Facts are the air of scientists. Without them you can never fly. Linus Pauling

QRSTF
QUINTE REGIONAL
SCIENCE & TECHNOLOGY FAIR

This document contains Information for Judges of the Quinte Regional Science and Technology Fair .. The QRSTF runs on Volunteers and it is greatly appreciated that you have given of your time and support for this excellent event

Judges
Information Package

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Overview

Volunteers do not necessarily have the time; they just have the heart.
~Elizabeth Andrew

"Volunteers are paid in six figures... S-M-I-L-E-S"
--Gayla LeMaire

Quinte Regional Science and Technology Fair

The QRSTF is a group of volunteers dedicated to promoting science and technology amongst the youth of Hastings and Prince Edward Counties.

The premier event of the QRSTF is the Regional Science Fair held in March or April each year. All students in Hastings and Prince Edward 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 area and home schooled students who reside in the county. Students who live outside of the area but attend a school located in our area will attend the QRSTF. Students who live in the area but attend school in another County must attend the Regional Fair the school participates in. The Mission of the QRSTF will be reviewed by the committee annually at its year end meeting in June of each year. (See .. Year end Meeting)

If you are reading this Judges Training handout, you have either volunteered as a judge before, or have heard of our fair or you have picked up this handout to read. If you are a Judge, thank you for your interest and commitment to the youth of tomorrow. If you picked up this handbook out of interest I would encourage you to see the Science Fair web site at http://www.qrstf.ca

As a science fair judge, you will be provided with a number of opportunities for the small amount of time that you will invest in judging. Also you will gain personal rewards from the experience and interaction with the students that can be found by any other experience.

Program Goals

- To support instruction and learning of the Ontario Science and Technology Curriculum
- To provide the opportunity for students to participate in an enjoyable learning experience.
- To encourage students to extend their knowledge, skills and values in scientific endeavors.
- To provide the opportunity for students to grow in their ability to communicate ideas in a logical and interesting way.

Benefits of being a QRSTF Judge

® Excellent Opportunity to Network

® Develop Communication Skills

® Develop Analytical and Evaluation skills (Translates into leadership and management skill base)

® Sharpen your Investigative Skills

® Build Self Confidence

® Share Knowledge with Today's Youth

® Have fun while helping others

Quinte Regional Science and Technology Fair

Judges are an integral part of a science fair. As a judge you are part of the science fair infrastructure. Your time as a judge has impact that goes far beyond the day of judging, your time reaches out and influences students, schools, the community, businesses and science fairs. Overview of the Three Fairs

Students Benefits

® Learn more about Science

® Are presented with a challenge

® Earn Recognition and win acceptance

® Gain Pleasure from achievement

® Build Self Esteem and Self Confidence

® Meet members of the Business Community

® Meet members of the Scientific Community

School Benefits

Science fairs create an event for schools to use to raise interest in education. Schools also gain in having better students through their experience of science fair competition and interaction with the judges.

Community Benefits

The community gets the long-term benefits of the leadership development of our children who participate in science fairs.

Business Benefits

Science fairs are a medium that can be used to promote businesses through raising community awareness of the businesses that support science fairs. Businesses also reap rewards from the communication and leadership skills that their volunteer judges gain through participating in the science fairs.

Science Fair Benefits

"The Science Fair gains exposure to businesses and schools. Science Fairs, a network of volunteer organizations, are sponsored by community and business donations. Well run science fairs build fair credibility and solidarity of all of the fair supporters."

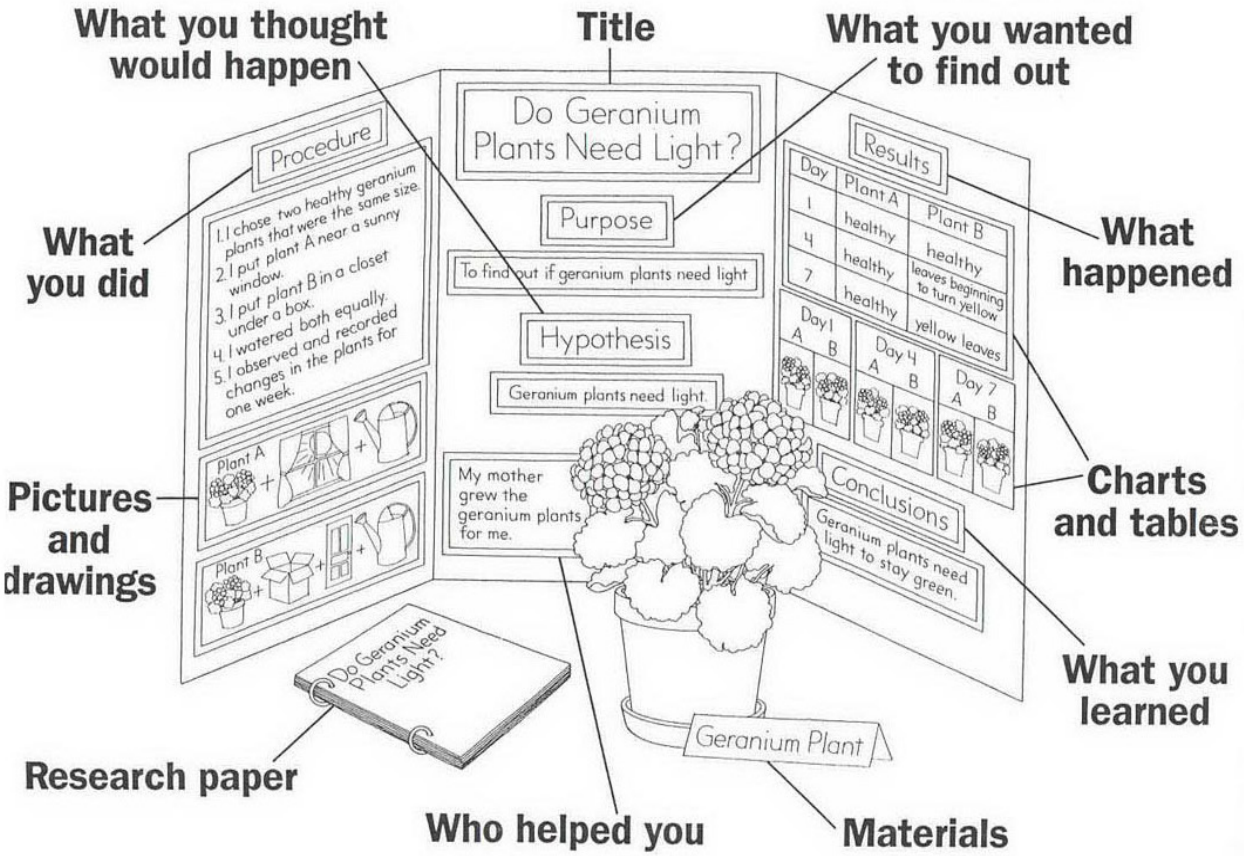
(from the Bayarea Judges manual)

Levels of Science Fairs

1. School Level : Each school that participates has either a formal science fair, a science club or a teacher that has chosen students to participate based on their projects.

