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Quebec Entrepreneurship Contest
Student Application Package
2006 Quebec High School Science Fair: Students for Science
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Students visiting the Science Fair.

Project Description

The initial goal of our project was for our Planning Committee — which was organized by students, led by students, and made up of students — to organize the 2006 Quebec High School Science Fair for the school’s entire student body, with the objective of stimulating student interest in Science. The Science Fair could act as a medium through which we could demonstrate how basic scientific principles can be applied to solve complex problems and to facilitate daily life. Each QHS student was to create a Science project related to the chosen theme of “How Things Work,” and then present his or her project to fellow students, teachers, and visitors on the day of the Science Fair.



Student Jean-Denis Lemieux presenting his project.

This event was to be accompanied by several guest-speaking presentations given by local scientists from various scientific fields. These presentations provided opportunities for students to appreciate that scientists are regular people, and that they are driven by their curiosity, their ability to question, and by their determination to find answers.

However, not all aspects of this originally planned project could be carried out, and we were forced to downsize the Science Fair. This was due to the ongoing teacher pressure tactics occurring at the time, as the majority of teachers were unwilling to assign and grade their students’ projects. This meant that Secondary 1 to 4 students were unable to participate in the Science Fair by creating or presenting projects.

However, the student Planning Committee **persevered**, and we decided to **creatively** redesign the Science Fair to fit our new guidelines. Ultimately, the project was reframed so that only the Secondary 5 students would exhibit their projects, while younger students would be invited to visit the Science Fair and to attend guest speaker presentations. We also organized a field trip for the Secondary 5 students to a prestigious regional Science Fair: *Expo Sciences Bell*.

Throughout the several months of planning, we student organizers never lost sight of our goals and objectives, and we remained highly **motivated**. The Science Fair’s theme remained

unchanged, and the exhibit included many interesting projects covering various fields of Science. These topics included transportation (maglev trains), refrigeration (thermoacoustic refrigeration), optics (lenses), medicine (allergies and anticoagulants), and recreational activities (Cartesian diving).

Organizing the 2006 QHS Science Fair provided us with a solid opportunity to develop many entrepreneurial values and skills. We learned how to work as a **team**, and we developed a **sense of responsibility, patience, and perseverance**. We also improved our **leadership skills, organizational and communication skills, problem-solving skills**, and our **ability to schedule and manage time**. Above all, we learned that **hard work, patience, and focus** are essential for getting a job done.

We truly enjoyed the outcome of our project. Through careful planning and organization, the Science Fair was successful in many ways. We enjoyed achieving our goal of stimulating student interest and getting students excited about Science. In addition, we received a lot of positive feedback from teachers, students, and administrators. At the end of the day, we felt a sense of **accomplishment** and great **satisfaction**.

The major obstacle we faced involved the teachers' "Work to Rule" tactics and their unwillingness to actively participate in their students' activities. Fortunately, we collaborated with a few willing teachers and staff advisors to make the Science Fair a success. We showed **creativity** by changing the Science Fair's format, and we **persevered** to overcome our obstacles.



Teacher Mr. David Rompré introducing guest speaker Roger Lessard to students.

Once our original plan was reworked, we faced certain problems involving time constraints, identifying suitable guest speakers, and finding sponsors. We also had some difficulty finding a location for the Science Fair, and we had to deal with conflicting scheduling between the Book Fair and Science Fair — which both occurred on the same day. To solve these problems, we re-organized ourselves into sub-committees, with each focused on a specific task — and we then went into overdrive. This **determination** and **focused completion** of tasks helped us accomplish our project in time.

Commentary from the Staff Advisor

In order to appreciate the tremendous challenges for students to organize the “2006 Quebec High School Science Fair: Students for Science”, let me first explain the history of this event and the context in which the project was developed.

We, at Quebec High School, have been holding Science Fairs for the last few years, and each time it has been organized by the teachers and staff. However, this year the staff felt that students could expand their learning and develop entrepreneurial skills by having a student-run event and by applying to the *Quebec Entrepreneurship Contest*. The students showed great interest in the project and were motivated by the challenge.

However, since the teachers in the province were working “to rule” during the first part of the year, the students had to organize the project alone with minimal supervision on my part. Although the students had prior experience in developing a Science Fair project and presentation, they had never been involved in the organization of such an event. In addition, they had never organized a career day, nor a school outing. Also, in order to have the events take place under these new conditions, the students had to adapt their original Science Fair model to assure its success and realization. Without these students there would not have been a Science Fair/Career Day this year at QHS. In a similar “Work to Rule” situation during the 2001/2002 school year, many activities — including the Science Fair — were simply cancelled. Not only did this year’s students make it happen, with their determination they worked on creating an innovative project with the resources they had, and succeeded in motivating the Quebec High School community at large to participate in the Science Fair/Career Day. They also made sure their group outing to the *Expo Sciences Bell* took place.

