefit, advancement of knowledge, and/or economic applications should be evident.	The study is based on systematic observations and a literature search. Appropriate analysis of some significant variable(s) is included, using arithmetic, statistical, or graphical methods.
LEVEL 4 (excellent) Mark Range 36 to 45		
Devise and carry out original experimental research in which most significant variables are identified and controlled. The data analysis is thorough and complete.	Integrate several technologies, inventions, social/behavioural interventions or design and construct an innovative application that will have human and/or commercial benefit. Alternatively, unify two or more existing physical theories and make verifiable predictions.	The study correlates information from a variety of peer-reviewed publications and observations, and reveals significant new information, or original solutions to problems. Significant variable(s) are identified with a complete statistical analysis of the data.

PART B: ORIGINAL CREATIVITY – 25%			MARK _____ / 25
LEVEL 1 (low) Mark Range 6 to 10	**LEVEL 2 (fair)** Mark Range 11 to 15	**LEVEL 3 (good)** Mark Range 16 to 20	**LEVEL 4 (excellent)** Mark Range 21 to 25
The project design is simple with little evidence of student imagination. It can be found in books or magazines.	The project design is simple with some evidence of student imagination. It uses common resources or equipment. The topic is a current or common one.	This imaginative project makes creative use of the available resources. It is well thought out, and some aspects are above average.	This highly original project demonstrates a novel approach. It shows resourcefulness and creativity in the design, use of equipment, construction and/or the analysis.

PART C: VISUAL DISPLAY – 8%	Max	Mark
Layout logical and self-explanatory	5	
Exhibit attractive & well-constructed	3	
Total mark for visual display	8	

PART D: ORAL PRESENTATION – 8%	Max	Mark
Clear, logical, enthusiastic presentation	5	
Response to questions	3	
Total Mark for Oral Presentation	8	

PART E: FIVE-PAGE REPORT & PROJECT LOG – 14 %	Max	Mark
Information content / substance	4	
Readability / clarity	3	
Bibliography & citations	3	
Project log (hard copy or electronic)	4	
Total for Five-Page Report & Log	14	

TOTAL MARKS	Max	Mark
PART A: Scientific Thought (Page 1)	45	
PART B: Original Creativity (Page 1)	25	
PART C: Visual Display	8	
PART D: Oral Presentation	8	
PART E: Five-page report and project log	14	
Total Mark Awarded to this Project	100	

JUDGING NOTES:

Strengths: _____

Weakness: _____

https://www.ufv.ca/media/assets/faculty-of-science/fv-regional-science-fair/FVRSF-Judge-Marking-Sheet.pdf

DURING THE FAIR

After all your hard work and preparation for the fair, you will get to join 100+ students from all over the Fraser Valley area for a few fun-filled days of science.