Usually:

- **The best projects are selected through a variety of different judging processes.**
- **Often doing a project is voluntary in secondary school.**
- **Enthusiasm and creativity run high in elementary.**



School Fairs bring out the parents.

Every project you judge is already a winner.

So listen really well, encourage, and motivate!!

Quinte Regional Science and Technology Fair

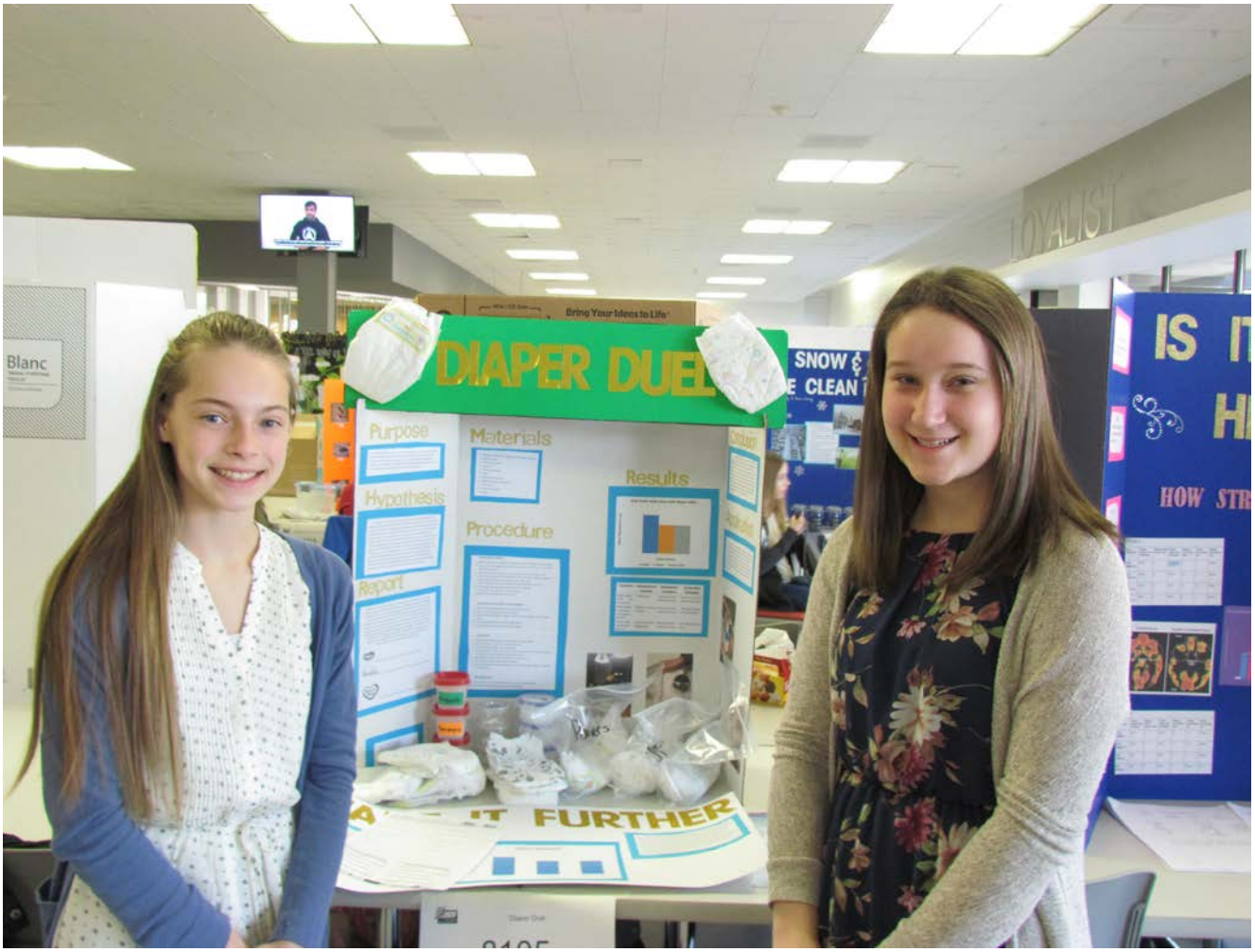
2. Regional Level: **QRSTF** conducts an annual fair for the exhibition and competition of scientific, engineering and technology projects by students registered in grades 4 -12 from all schools within the Hastings and Prince Edward Counties and those students who are home schooled.

3. Canada Wide Science Fair: CWSF is the premiere science event in the country for competing. There are approximately one million dollar in prizes for the students to win.

- Five students from the Quinte Regional Science and Technology Fair will be chosen to participate from projects in Grades 7-12.
- Over the years this area has done extremely well at CWSF

QRSTF 2010 Canada Wide Science Fair Participants

Types of Projects



There are 3 main type of projects we see at our fair. (the experiment, Case study, and the Innovation

Experiment

Compare different things:

Examples:

- Efficiency of various light bulbs
- Effect of sunlight on fabric type
- Examine the effect of a change in some factor
- Effect of sunlight length on plant growth
- Effect of temperature on cyanoacrylate glue

Case Studies

Collect and analyze information

Examples:

- Loon habitats
- Meteors and human history
- Age of airliners and crash probabilities

Innovations

Develop new devices.

Examples:

- Biodegradable golf tees
- A voice controlled faucet
- Binocular robotic vision

All project types are of equal scientific value and one is not evaluated with more merit than the other.

Judging Form

Project Number_____ Project Title_____

Part A: Scientific Thinking	Mark:_____/ 50	
Experiment	**Innovation**	**Study**
Level 1 Mark Range 26 to 30		
Duplicate a known experiment to confirm previous findings	Build models (devices) to duplicate existing technology.	Study existing printed material related to the basic issue.
Level 2 Mark Range 31 to 35		
Extend a known experiment through modification of procedures, data gathering, and application.	Make improvements to or demonstrate new applications for existing technological systems or equipment and justify them.	Study material collected through a compilation of existing data and through personal observations. Display attempts to address a specific issue.
Level 3 Mark Range 36 to 41		
Devise and carry out an original experiment. Identify and control some of the significant variables. Carry out an analysis using graphs or simple statistics.	Design and build innovative technology or provide adaptations to existing technology that will have human benefit and/or economic applications.	Carry out a study based on observations and literary research illustrating various options for dealing with a relevant issue. Include appropriate analysis (arithmetic, statistical, or graphical) of some significant variable(s).
Level 4 Mark Range 42 to 50		
Devise and carry out original experimental research which attempts to control or investigate most significant variables. Include statistical analysis in the treatment of data.	Integrate several technologies, inventions or designs and construct an innovative technological system that will have human and/or commercial benefit.	Correlate information from a variety of significant sources which may illustrate cause and effect or original solutions to current problems through synthesis. Identify significant variable(s) with an in-depth statistical analysis of data.