Students had to learn the rudiments of conducting meetings that would lead to decision-making. They also had to learn the procedure for organizing events in a school. They had to prioritize and find creative solutions as problems arose. They worked effectively in seeking both the human and material resources needed for the project, developed leadership skills, and cooperated with the adults in authority to fulfill the project and have the community involved. They shared the tasks and learned to work as a team.

It has been a pleasure and a privilege to work with such a dynamic group of students. It has also been a learning experience for me. As adults, we most often exercise the leadership role and take on the responsibility. However, these students took responsibility for all aspects of the Science Fair's planning, and the result of the project speaks for itself. When we expect great things from students, great things happen.

Diane Dee Hostetler
Guidance Counsellor
Staff Advisor

Personal Learning Experiences

Laura Arul Executive Planning Committee

Being Chairperson of this Science Fair Committee was a one-of-a-kind experience. I not only oversaw the organization of an event that heightened school spirit, I also developed many values and skills that will surely serve me in the future.



I got involved in this project because I believed there was a need to promote Science among students — in particular among younger students — and I enthusiastically accepted my leadership role over the organization of this project. I valued my interactions with students, teachers, administrators, and local businesses and organizations, as they gave me a better appreciation of people both inside and outside the school's community. In the process, I developed **time-management skills**, **communicational** and **organizational skills**, and **problem-solving skills**. I also realized that **motivation**, **hard work**, and **patience** are essential in accomplishing one's goals. In the end, I felt great satisfaction, which boosted my self-confidence.

Laura Arul

Sepehr Naserkakhi

Executive Planning Committee

I feel my position as a member of the Science Fair Executive Planning Committee and the leader of the Science Fair's Guest Speaker Committee allowed me to play an important role in the success of this year's Science Fair. I was responsible for contacting various people from several scientific fields, and for inviting them to come to our school to promote their careers within the frame of our Science Fair day. I also had to arrange all the equipment these guest speakers needed for their presentations, and for organizing a proper reception for them on the day of the event. I faced many difficulties, especially while trying to identify and contact enough guest speakers.



These responsibilities — for which I was appointed — were at the root of my many learning experiences. I had to schedule and plan many presentations for this event — mostly within the two weeks preceding the Science Fair. I confirmed the guest speakers' presence for the day of the event by calling them a few days ahead. I also had to make sure that all the equipment that was needed would be placed and set-up in the appropriate classroom. Completing these tasks required well-developed **communication skills**, as well as a good **sense of organization**.

My contribution to our project developed many of my **entrepreneurial skills**, such as **communication, organization, perseverance** and **ingenuity**. Due to the teachers' pressure tactics, had we students not organized the Science Fair, it would have simply been cancelled. But — because of us — we kept a school tradition alive, which for me, was a very rewarding experience.

Sepehr Naserkhaki

Robert Puckrin

Executive Planning Committee



As a member of the Science Fair Executive Planning Committee and the leader of the Science Fair’s Set-Up and Scheduling Committee, I feel I played an important role in the planning and organization of this year’s Science Fair. I was responsible for creating a schedule that allowed all QHS classes to have an opportunity to visit the Secondary 5 Science Fair, and I then had to visit each invited teacher to verify their responses.

Through completing my various tasks, I learned several important values, as well as specific information as to how a school is run and how its decisions are made. In order to ensure it was possible for each class to be able to visit the Secondary 5 students’ projects, I had to deal with the school administration as well as with the respective teachers. I also had to coordinate my class-visiting schedule with the QHS Book Fair, as I had to ensure that no class was assigned to visit both the Science and Book Fair at the same time. Completing these tasks required well-developed **organizational** and **communication skills**, as I had to deal with many faculty members and administrators to ensure proper scheduling.

In addition to these responsibilities, I was also placed in charge of the meeting secretarial tasks. I wrote summaries of each meeting by including the main points discussed during the course of the gathering, and by taking note of which Planning Committee members were present. This task in itself required a lot of **organization** and **dedication**, as I often had to spend great lengths of time ensuring meetings were sufficiently described and were neatly organized.

Robert Puckrin

Jeremy Wong

Executive Planning Committee



When I look back four months — to the time when the Planning Committee first began organizing the Science Fair — I

realize how much I have since learned. The whole planning process was a great learning experience!

As head of the Sponsorship Committee, my responsibilities required me to acquire more knowledge on how the school system functions. For example, I now know the process through which one must go in order to be authorized to send a fax. I also learned a great deal about the faxes themselves, as they must have a very specific format.

On another note, I learned to be more **courteous**, because writing faxes requesting money from businesses tends to be a delicate task. The wording must be very **polite**, **concise**, and **convincing**... which is a difficult undertaking! It's very much like composing a subtle argumentative essay.

Working as the head of a committee taught me valuable **leadership skills**. As a leader, you need to think ahead and have a plan. You also learn to be **confident** and **firm**. As a member of the Executive Committee — which is essentially a group of leaders — I learned to **listen** to others and their ideas. Teamwork was especially important here.

Most importantly, I realized that **perseverance** is the key to making an event like the Science Fair succeed. Without perseverance, the Planning Committee could easily have given up — especially when considering the obstacles we faced. But with it, we were able to follow through with our plans and finish off with a great Science Fair.

