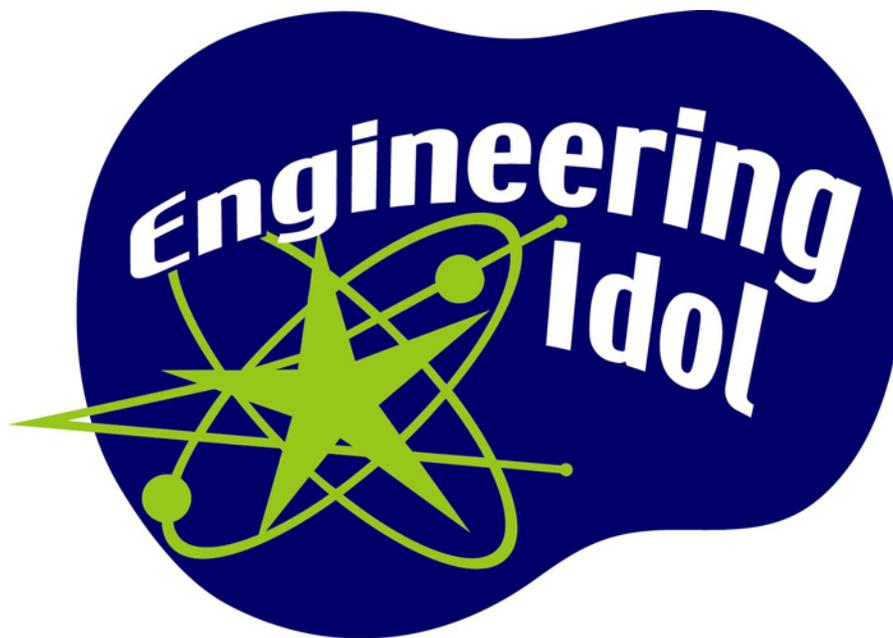


National Engineering Week
2010

Launch Package



Professional Engineers Ontario
Etobicoke Chapter



November 30, 2009

Thank you for agreeing to participate in our National Engineering Month Project for 2010 – Engineering Idol! This year, we are pleased to announce that we have partnered with the Ontario Science Centre and the third annual Engineering Idol competition will include 12 schools from across the Greater Toronto Area.

We are members of Professional Engineers Ontario, which is the licensing body for the 70,000 Professional Engineers in Ontario. It fulfils the same role for Engineers as the College of Physicians and Surgeons for Doctors and the Law Society of Upper Canada for Lawyers. Professional Engineering can be a very rewarding career for many and we are always interested in ways to interact with students as they begin considering career choices for themselves.

Professional Engineers Ontario is organized at the local level through 37 “chapters” across our province. We do many activities through the year to promote our profession in the community and among our members. Every year we run an active National Engineering Month Program with local high schools.

We thank you for your support in our efforts to develop Engineering Idol further in 2010 and trust you will enjoy the Ontario Science Centre as our venue for the competition day this year. We hope you will find this package informative and will provide you with the background information you will require in answering questions for your students. We have included contact information should you have questions in the upcoming months. We look forward to your participation in this event.

Regards

Richard Weldon, P.Eng.
Chair, National Engineering Month Sub-Committee





Engineering Idol - Some Quick Facts for Students and Teachers

What is Engineering Idol?

National Engineering Month occurs in March of every year and Engineers and Technologists across Canada celebrate engineering and help generate public awareness in what we do.

Engineering Idol is a National Engineering Month program organized by the Etobicoke Chapter of Professional Engineers Ontario together with their partner OACETT (Ontario Association for Certified Engineering Technicians and Technologists). Together, we represent over 100,000 Engineering and Technology professionals in the province of Ontario. This year we are very pleased to welcome the Ontario Science Centre as one of our primary organizing partners.

The 2010 Competition will host students from 12 high schools from across the Greater Toronto Area. Schools are invited to form a team and compete on an engineering project or problem. Professional Engineers will judge their solutions. The winning school takes possession of the coveted Engineering Idol trophy for the year. Prizes are awarded to the top 3 teams and participation and recognition plaques are awarded to all teams. Two, \$500 Scholarships are also awarded to participating students from the competition that enter into an Engineering program at a Canadian University.

How big will the teams be?

Each team will consist of 4 to 6 students with a teacher or supervisor for moral support! The students can be from any grade, but typically more senior grades participate.

When and Where will the competition be held?

The competition is set for Saturday, March 6, 2010 at the Ontario Science Centre. We are planning lots of activities that day as part of a National Engineering Month celebration. Friends and family are welcome.

Who are the Past Champions and Scholarship Recipients?