Part B: Creativity and Originality	Mark:_____/ 20		
Level 1 (10 to 11)	**Level 2 (12 to 14)**	**Level 3 (14 to 16)**	**Level 4 (16 to 20)**
Simple design with little student input. A textbook /internet type project.	Some creativity in a project of fair to good design. Topic is a common one.	Imaginative project, well thought out. Some creativity in design or use of materials.	Highly original approach, showing much resourcefulness and creativity in design use of equipment or analysis.

Part C: Communication	Total Mark:_____/ 30		
The level is based on four elements: visual display, oral presentation, project report with background research and logbook.			
Level 1 (15 to 17)	**Level 2 (18 to 20)**	**Level 3 (21 to 24)**	**Level 4 (25 to 30)**
Most or all of the four elements are simple or incomplete. There is little evidence of attention to effective communication. In a pair project, one member may have dominated the presentation.	Some of the four elements are simple, or incomplete, but there is evidence of student attention to communication. In a pair project, one member may have made a stronger contribution to the presentation.	All four elements are complete and demonstrate attention to detail. The communication components are each well thought out and executed. In a pair project, both members made an equitable contribution to the presentation.	All 4 elements are complete and exceed age/grade expectations. The visual display is logical and well presented. The project report and logbook are informative and clearly written. The bibliography goes beyond web-based articles. The oral presentation is clear, logical, enthusiastic and contributed to equally in a pair project.

Submit Judging Forms to the Main Desk in the Judges' Headquarters after completing your ranking. ***These forms are not to be given to students.*** To provide feedback to students use the Project Feedback form.

Total Score:_____/100 *Dec. 2018*

Formulaire d'évaluation

Numéro de projet_____ Titre du projet_____

Partie A: Pensée scientifique	Note: _____/ 50	
Expérience	**Innovation**	**Étude**
Niveau 1 (Note de 26 à 30)		
Reproduire une expérience connue pour confirmer les résultats précédents	Construire des appareils scientifiques pour reproduire une technologie existante	Étudier des matériaux imprimés existants liés à un problème connu.
Niveau 2 (Note de 31 à 35)		
Reproduire une expérience connue en modifiant les procédures, la collecte de donnée et l'application.	Améliorez ou démontrez de nouvelles applications pour des systèmes ou équipements technologiques existants et les justifier.	Étudiez le matériel recueilli grâce à la compilation de données existantes et à des observations personnelles. Tente de résoudre un problème spécifique.
Niveau 3 (Note de 36 à 41)		
Réalisez une expérience originale. Identifiez certaines des variables significatives et les contrôler. Effectuer une analyse à l'aide de graphiques ou de statistiques simples.	Concevoir et construire des technologies innovantes ou apporter des adaptations aux technologies existantes qui auront des avantages humains et / ou des applications économiques.	Réaliser une étude basée sur des observations et une recherche littéraire illustrant diverses options pour traiter un problème pertinent. Inclure l'analyse appropriée (arithmétique, statistique ou graphique) de certaines variables importantes.
Niveau 4 (Note de 42 à 50)		
Concevez et menez des recherches expérimentales originales qui tentent de contrôler les variables les plus significatives. Inclure une analyse statistique dans le traitement des données.	Intégrez plusieurs technologies, inventions ou conceptions et construisez un système technologique innovant présentant des avantages humains et / ou commerciaux	Corréler les informations provenant de diverses sources significatives pouvant illustrer les causes et les effets ou les solutions originales aux problèmes actuels. Identifiez les variables significatives grâce à une analyse statistique approfondie des données.

Partie B: Créativité and Originalité	Note: _____/ 20		
Niveau 1 (10 à 11)	**Niveau 2 (12 à 14)**	**Niveau 3 (14 à 16)**	**Niveau 4 (16 à 20)**
Conception simple, un projet facilement retrouvé dans un manuel ou en ligne.	Un peu de créativité avec un sujet commun mais bien pensé.	Projet imaginatif, bien pensé. Un peu de créativité dans la conception.	Approche très originale, faisant preuve de beaucoup d'ingéniosité et de créativité dans la conception.

Partie C: Communication	Note : _____/ 30		
Le niveau est basé sur quatre éléments: le visuel, la présentation orale, le rapport de projet et le journal de bord.			
Niveau 1 (15 à 17)	**Niveau 2 (18 à 20)**	**Niveau 3 (21 à 24)**	**Niveau 4 (25 à 30)**
La plupart ou la totalité des quatre éléments sont simples ou incomplets. Il y a peu de preuves d'attention à la communication effective. Pour un projet avec deux étudiants, un membre peut avoir dominé la présentation.	Certains des quatre éléments sont simples ou incomplets, mais il est évident que les étudiants sont attentifs à la communication. Pour un projet avec deux étudiants, un membre peut avoir apporté une contribution plus importante à la présentation.	Les quatre éléments sont complets et démontrent une attention particulière aux détails. Les composantes de la communication sont bien préparées et présentées. Pour un projet avec deux membres, les deux étudiants ont apporté une contribution équitable à la présentation.	Les 4 éléments sont complets et dépassent les attentes. L'affichage visuel est logique et bien présenté. Le rapport de projet et le journal de bord sont informatifs et clairement écrits. La bibliographie va au-delà des articles Web. La présentation orale est claire, logique et enthousiaste et les partenaires ont contribuées également dans un projet en double.

Après avoir complété votre formulaire, le soumettez au bureau principal des juges... ***Ces formulaires ne doivent pas être donnés aux étudiants (fournir des commentaires sur l'autre formulaire)***

Note Final :_____/100

Special Awards

We hand out a series of special awards to students that fit a pre describe criteria. The students self nominate themselves or the teacher does it for them. In some cases the organization that sponsors the award will choose and judge the projects. These awards will change from year to year based on sponsorship.

You may be asked to judge the special awards. (we thank-you)