Jeremy Wong

Source of the Idea

The Science Fair is an annual school-wide event at Quebec High School, and — in the past — it has been organized by several Science teachers. However, this year introduced several changes to QHS' Science faculty, as three of last year's Science teachers — who all played instrumental roles in the planning of previous Science Fairs — were either on leaves of absence or were unable to organize any events.

During the summer of 2005, several Science teachers — knowing they would be unable to organize any events during the 2005/2006 school year — decided that a volunteer student Planning Committee could organize the Science Fair instead. In December 2005, a Science teacher, Mr. Charles Sias, collected names of Secondary 5 students who were willing to participate in the planning of the Science Fair.

We students then took the **initiative** to organize the event by forming a Science Fair Planning Committee, which consisted of fifteen Secondary 5 students. We divided ourselves into several sub-committees — with each sub-committee responsible for a particular aspect of the Science Fair’s planning. We held several meetings, and began planning on December 5, 2005.

Goals

Science is perceived by many students as being abstract, difficult, and meant solely for those with higher intelligence levels. Although these students enjoy the conveniences of modern living that Science has introduced, they have little appreciation for the application of Science to various aspects of life — such as communications and healthcare. The perception that one has to be “gifted” to be a scientist discourages many students from even considering Science as a career.

Thus, the primary goal of our project was to get students excited about Science. By exhibiting the Secondary 5 projects and by hosting the entire student body as visitors, we were able to demonstrate the basic scientific process — from the questioning phase to the conclusion phase — to our fellow students. Additionally, we exposed students to a variety of careers in Science by inviting guest speakers to share their experiences with them. Furthermore, the Secondary 5 students had a chance to learn about new scientific discoveries through our field trip to the *Expo Sciences Bell*.

Another important goal of this year's student-planned Science Fair involved boosting **entrepreneurial spirit** among Quebec High School students. In June 2005, several Science teachers and staff members met with Ms. Cynthia Blanchette, a representative of *Carrefour Jeunesse-Emploi de la Capitale Nationale*, to discuss the various options in completing this task. After considering the fact that several Science teachers would be absent during the 2005/2006 school year, they decided that this year's Science Fair would be a student-organized event.

As us students were responsible for every aspect of the Science Fair's planning and organization, this project served as an excellent opportunity for us to learn and develop new **entrepreneurial skills**. This also gave us a chance to enter the *Quebec Entrepreneurship Contest*, which allowed us to showcase and to demonstrate how we developed our potential to be entrepreneurs.

Innovative Aspects and Benefits

Although the Quebec High School Science Fair has been an annual tradition at this school for several years, this was the first year that it was entirely planned and organized by students. Normally, the QHS Science Fair is organized by several Science teachers — with little or no student involvement. However, the 2005/2006 school year has introduced many changes to our school's Science faculty, as three of last year's Science teachers are no longer at the school or are unable to organize any events. The fact that students were responsible for the Science Fair's planning is one of the greatest changes we introduced this year. Unlike any previous year, the 2006 QHS Science Fair was a **student-centred** activity, as it was organized by the students, for the students.



Secondary I student viewing project.

We — the student volunteers who participated in the Science Fair's organization and planning — were able to enhance our **entrepreneurial qualities** and thereby benefited from this project. This year's Planning Committee probably faced more outside problems than ever before, thus we had to pull together and continue to be committed and dedicated as a team. We all benefited by learning to be **tenacious** and to never cease seeking one's goals.

Considering how the planning of the Science Fair allowed each of us to develop a variety of **entrepreneurial skills**, we decided to enter our project into the *Quebec Entrepreneurship Contest*. This marked the first time that any project organized at Quebec High School has applied to this contest, and we are excited about the opportunity to represent QHS with our Science Fair event.

As previously mentioned, the student Planning Committee ran into several problems — most notably a lack of teacher willingness to assign and grade the students’ projects due to labour disputes — and the Science Fair had to be scaled down to include only Secondary 5 projects. Although this may appear to be a setback, it actually allowed the Planning Committee to be more **creative** and **ingenuitive** when it came to organizing and planning, as we were able to introduce several of our own ideas to this year’s Science Fair. We were given a chance to give the entire Science Fair a ‘makeover,’ as we could **reinvent** it to include as many new ideas or themes as we desired.

We student organizers selected the theme of this year’s Science Fair, and we decided to choose a topic never before done at this school’s past Science Fairs: “How Things Work”. Although there were fewer projects on display than in previous years, the **innovative** topics the Secondary 5 students came up with represented a broad and exciting range of Science. These projects involved environmentally friendly forms of refrigeration (thermoacoustic refrigeration), transportation (Maglev trains), medicine (allergies and anticoagulants), optics (lenses), and recreational activities (Cartesian diving). Younger students who visited the Science Fair were exposed to a variety of topics from which they learned many scientific principles.



Student Eric Beaudreau presenting his project.



Guest Speaker John Himmelman

Another **innovative** aspect of this project involved the guest speaker presentations. We student organizers invited several members of the local scientific community — including a biologist, a physicist, a civil engineer, and a doctor — to come and speak with QHS students about their careers and experiences in the sciences. This new idea allowed students to learn a great deal about a scientifically oriented career, and it also stimulated student interest in Science.

This year’s student organizers also initiated a whole new event to be tied-in with the Science Fair. We decided to organize a field trip for the Secondary 5 Science students to the regional *Expo Sciences Bell* on March 16th. This event allowed the students who participated in

the QHS Science Fair to see and visit with other projects — created by students from all over the Quebec City region.

We student organizers were able to introduce several new and **innovative ideas** into this year's Science Fair, and we were thus able to enhance our **creativity** and **ingenuity**. We also developed **leadership skills** and our **potential** to be entrepreneurs, as we made this year's Science Fair **unique, distinct, and successful**.

Work Organization

Organizing an entire Science Fair is a very large undertaking, and it required a lot of **work** and **organization** by many students. The first step that was taken involved creating a Science Fair Planning Committee. A Secondary 5 Science teacher created a list of all students who were interested in helping organize the Science Fair, and he then left us to decide upon a proper organizational format. At the first planning meeting, we held a general vote of all members to decide upon an Executive Planning Committee. This committee — which was made up of four students — was responsible for ensuring the Science Fair planning was moving ahead properly, for coordinating the organizational process, for identifying the tasks of each sub-committee, for creating the *Quebec Entrepreneurship Contest* application package, and for creating deadlines and making certain major decisions involving the Science Fair.

Another key step in the planning of the Science Fair involved breaking up the main committee into several sub-committees. The Executive Committee decided to create four sub-committees, with each being held responsible for all activities concerning a specific aspect of the Science Fair's planning. These sub-committees were responsible for 'planning a field trip to the *Expo Sciences Bell*,' for 'identifying and contacting guest speakers,' for 'organizing the Science Fair's set-up and for scheduling class visits to the Science Fair,' and for 'finding sponsors to help fund any costs the Science Fair may incur.' Each sub-committee consisted of three to four students, and these students worked together to ensure all the planning they were responsible for was completed.

To ensure the various sub-committees were moving ahead properly and were upholding their areas of responsibility, each sub-committee included one member of the Executive Committee. The Executive Committee member would ensure that all other members in their

sub-committee were working hard and were being held accountable for what they were doing. The Executive Committee's members would then meet weekly to provide each other with updates concerning their sub-committee's planning.

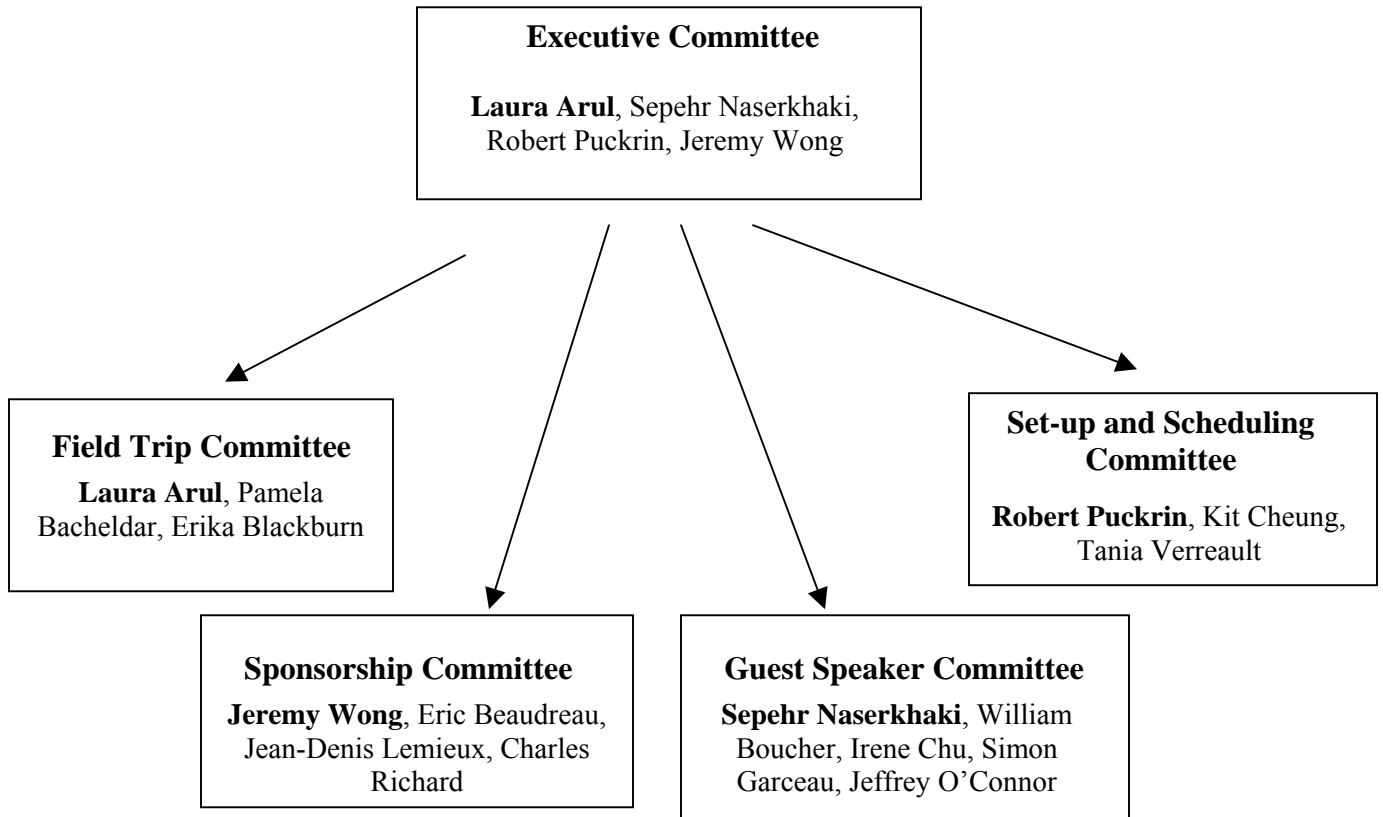
In addition to this weekly meeting, the entire Science Fair Planning Committee would gather twice weekly to move ahead with its planning. These meetings served as a time for all sub-committees to come together to make decisions and to further discuss and develop their plans for the Science Fair.