- Astronomy
- Professional Engineers
- OACETT Technology Award
- Michel-Sarrazin Award (French Language)
- Dennis Kritzer Memorial (Computer Science)
- University of Ottawa Scholarship
- CWSF award
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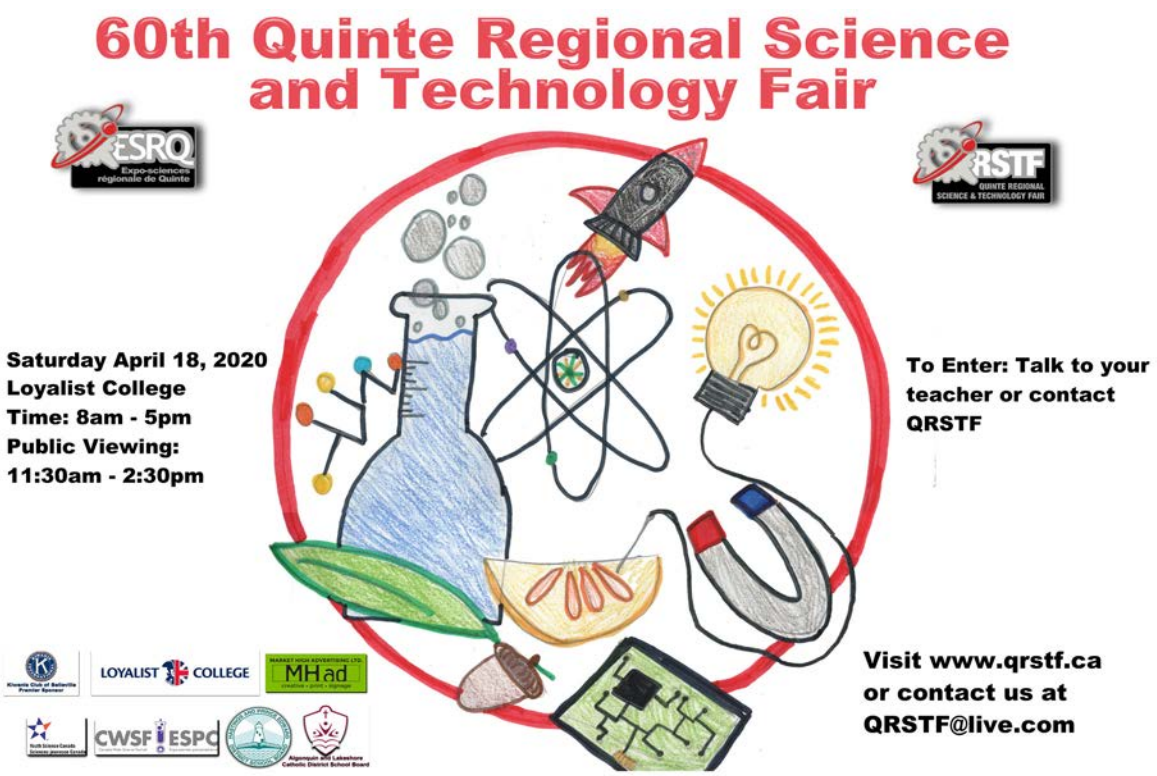


Judging/Day of Fair

This part of the document deals with the judging at the QRSTF and the day of the Fair. It deals with the effective ways we can judge the scientific projects of the youth who come to the QRSTF.

Schedule for Day of Fair - This schedule is always in review and may change the day of the fair.

8:00 -8:30 am – pick up & inspect packages

8:30 – 8:45 am – judges' orientation

9 am – 11 – Round 1 interviewing: Gr 7 – 12 can be interviewed until 11:30 and hand out awards (ribbons, medals)

11:30 am – noon – Lunch for students: Gr 4 – 6 start first at 11:30 (must)

1 – 2:30 pm - Round 2 (subset of judges)

3:30 pm – Awards Ceremony – Automotive Bay

Judge's Questions

Q. How do I sign up to judge?

It's easy, just fill out the registration form on-line. (www.qrstf.ca) Please remember to include your email address as this is the easiest way for us to send out reminders. Also provide all personal data when registering.

Q. Are there any requirements to be a judge?

If you wish to be a judge at the QRSTF you must:

1. be at least 19 years old or attending a post-secondary institution
2. have a love of science
3. be free all morning or the day of the fair

Q. How do I know I have been accepted as a judge?

Space permitting, all people are accepted as judges until the day of the fair. You should get an e-mail confirming your registration immediately after registering.

Q. What is the difference between elementary and secondary?

Elementary projects are done by students in grades 4-8. Most of these students have competed at a school fair and have won their place to attend the QRSTF. Secondary projects are from students in grades nine to twelve and have projects that are generally more advanced then those in elementary.

Fill out Judging Team Mark Summary form, this does not need to be an average mark but a mark that all team members feel the student deserves

We need scores handed in by 11:15 am (no comments, just scores) so the list of projects that should be second round judged can be made.

11:15 am Prepare one written comment sheet for each student (please make two identical comment sheet if there are two students)

Please remember to complete the lines for Entry No. and Location No. on the forms

12:00 noon First Round / Medal Round ends

At this time, use the envelope to hand in all forms:

- Comment sheets
- Tally sheets (evaluation forms)
- Spare forms

Q. What do I do if I can't judge in the morning of fair day?

Please email or phone the Judging Team.

Q. How does my company become a sponsor?

Please contact the chair of the QRSTF at qrstf@live.com

Q. . What day/time/location is the fair?

The Quinte Regional Science and Technology Fair is held in April and will be posted on the Website and will emailed to you.

Q. I'm a first time judge, how do I get a judging handbook?

There are two ways to receive a judging handbook (only for new judges as the handbook information does not change, just the color does). If you attend the judging seminar you can pick one up there or if you are unable to attend the judging seminar, you can contact us at qrstf@live.com and we will send you a link to download and print off a copy.

Q. My child is in the fair, can I still judge?

You can still judge as there are many students at the fair. If you arrive in the morning and find that you are judging your child's project, we will switch you to a new team.

Q. I would like to do more than just judge, where do I get more information on volunteering?

Please contact us through our website.

Q. I am a first time judge, should I judge elementary or secondary?

We like to recommend you start at the elementary level for at least one year. Elementary projects are generally not as involved as those at the secondary level and don't require in depth knowledge of a subject. Judges at the secondary level must have adequate knowledge of a subject so that they can ask more complex questions about project results.

Q. I would like to judge with my friend, what should I do?

When you fill out a registration form, you must put your friend's names down and they must do the same. However, we can't guarantee that you will be judging with your friends. When we build the judging teams, we like to put experienced judges with less experienced or new judges. This gives us more consistent results and allows new judges to learn from past experience of the other judges.

Q. What happens on judging day?

8:15 am Judges arrive at Centennial SS - April 6, 2024

Follow signs to Judge's room

Please bring clipboard, pencil and pen if you can

Pick up your judging package, take your name tag and meet your team

Each team has an envelope that contains forms, labels, and schedule. The team should go through the envelop to make sure they have all forms and labels.

8:30 am Chief Judge addresses judges and go over a few last minute details and give thanks to all the volunteers and sponsors

9:00 am Judges read over their forms and move into the exhibit hall and introduce yourselves to the students you will be judging and let them know what time each of you will be back to judge them. Please remember to introduce yourself to students as a group.

9:15 am Judging starts

You will judge each project separately (usually about 6-7 projects)

You will have around 10-20 minutes per project

11:00 am Meet your team back in the judging room

By 11:30- all marks and rankings are handed in

You and your team will compare notes, rank projects and discuss and assign final marks

Fill out Judging Team Mark Summary form, this does not need to be an average mark but a mark that all team members feel the student deserves

We need scores handed in by 11:15 am (no comments, just scores) so the list of projects that should be second round judged can be made.

Hand out the awards to your group. First place will get a ribbon and later a trophy. This project will compete for the Best in Grade.

Hand out the second, third and honourable mention.

All students are to remain. They are being judged for special Awards.