It is important to note that the student members of the Planning Committee made all decisions involving the Science Fair's planning and organization. Major decisions — such as the theme or format of the Science Fair — would be made through a general vote involving the Planning Committee's members. Other minor decisions would be made by the appropriate sub-committee or by the Executive Committee.

There were many aspects of the Science Fair that needed to be planned, and there were therefore many deadlines and schedules that each sub-committee had to follow. The Executive Committee created a calendar, which mentioned every important date and deadline leading up to the Science Fair. This calendar can be found on page 23 of the Appendix. Each sub-committee was aware that the Science Fair was to be held on March 1st, and they used this knowledge to create their own deadlines for any other tasks that were not mentioned on the calendar.

The Executive Planning Committee was responsible for creating the *Quebec Entrepreneurship Contest* application package, thus we students wrote and edited every section of this document — excluding the staff member's comments on page 5. Executive Planning Committee member Robert Puckrin was also responsible for keeping records of each meeting by writing the meeting minutes, and a copy of each meeting's summary can be found in the Appendix at the end of this document.

**Science Fair Planning Committee
Organizational Diagram**



Bolded name designates leader of committee.

Organizing Work

Organizing a Science Fair

Executive Committee:

Students' names: Laura Arul, Sephr Naserkhaki, Robert Puckrin, Jeremy Wong

Students' tasks: Coordinating entire organizational process, overseeing other sub-committees, making major decisions, ensuring planning is advancing properly, identifying tasks of each sub-committee, creating *Quebec Entrepreneurship Contest* application package.

Guest Speaker Committee:

Students' names: William Boucher, Irene Chu, Simon Garceau, Jeffrey O'Connor, Sepehr Naserkhaki

Students' tasks: Identifying and contacting members of local scientific community who may be interested in speaking to students, handing out permission slips to all students so that they may be able to leave class to attend the guest speaker presentations, ensure the guest speakers are greeted at school's entrance and are served refreshments.

Field Trip Committee:

Students' names: Laura Arul, Pamela Bacheldar, Erika Blackburn,

Students' tasks: Obtaining permission from school administration to attend *Expo Sciences Bell* on March 16th, reserving place for class at *Expo Sciences Bell*, finding two teacher supervisors, ensuring student transportation to *Expo Sciences Bell*, creating and collecting students' permission slips.

Set-Up and Scheduling Committee: Students' names: Kit Cheung, Robert Puckrin, Tania Verreault

Students' tasks: Setting up desks and ensuring adequate power access for Science Fair projects, inviting other classes to come visit Science Fair, creating a class-visiting schedule.

Sponsorship Committee:

Students' names: Eric Beaudreau, Jean-Denis Lemieux, Charles Richard, Jeremy Wong

Students' tasks: Identifying the sponsors and local businesses that need to be contacted, identifying sponsorship target, contacting local businesses to request donations.