11:15 am Prepare one written comment sheet for each student (please make two identical comment sheet if there are two students)

11:30 am First Round / Medal Round ends

At this time, use the envelope to hand in all forms:

- Comment sheets

- Tally sheets (evaluation forms)

- Spare forms

1:00 pm - 2:30 all Second Judging is done and the Special Awards finish.

Q. I can't be a judge this year but would like to be contacted in future, what do I do?

Please contact us to let us know of your interest in judging for future years and we will add you to our data base.

Q. How can I find out how the students I judged did?

Visit our website after the fair http://www.qrstf.ca to see the results

Q. Do I have to attend the Judging Seminar?

No, you don't need to attend the Judging Seminar, and you can still judge if you don't attend. We strongly encourage all new judges attend as you go over how to judge a project and what to do if you have a problem project. Also, the judging handbook is handed out, so if you are not attending, and have never judged, please e-mail qrstf@live.com to let us know you need a handbook.

Q. How can I find out how the students I judged did?

Visit our website after the fair http://www.qrstf.ca to see the results

Q This is my first time, what do I need to know? And where can I find this information?

What you need to know:

* First, you must have an understanding of the scientific method;

* Second, you must understand our judging forms and know what information meets the criteria set out in those forms;

* Third you must know how to fill out all the judging forms and when we need them on the morning of the fair.

* You will be teamed up with an experienced judge who will help you through the process.

Where you can find this information:

All these topics are covered in our yearly Judging Seminar. The seminar highlights the events of the judging day, goes through the scientific method, mock judges a project, and explains all the judging forms. The seminar is 1 hour long and at that time we will also give new judges a judging handbook to take away. The handbook summarizes all the information presented in the seminar, but does not act as a replacement for the seminar. If you can't make it to the seminar contact us at qrstf@live.com a and we can send you a link to download and print off a copy. http://www.qrstf.ca

You will be contacted when it is.

Judging Envelopes

Exterior:

- Judging group number or Special Award
- Judges names

Interior: (First Round Judging)

- List of Projects (orange recording sheet)

Project summaries

- Judges checklist: contents list plus order of duties
- 8 ribbons (1st, 2nd, 3rd, Honourable Mention)
- Judges' name tags
- pencils
- project locator map
- People's Choice Award ballots
- Participation Certificates

QRSTF folders:

- 6 Communicator Ballots per folder
- 6 Judging forms
- 6 Feedback Forms
- Feedback for judges

(Special Awards)

- List of Projects (Orange recording sheet)
- Corresponding number of judging forms
- folders
- project locator maps

Judging Envelope Contents

Exterior

- Judging Group Number
- Judges Names

Interior

- Judges name tags
- Judging Checklist
- Project Summaries
- Site Map
- Cineplex Odeon Good Communicator Award forms (1/student)
- Project List Reporting Sheet (orange)
- Participant Certificates
- Judge's Feedback to QRSTF Committee Form
- Ribbons: 2 reds (1st place), 2 blue (2nd place), 2 white (3rd place) 2 yellow (Honourable Mention)
- Pencils – 2
- QRSTF Judges Folders
  - 6 Judging Forms per folder
  - 3 Project Feedback forms (6 total between 2 judges)

***Once judging is complete, judges turn in their List of Projects (orange recording sheet) with their rankings (no ties please!) and pick up medals for 2nd and 3rd place finishers as well as additional ribbons, if required **

Quinte Regional Science and Technology Fair

Round 1 of judging: 9 am–11:30 am

* If you do not have an assignment please see the judge coordinator

Each pair of judges assigned 5-6 projects

Step 1: In pairs, visit each project for a few minutes & give them materials from package

Step 2: Individually judge each project for 15 minutes (min.) (allow students to present before questioning)

Step 3: Meet your partner in Judges' Room to decide on 1st, 2nd, 3rd, and Hon. Men. (optional); revisit projects if necessary with/without student(s). Hand in your forms to the office

Step 4: In pairs, do prescribed administrative work. Hand in your forms to the office

Step 5: In pairs, present ribbons/medals as per checklist (before lunch)(and comment sheets)

Judging/Fair Day

QRSTF: Judges' Checklist

- [ ] Read the project summaries, to get a preview of the displays
- [ ] Locate your group on the map
- [ ] Visit the groups, introduce yourselves, and deliver the participation certificates
- [ ] Give each student a Communicator ballot
- [ ] Interview each group, and encourage a thorough presentation of their work. (allow students to "present" their projects before asking questions)
- [ ] Record your marks on the Judging Forms
- [ ] Return to Headquarters, to confer with your partner.
- [ ] Rank the top 4 projects on the Recording sheet (no ties please!). Hand in orange form before presenting awards
- [ ] Write your comments to your Students on the Judging Feedback Forms (hand back comment forms to all students)
- [ ] Exchange the Project List Ranking Sheet and the Judging Forms at the main desk in the QRSTF Committee Room for medals (see next).
- [ ] Pick up silver and bronze medals for 2nd and 3rd place students. Pick up any extra ribbons you may need. (Blue Medal Count sheet is your reference.)
- [ ] Complete the Judges Feedback to QRSTF Committee Form
- [ ] Both judges return to the students and congratulate them on their efforts.

☐ **Hand each student a Participation Certificate and a Project Feedback Form and discuss your comments.**

☐ **Award the ribbons (1st, 2nd, 3rd and Honourable Mention). Present the 2nd place students with silver medals and the 3rd place students with bronze.**

☐ **Tell the 1st place student(s) they will receive their medal(s) at the award ceremony in Auditorium,Centennial SS at 3:30 p.m.**

☐ **Return to Headquarters to return name tags, envelopes, folders and any remaining folder contents to main desk**

QRSTF : Judging Feedback Form

Project Feedback Form

To be presented to students when informing them of the judging results.

Project Name:_____

What I (we) liked about this project- Its strengths.

Recommendations:

Judged By: _____

_____

December 2018

QRSTF : Judges QRSTF feedback form

2020
Judge's Feedback to QRSTF Committee Form

In an effort to continue to improve the Fair, we would like to get your comments on this year's science fair. We constantly strive to improve the Quinte Regional Science and Technology Fair experience for both the students and the judges and appreciate and encourage your feedback. Categories and judging procedures and criteria are reviewed annually.

Round 2 of judging: 1 pm–2:30 pm

Obtain assigned projects from Co-Chair

Step 1: In pairs, survey the projects quickly then judge each project for up to 10 minutes.