Production Schedule for the Science Fair's Organization and Planning

Science Fair Planning Committee - Committee's tasks	Schedule for Completion Of Tasks
Entire Planning Committee: <ul style="list-style-type: none"> - Forming Executive Committee and initial sub-committees - Forming new sub-committees 	December 5 to December 7 January 30
Guest Speaker Committee: <ul style="list-style-type: none"> - Identifying members of local scientific community who may be interested in speaking to students - Contacting possible guest speakers and inviting them to speak at Science Fair - Handing out permission slips to allow students to leave class to attend guest speaker presentations - Greeting guest speakers and serving refreshments 	December 7 to February 22 February 22 to February 26 February 22 to 23 March 1
Field Trip Committee: <ul style="list-style-type: none"> - Obtaining permission from school administrators to attend <i>Expo Sciences Bell</i> on March 16th - Finding two teacher supervisors - Reserving place for class at <i>Expo Sciences Bell</i> - Creating and collecting student permission slips 	February 14 February 14 to 22 February 23 February 23 to March 15
Set-Up and Scheduling Committee <ul style="list-style-type: none"> - Creating a schedule for class visits to the Science Fair - Setting up desks and ensuring adequate power access for Science Fair projects - Inviting teachers to bring their classes to the Science Fair 	February 8 to February 23 February 28 to March 1 February 24 to February 28
Sponsorship Committee <ul style="list-style-type: none"> - Identifying the sponsors and local businesses that need to be contacted - Formulating a written request for donations - Contacting local businesses to request donations 	December 7 to February 13 February 13 to 20 February 20

Collaborators and Resources

Although us student organizers were responsible for every aspect of the Science Fair's planning, we required the assistance or expertise of several teachers, businesses, and local organizations. We used all resources — human, material, and financial — to make our Science Fair a success, and we required the participation of many people from the school and local business community.

The Science Fair Planning Committee sought out the help of Diane Hostetler, our school guidance counsellor. Mrs. Hostetler offered helpful advice to the students concerning their organizational skills, and — thanks to her large list of local contacts — she also played an important role in identifying and contacting guest speakers. Mrs. Hostetler also collaborated with us by supervising the Secondary 5 Chemistry class on their field trip to the *Expo Sciences Bell*.

The Science Fair Planning Committee also needed the participation of a few Quebec High School teachers. The Chemistry teacher, Ms. Paule Cantin, graciously supervised our class on the day of the Science Fair. She was also responsible for helping grade the Science Fair projects, and along with Physics teacher Ms. Catherine Talbot, ensured each student was evaluated for his or her work. As with Mrs. Hostetler, Ms. Cantin agreed to act as a teacher supervisor on our field trip to the *Expo Sciences Bell*.



Ms. Catherine Talbot and Ms. Paule Cantin discussing.

Another teacher, Mr. Guy Fournier aided the Sponsorship Committee by helping identify local businesses that would be interested in donating to the school's Science Fair. Finally, Science teacher Mr. Charles Sias played an instrumental role in the primary stages of our planning, as he came up with the idea of students planning the Science Fair and he led us through our first few meetings.

As with any project this size, the Planning Committee needed the full cooperation of the school's administration. Fortunately, Quebec High School's Vice-Principal, Stéphane Lagacé, was very helpful, as he offered his expertise and gave us access to necessary school documents.

He also gave his permission to any major decision we made, and played a helpful role in the planning process.

Each of the above people were ready and willing to aid with any aspect of the Science Fair's planning, and each sub-committee was able to approach them at any time for assistance. A member of the Science Fair Executive Planning Committee, Laura Arul, served as the official student-teacher liaison. She was responsible for updating the teachers and administration with progress made in the Science Fair's planning, and also sought out specific assistance from the teachers when necessary.

We student organizers made several connections with the local business community through the planning of the Science Fair. The Sponsorship Committee contacted several local businesses with requests for donations, and we were fortunate enough to receive sponsorship aid from two of them. These two businesses donated a total of \$150, and we used this money to help cover the costs the Science Fair incurred.

While identifying and contacting potential local sponsors, we learned a lot about **financial management** and **fiscal responsibility**. We had to ensure we were using the proper methods to collect the sponsorship donations, and we had to be certain the money was being spent properly. It must be noted that us students were responsible for contacting all businesses, for collecting funds, and for budgeting our finances. An entire list of all revenue sources and expenses can be found on page 3 of the Appendix.

By entering our project into the *Quebec Entrepreneurship Contest*, we have discovered that we are eligible to receive a “subsidy for introduction to entrepreneurship measure.” This money will also be used to cover our Science Fair's costs, and any remaining funds will be donated to Quebec High School for future entrepreneurial use.

Another aspect of our planning that included making contacts with the local community involved identifying and speaking with guest speakers. We contacted several local organizations — including *Boîte à Science*, *Community Economic Development and Employability Committee* (CeDeC), and several Science departments at *Université Laval* — for assistance in finding guest speakers.

These organizations were quite helpful, and through dealing with them, we were able to improve our **communication skills**. Incidentally, our search for guest speakers led to an indirect impact on Quebec High School. After we contacted *CeDeC*, a member of that organization — who had been previously working with QHS on an entrepreneurial project for students — decided to reinstate meetings with QHS Principal Mark Sutherland to further discuss this issue. This has led to further school staff meetings concerning student entrepreneurship, and in the coming years we expect Quebec High School to institute new measures to boost student entrepreneurship. We are excited about the fact that our involvement with *CeDeC* has led to such positive changes in our school.

We also required the aid of four local scientists, as they took part in the Science Fair by being guest speakers. These guest speakers included a marine biologist, John Himmelman, a physicist, Roger Lessard, a civil engineer, Guy Morisset, and finally, a doctor, Jean Dorval. These men were very kind, as they took time out of their busy schedules to come and speak to our school's students about their careers in the sciences.