Step 2: Return completed form to Judges' Room before 2:00pm and obtain next assignment

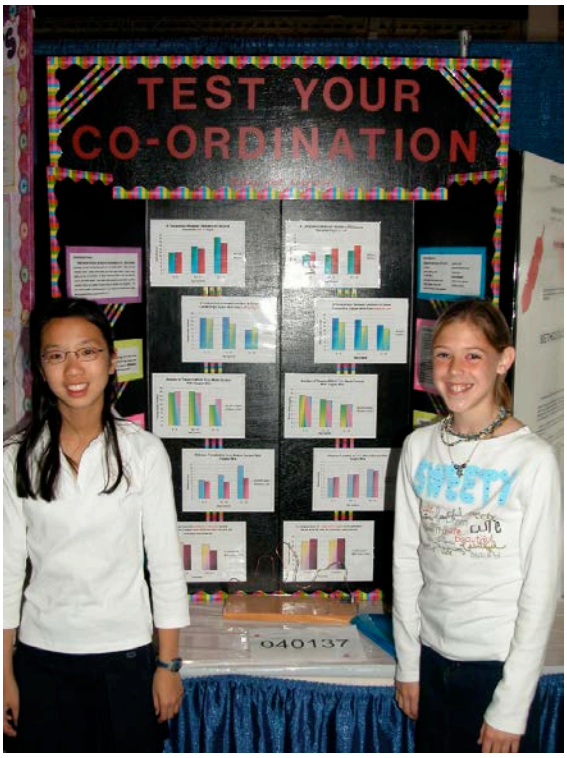
Step 3: In pairs, judge each project for 5-10 minutes.

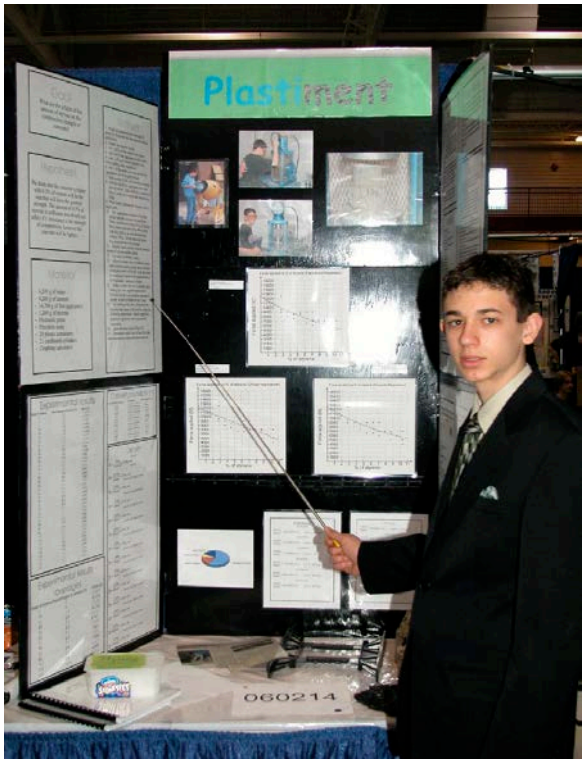
Step 4: Return completed form to Judges' Room by 2:30 pm. This will leave time for CWSF selections from the grade winners.

Your are now finished – thank you!

Quinte Regional Science and Technology Fair

Science Fair Judging





Assessment Workshop

For Judges

Judging/Fair Day

Role of a QRSTF judge

- **Facilitator**
- **Motivator**
- **Role Model**
- **Counselor**
- **Evaluator**

The role of a QRSTF judge is challenging, but it is a very rewarding and worthwhile effort. As a science fair judge, you are given the unique opportunity to impact the lives of some very talented young people. Consider this -- for many of these students, you may be the first professional they have ever met who is engaged in a science or engineering job for a living. You are an ambassador for your profession. You may very well influence their career choices.

Facilitator

- Introduce yourself.
- Make eye contact. Be friendly / professional
- Where you come from; what you do.
- Ask the exhibitor to introduce himself/herself.
- Listen respectfully to the presentation.
- Ask graded questions stop when the limit of knowledge is reached.
- Find two things to praise.
- Give a minimum 12-15 minute interview (in Round 1)

Motivator

- Focus on the exhibitors.
- Ask questions in an upbeat tone.
- Listen intently.
- Give lots of
- encouragement.
- I liked …
- I enjoyed …
- Thank them for sharing their project with you.

Role Model

You are

- Judge
- Scientist, and/or
- Educational Leader, and/or
- Business Leader
- You represent several of these aspects.
- Let the exhibitors say

"That was a fantastic judging experience"

Counselor

- Coach as much as you like.
- Find two things to praise.
- Make one suggestion for further
- Improvement.

-I suggest …

-A technique I have used…

- Use the Feedback to Exhibitors form.

Things to Remember:

- Introduce yourself/ shake hands/ eye contact with student
- Never talk about students in front of them. Go to the judges' room or to a corner.
- There can be no ties for first place.. Choose one winner for first in each group.
- If there is a pair of students doing a project make sure each has equal time to present.
- Always be positive in your discussions and in your written comments. Avoid "Why didn't you.." Instead try "Could you have..." or What do you think would have happened if..."
- Guide the discussion
- The student should be doing most of the talking.
- Encourage the student to continue research
- Work at the students level and not intimidate by size.
- Tone of voice is very important.. always be interested.
- Whether the quality of the project give all equal merit. Some students may not have had the same opportunities to labs, equipment or mentors.
- The board has a limited affect on whether a project wins or not
- If you have any difficulty.. do not hesitate to ask the organizing committee

Possible Questions to use:

How did you come up with the idea for this project?

What did you learn from your background search?

How long did it take you to build the apparatus?

How did you build the apparatus?

How much time (many days) did it take to run the experiments (grow the plants) (collect each data point)?

How many times did you run the experiment with each configuration?

How many experiment runs are represented by each data point on the chart?

Did you take all data (run the experiment) under the same conditions, e.g., at the same temperature (time of day) (lighting conditions)?

How does your apparatus (equipment) (instrument) work?

What do you mean by (terminology or jargon used by the student)?

Do you think there is an application in industry for this knowledge (technique)?

Were there any books that helped you do your analysis (build your apparatus)?

When did you start this project? or, How much of the work did you do this year? (some students bring last year's winning project back, with only a few enhancements)

What is the next experiment to do in continuing this study?

Are there any areas that we not have covered which you feel are important?

Do you have any questions for me?

What to look for in a winning project?

When discussing the projects:

- Quality and originality of the project
- All project types are equal
- Team projects are judged like all other projects. It is the quality of the project and the quality of the students knowledge.
- It is what the student knows about their project and next steps
- Having a mentor or extra time in a lab does not make a top project
- Even if the project does not work out or disproved their objective/hypothesis, it still can be a winner

What to look for:

- Genuine scientific project (Experiment, Study, Innovation)
- Discovering information beyond that which is readily available
- Data is correctly interpreted
- all information is written properly
- If it is an experiment... multiple trials
- Predicting and/or reducing experimental results with analytics
- Is the experiment applicible in the real world
- Ability of the students to easily and properlly explain their project.
- Next steps
- Always refer back to the judging form.

Remember always to make this a positive experience for the student no matter the outcome of the judging. Give them memories to remember.

Scientific Thought

- Experiment
- Innovation
- Study
- Each project type is equally valid.
- It is not essential that a type be identified
- Students could have mislabel their projects

Experiment

An investigation undertaken to test or formulate a scientific hypothesis using experiments. Experimental variables, if identified, are controlled to some extent.

Examples:

- Using Viruses to Kill Cancer.
- The Effect of Road Salt on Pea Plants: Can it be Reversed?
- Tree Bark vs Bacteria

Innovation

The development and evaluation of:

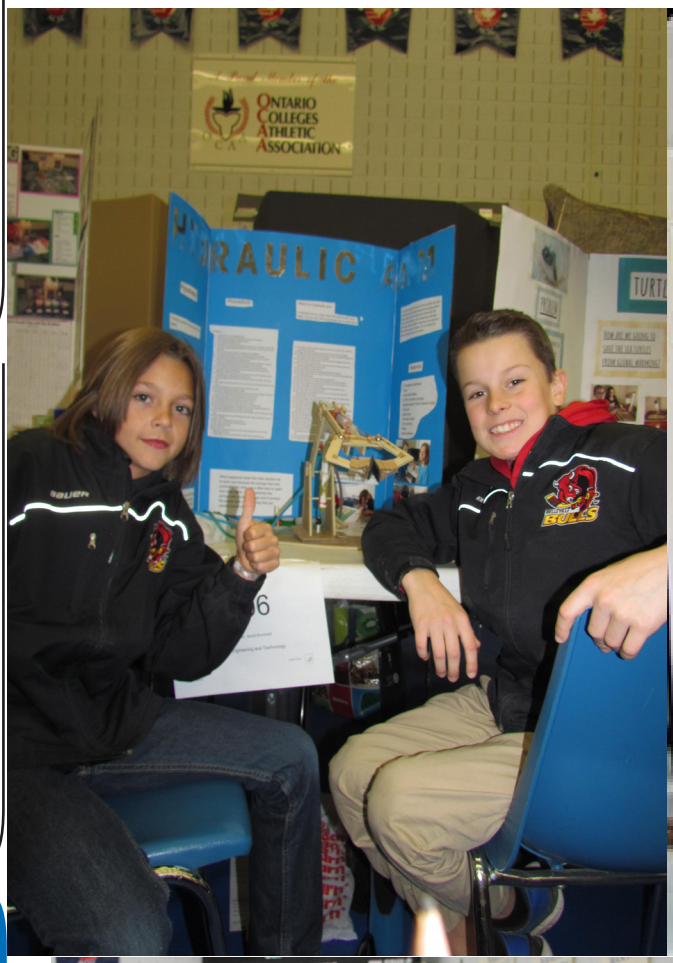
- - Innovative devices;
- models, techniques, or approaches in technology, engineering or computing;
- Theoretical models or formalism
- Economically Feasible Tsunami Detection system
- Dynamic Noise Cancellation Using Wave Super-positioning
- Example:

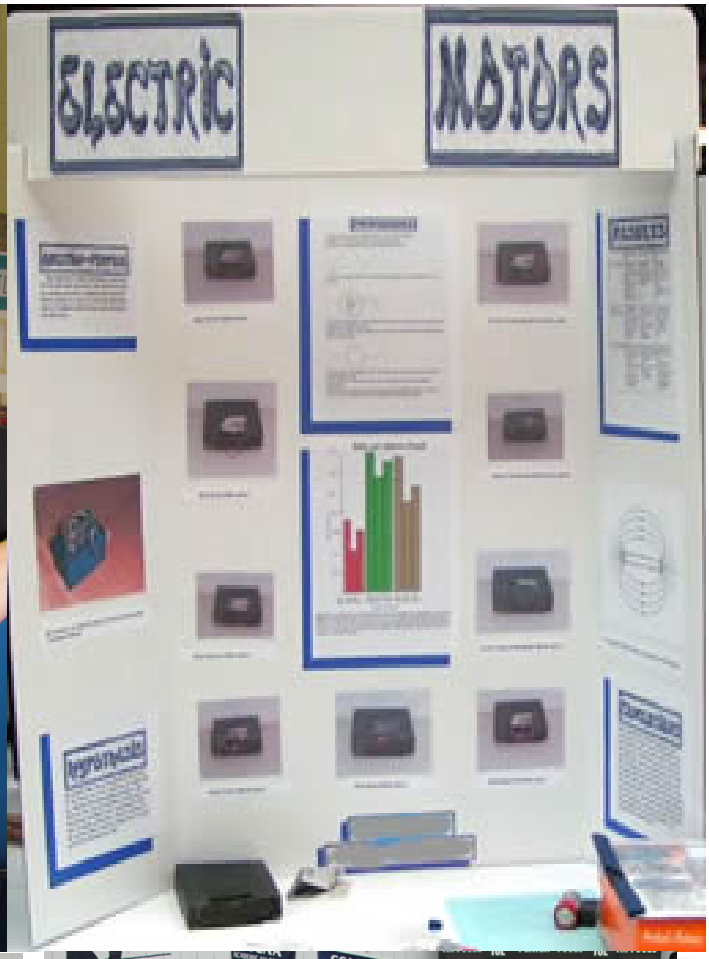
- Road Ice Detector II

Study

An analysis, and possible collection, of data to reveal evidence of a fact or a situation of scientific interest. It could include a study of cause and affect relationships, or theoretical investigations of scientific data, or a social sciences trial involving human subjects.

- Examples:
- Study of Bird Population Counts 1950 - 2000
- Analysis of Mars Data from NASA
- Investigation of Influenza outbreaks in Ontario 1900 - 1950


ONTARIO COLLEGES ATHLETIC ASSOCIATION


ELECTRIC
MOTORS


PH IN WATER?
Question:
Which drinking water is the best for drinking based on pH level?
Hypothesis:
The best water for drinking based on pH levels is Belleville city filtered tap water.
DISTILLED WATER
pH Levels in Water
5209


DARBY'S HOMEMADE LAVA LAMP
POINTS
MATCH
POINTS
HOME OF THE
LANCERS

Quinte Regional Science and Technology Fair

First/Second/Special Awards

After the first round of judging the best of each grade group is re-judged so that we can choose the best in the grade. If you wish to be a second round judge please inform us by email for check off the second round judging box when you register as a judge.
Also, we have many speciality awards that need to be judged as well. Many judges wish to judge these awards. If you wish to please inform us or check the box for special awards when you register.

The Specialty awards are judged throughout the day. The students have self nominated themselves for these awards. Some of these judging groups may contain over 30 projects that may have to look at. **The students should remain at their place throughout the afternoon.** In their permission form it states that are to remain unless they have permission from the organizing committee. They many be up for a special award. All students should have at least one special award they were nominated for.