Guest speaker Guy Morisset.

We also benefited from the assistance of Mrs. Cynthia Blanchette, who is an “*Agente de sensibilisation en entrepreneuriat*” at the *Carrefour Jeunesse-Emploi de la Capitale Nationale*. Mrs. Blanchette reviewed our *Quebec Entrepreneurship Contest* application package, and suggested several tips and improvements to our work. Finally, we collaborated with the organizers of the *Expo Sciences Bell* while organizing the Secondary 5 Chemistry class field trip.

The Planning Committee required several pieces of electronic equipment for the Science Fair and guest speaker presentations. To be able to host the Science Fair, we needed a large classroom, a power supply, several extension cords, and many desks. The guest speaker presentations involved four classrooms, as well as several laptop computers and overhead projectors. All these materials were borrowed from the school, thus they imposed no cost to the Planning Committee's budget.

We — the students — were responsible for contacting all the teachers, administrators, businesses, and organizations listed above. The Sponsorship Committee dealt with local businesses, while the Guest Speaker Committee contacted several organizations. The Set-Up and

Scheduling Committee spoke with many teachers, and the Field Trip Committee was responsible for dealing with the organizers of the *Expo Sciences Bell*.

By contacting these teachers, businesses, and organizations, we were able to develop our **communication skills**. We had to be **organized** and **prepared** before speaking with them, and it was necessary to ensure we stated our intentions clearly. We were able to develop our **entrepreneurial potential**, as — just like real entrepreneurs — we had to make many contacts in the local community to make our project successful.

Results

No matter which angle you look at it from, the 2006 Quebec High School Science Fair was a great success. Nearly the entire school population — made up of 380 students in total — received the opportunity to come and visit the Secondary 5 projects during the course of the day. Each of the 12 classes that visited the Science Fair spent approximately 15 minutes observing the projects and speaking with the students responsible for their creation. We received entirely positive feedback from the visiting students and teachers, as everyone seemed to enjoy the opportunity to explore our Science Fair.



Student Simon Garceau presenting his project.

In addition to the Science Fair visits, 54 students attended four guest speaker presentations. Although we initially expected greater student participation in these presentations, we were not disappointed in the relatively low student turnout. Attending a guest speaker presentation was purely a voluntary decision, and considering how the week before the March



Guest Speaker Jean Dorval.

Break is always a busy one, many students were busy preparing for exams and were thus unable to attend. However, we feel the students who did attend a guest speaker presentation thoroughly enjoyed the chance to learn about a scientist's career and experiences.

In terms of sponsorship, we received a total of \$150 in donations from two local businesses. Our costs were relatively low, as we only had to pay for the guest speakers' refreshments, for certain supplies, and for a congratulatory pizza party for the Planning Committee. As all equipment used was borrowed from the school, our costs surmounted to a total that did not exceed our revenue. We therefore made a profit, and all these excess funds were donated to the school for future entrepreneurial use. A list of all expenses and revenues can be found on page 3 of the Annex. Although our primary goal was not profit-driven, we were pleased that the Science Fair had not incurred any cost to the school.

Overall, the QHS Science Fair was a great success and it enjoyed widespread participation from the entire school. The students and staff members who visited the Science Fair appreciated the experience, and everyone seems to have benefited from its educational value. We hope to have inspired other students to try and organize future events in the school, whether in the form of the Student Council or through organizing events such as this one.



Students Tania Verreault, Jeffrey O'Connor, Irene Chu, and Kit Cheung with their project.

Entrepreneurial Skills Developed

Committee Name	Student Names	Entrepreneurial Skills Developed by the Students												
		Sense of Responsibility	Autonomy	Teamwork	Solidarity	Leadership	Problem-Solving Skills	Organizational Skills	Communication Skills	Time-Management Skills	Perseverance	Creativity	Patience	Courtesy
Executive Committee	Laura Sepehr Robert Jeremy	X	X	X	X	X	X	X	X	X	X	X	X	X
Set-Up and Scheduling	Robert Kit Tania	X	X	X				X	X	X		X	X	X
Guest Speakers	Sepehr Irene Simon Jeffrey William	X	X	X			X	X	X	X	X	X	X	X
Sponsorship	Jeremy Charles Eric Jean-Denis	X	X	X				X	X			X	X	X
Field Trip	Laura Pamela Erika	X	X	X				X	X			X	X	X

* Name of student in charge of sub-committee is in **bold**.

Over the course of the four months spent working on this project, we acquired many entrepreneurial values and skills. We became better acquainted with both the school and local business community. Our **interaction** with students, administrators, teachers, guest speakers, and businesses was a rewarding experience. We discovered more about the school's administration, and about how **decisions** are made. Through completing tasks such as scheduling and finding a location for the Science Fair exhibit, we learned about the school's structure and how to work within that structure.

This project offered us an opportunity to take **initiative** and to **persevere** in order to overcome obstacles such as the teacher pressure tactics. We derived energy from our **commitment** and **sense of responsibility**, which enabled us to **focus** on our goals. We learned

how to **organize** ourselves as a team, where individual tasks were delegated to specifically organized sub-committees.

The sub-committees were horizontally integrated so that tasks could be completed simultaneously. One of the aspects of this project involved developing a **creative** theme for the Science Fair — one that would show the student body how Science beneficially impacts our lives. We also invited local scientists to deliver guest speaking presentations to QHS students, and this further reinforced the Science Fair’s primary theme and goal.

We also developed important **communication skills** — both oral and written — as we had to effectively communicate with businesses and school staff members by using e-mails, telephone conversations, faxes, and memos. We also learned how to communicate with local organizations, as our search for guest speakers led us to contact *Université Laval*, *CeDeC*, and *Boîte à Science*.

In order for us to have documented evidence for each step of the planning process, we were responsible for creating our own meeting minutes. We had to keep carefully **organized** records of all meetings, and a copy of these — as well as a copy of all memos sent to staff members and any other relative documents — are included in the Appendix.

Additionally, we developed valuable **financial-management skills** and learned to be **fiscally responsible**. We had to ensure that all sponsorship donations were properly collected and that the money we obtained was appropriately spent. We also had to keep strict records of all revenues and expenditures, and this list can be found on page 3 of the Appendix.

Any project is bound to run into some obstacles, and this project was no exception. We found ways to **overcome** several problems — which included the teacher pressure tactics, conflicting schedules, the Science Fair’s location, time constraints, finding sponsors, and finding appropriate guest speakers. We were able to **solve** all these problems by examining all possible choices and by then **compromising** to find **creative solutions**. For example, the Set-Up and Scheduling Committee worked closely with Mrs. Brenda Ranville, the school librarian, to reach a compromise in which classes could visit both the Book Fair and Science Fair on the same day.

We also learned how to **motivate** our peers and how to use **time-management skills**, and we developed our senses of **patience**, **courtesy** and **discipline**. This project has helped us build **confidence** in ourselves, as we have derived great satisfaction from this valuable experience. We have — above all — been able to develop our **potential** to one day be true entrepreneurs.

Conclusion

The Quebec High School Science Fair represents an important learning experience for all the students involved in its planning. During the time spent organizing the event, we learned countless values, ranging from **teamwork** to **communication skills** to **time management**. Going beyond that, we learned important lessons in **patience**, **cooperation**, and **perseverance**. We were responsible for organizing an entire school event, and in order to do so, we had to develop our abilities to be **creative** and to **solve problems**. Organizing the Science Fair has truly benefited all members of the student Planning Committee, as we have all learned several key values and qualities that will be extremely useful to us in our future endeavours.

Throughout the several months spent planning the Science Fair, the student Planning Committee overcame many obstacles. These included teacher pressure tactics, labour disputes, and conflicting scheduling with other school events occurring at the same time. Our **tenacity** and **determination** in overcoming these problems is truly astonishing, as we pushed forward together to finish what we had started and to make the Science Fair a **success**. We believe it is this type of **determination** that makes a **true entrepreneur**, and we therefore believe that this project deserves to be a winning entry in the *Quebec Entrepreneurship Contest*.

Organizing the Quebec High School Science Fair involved coordinating an entire school in order for the project to succeed. We spent several months working in our various sub-committees, and after such extensive planning, the Science Fair turned out to be an extraordinary success. Everything moved according to schedule, and the entire day went by without a hitch. We received entirely positive feedback from visiting students and teachers, as everyone seemed to have truly benefited from the opportunity to spend time visiting the Science Fair. We were able to cover all our costs after asking for and receiving several donations from the local business community, and we feel the Science Fair's success is a significant achievement for all students who participated in its planning process.



Student Simon Garceau presenting his project to Secondary 1 students.

The Quebec High School Science Fair is in itself a very important event, as it serves as a medium through which we can generate student interest towards the sciences and to demonstrate to them fascinating scientific phenomena in the form of projects. The Science Fair is a tool for the students to increase their knowledge of Science by learning through the examples of their peers. In this way, we hope to have improved the world around us by increasing the students' knowledge and by raising awareness that the future greatly depends on Science and on the scientists of both today and tomorrow. We believe we have succeeded in achieving our goal, as we have sparked interest into the sciences among Quebec High School's students.

This document was entirely written and created by the four student members of the Science Fair Executive Planning Committee. We spent a great deal of time completing this application package, and we feel quite proud of the result. We have demonstrated that we — a group of volunteer student organizers — were able to plan and organize an important school event with extremely successful results. Even more importantly, we have shown that we developed and improved many important entrepreneurial qualities, and that we have increased our potential of one day being entrepreneurs. We believe it is this type of learning experience that qualifies us to be a winning entry in the *Quebec Entrepreneurship Contest*.

Names of persons who wrote this document: Laura Arul, Sepehr Naserkhaki, Robert Puckrin,
and Jeremy Wong

Title: **2006 Quebec High School Science Fair: Students for Science**

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