Judging Form

Project Number_____ Project Title_____

Part A: Scientific Thinking	**Mark:_____/ 50**	
Experiment	**Innovation**	**Study**
Level 1 Mark Range 26 to 30		
Duplicate a known experiment to confirm previous findings	Build models (devices) to duplicate existing technology.	Study existing printed material related to the basic issue.
Level 2 Mark Range 31 to 35		
Extend a known experiment through modification of procedures, data gathering, and application.	Make improvements to or demonstrate new applications for existing technological systems or equipment and justify them.	Study material collected through a compilation of existing data and through personal observations. Display attempts to address a specific issue.
Level 3 Mark Range 36 to 41		
Devise and carry out an original experiment. Identify and control some of the significant variables. Carry out an analysis using graphs or simple statistics.	Design and build innovative technology or provide adaptations to existing technology that will have human benefit and/or economic applications.	Carry out a study based on observations and literary research illustrating various options for dealing with a relevant issue. Include appropriate analysis (arithmetic, statistical, or graphical) of some significant variable(s).
Level 4 Mark Range 42 to 50		
Devise and carry out original experimental research which attempts to control or investigate most significant variables. Include statistical analysis in the treatment of data.	Integrate several technologies, inventions or designs and construct an innovative technological system that will have human and/or commercial benefit.	Correlate information from a variety of significant sources which may illustrate cause and effect or original solutions to current problems through synthesis. Identify significant variable(s) with an in-depth statistical analysis of data.

Part B: Creativity and Originality	**Mark:_____/ 20**		
Level 1 (10 to 11)	**Level 2 (12 to 14)**	**Level 3 (14 to 15)**	**Level 4 (16 to 20)**
Simple design with little student input. A textbook /internet type project.	Some creativity in a project of fair to good design. Topic is a common one.	Imaginative project, well thought out. Some creativity in design or use of materials.	Highly original approach, showing much resourcefulness and creativity in design use of equipment or analysis.

Part C: Communication	**Total Mark:_____/ 30**		
The level is based on four elements: visual display, oral presentation, project report with background research and logbook.			
Level 1 (15 to 17)	**Level 2 (18 to 20)**	**Level 3 (21 to 24)**	**Level 4 (25 to 30)**
Most or all of the four elements are simple or incomplete. There is little evidence of attention to effective communication. In a pair project, one member may have dominated the presentation.	Some of the four elements are simple, or incomplete, but there is evidence of student attention to communication. In a pair project, one member may have made a stronger contribution to the presentation.	All four elements are complete and demonstrate attention to detail. The communication components are each well thought out and executed. In a pair project, both members made an equitable contribution to the presentation.	All 4 elements are complete and exceed age/grade expectations. The visual display is logical and well presented. The project report and logbook are informative and clearly written. The bibliography goes beyond web-based articles. The oral presentation is clear, logical, enthusiastic and contributed to equally in a pair project.

Submit Judging Forms to the Main Desk in the Judges' Headquarters after completing your ranking. ***These forms are not to be given to students.*** To provide feedback to students use the Project Feedback form.

Total Score:_____/100 *Dec. 2018*

Formulaire d'évaluation

Numéro de projet_____ Titre du projet_____

Partie A: Pensée scientifique	**Note: _____/ 50**	
Expérience	**Innovation**	**Étude**
Niveau 1 (Note de 26 à 30)		
Reproduire une expérience connue pour confirmer les résultats précédents	Construire des appareils scientifiques pour reproduire une technologie existante	Étudier des matériaux imprimés existants liés à un problème connu.
Niveau 2 (Note de 31 à 35)		
Reproduire une expérience connue en modifiant les procédures, la collecte de donnée et l'application.	Améliorez ou démontrez de nouvelles applications pour des systèmes ou équipements technologiques existants et les justifier.	Étudiez le matériel recueilli grâce à la compilation de données existantes et à des observations personnelles. Tente de résoudre un problème spécifique.
Niveau 3 (Note de 36 à 41)		
Réalisez une expérience originale. Identifiez certaines des variables significatives et les contrôler. Effectuer une analyse à l'aide de graphiques ou de statistiques simples.	Concevoir et construire des technologies innovantes ou apporter des adaptations aux technologies existantes qui auront des avantages humains et / ou des applications économiques.	Réaliser une étude basée sur des observations et une recherche littéraire illustrant diverses options pour traiter un problème pertinent. Inclure l'analyse appropriée (arithmétique, statistique ou graphique) de certaines variables importantes.
Niveau 4 (Note de 42 à 50)		
Concevez et menez des recherches expérimentales originales qui tentent de contrôler les variables les plus significatives. Inclure une analyse statistique dans le traitement des données.	Intégrez plusieurs technologies, inventions ou conceptions et construisez un système technologique innovant présentant des avantages humains et / ou commerciaux	Corréler les informations provenant de diverses sources significatives pouvant illustrer les causes et les effets ou les solutions originales aux problèmes actuels. Identifiez les variables significatives grâce à une analyse statistique approfondie des données.

Partie B: Créativité and Originalité	**Note: _____/ 20**		
Niveau 1 (10 à 11)	**Niveau 2 (12 à 14)**	**Niveau 3 (14 à 15)**	**Niveau 4 (16 à 20)**
Conception simple, un projet facilement retrouvé dans un manuel ou en ligne.	Un peu de créativité avec un sujet commun mais bien pensé.	Projet imaginatif, bien pensé. Un peu de créativité dans la conception.	Approche très originale, faisant preuve de beaucoup d'ingéniosité et de créativité dans la conception.

Partie C: Communication	**Note : _____/ 30**		
Le niveau est basé sur quatre éléments: le visuel, la présentation orale, le rapport de projet et le journal de bord.			
Niveau 1 (15 à 17)	**Niveau 2 (18 à 20)**	**Niveau 3 (21 à 24)**	**Niveau 4 (25 à 30)**
La plupart ou la totalité des quatre éléments sont simples ou incomplets. Il y a peu de preuves d'attention à la communication effective. Pour un projet avec deux étudiants, un membre peut avoir dominé la présentation.	Certains des quatre éléments sont simples ou incomplets, mais il est évident que les étudiants sont attentifs à la communication. Pour un projet avec deux étudiants, un membre peut avoir apporté une contribution plus importante à la présentation.	Les quatre éléments sont complets et démontrent une attention particulière aux détails. Les composantes de la communication sont bien préparées et présentées. Pour un projet avec deux membres, les deux étudiants ont apporté une contribution équitable à la présentation.	Les 4 éléments sont complets et dépassent les attentes. L'affichage visuel est logique et bien présenté. Le rapport de projet et le journal de bord sont informatifs et clairement écrits. La bibliographie va au-delà des articles Web. La présentation orale est claire, logique et enthousiaste et les partenaires ont contribuées également dans un projet en double.

Après avoir complété votre formulaire, le soumettez au bureau principal des juges... ***Ces formulaires ne doivent pas être donnés aux étudiants (fournir des commentaires sur l'autre formulaire)***

Note Final :_____/100

QRSTF

http://www.qrstf.ca

The Quinte Regional Science and Technology Fair runs completely on volunteers. We appreciate the time you have given to our fair, and to the youth of our community. It is only with volunteers such as yourself that we are able to go beyond the books and classroom walls to show students that science is all around us in the "real world" and that there are opportunities in the field. We hope that you will take part in next years science fair. See you then.