2008 - Michael Power Catholic Secondary School

2009 – Martingrove Collegiate Institute

Scholarship Recipients

2009 - Adam Caprini

- Mark Charak

Please visit www.engineeringidol.com for full list of participating schools for 2010.

Congratulations to Martingrove Collegiate who are the Reigning Champions and we wish all participants the best of luck for the 2010 competition!

www.engineeringidol.com



What will the project be?

The project is a *secret* and will not be unveiled until the week of January 11, 2010. The project will be unveiled on our website (www.engineeringidol.com) via a pre-recorded video cast together with a post of the official '*unveil*' package which details the design criteria. A mechanism for asking questions and receiving responses will be available. One hint is that the project for 2010 will be related to '*pollution and environment*'.

How does the project work?

The project is designed for high school students to apply many of the scientific principles they have learned in science to an engineering project. Students will have sufficient information at the unveiling that they could spend the subsequent 6 weeks researching the variables around the project.

What happens at the unveiling?

During the week of January 11th, the teams will learn what the secret project will be and what judging criteria will be used by visiting the engineering idol website www.engineeringidol.com. The '*unveil*' meeting will be through a broadcast video this year, as there are so many teams participating. A broadcast video is the only mechanism we have to get the information out at the same time!

Each team will learn that they are required to build a '*device*' on competition day and one of the judging criteria will be the demonstrated performance of the '*device*'.

Don't worry though – the project is intended to be fun and the testing of the devices is expected to be exciting for all participants!

Use the 6 or 7 weeks ahead of the competition day to research the technology and submit a concept design report by Monday, February 8th to Mr. Paul Short P.Eng (just so we can check that you are on the right track). You also need to prepare a shopping list, purchase materials (keep receipts so we can reimburse you) and come prepared to build your prototype on competition day. There will be a limit on the amount of money that can be spent.

Each team will learn that they are required to prepare a presentation of their project for the competition day. The presentation will need to be submitted in a pre-defined format by Wednesday, March 3rd (3 days ahead of the competition day) so the Ontario Science Centre can load it into their system.

What do I have to bring to the competition day?

Bring your research notes, questions, materials and enthusiasm! Also bring your appetite as we plan to have food! Your presentation will already have been submitted, but be prepared to wow the judges and the other competitors with your show. There will be many visitors at the Science Centre on competition day, so come prepared to talk with the public about your project and what you have learned.

www.engineeringidol.com



What is the purpose of the competition?

The Profession of Engineering is more than just calculations and science. A successful engineer must be able to solve a complex problem, often in little time, with several teammates who may have different solutions or ideas. Communication is a big part of engineering so be prepared to talk with our judges about your team, project, research and participation. Hopefully you will experience what it is like to be a Professional Engineer and help you decide if you would like engineering as your Profession!

I heard something about prizes?

Yes! We will be awarding monetary prizes: \$400 for first place, \$300 for second place and \$200 for third. Each team decides what it will do with this money.

Summary of Timelines!

November 2009

The high schools accepting the challenge are provided information about the program, what is expected of the school team and what they can expect for support from the participating Professional Engineers.

December 2009 to January 2010

The high schools pick their school's Engineering Team of 4 to 6 students and solicit a teacher or supervisor from the school to help coach the students. Each student should be available to attend the competition day on Saturday, March 6, 2010 at the Ontario Science Centre.

January 8, 2010

Teachers from each school submit the names of their team members to Richard Weldon at Richard@cdwengineering.com. Once submitted, your school will receive the instructions on how to view the *unveil* package and begin the competition!

Week of January 11, 2010

Each team visits www.engineeringidol.com to *unveil* the competition project for that year. Expectations of the team on competition day will be clarified. The judging criteria and a list of materials that will be available on competition day will be delivered. The team is then expected to determine how best to research and plan their entry over the upcoming weeks.



Monday, January 15, 2010

Teachers submit to Richard Weldon the T-Shirt orders for each team.

Monday, February 8, 2010

The concept design report is submitted by each school to Mr. Paul Short, P.Eng to ensure that everyone is on the right track. The package needs to include the concept design, list of materials required, budgetary cost to build the prototype and a list of tools that are required to build your prototype. This will allow us to arrange for the tools to be available on Competition Day.

Friday, February 12, 2010

Teams receive final approval regarding their concept design package so that everything is good to go for the Competition Day! If there is anything special about your design that hasn't been identified, the organizers will attempt to contact you – for instance if you need a special tool that isn't available that you should bring with you.

Wednesday, March 3, 2010

Students submit their electronic presentation materials that will be used on the Competition Day. Details on the presentation and the required format are provided in the *unveil* package.

Saturday, March 6, 2010 – Competition Day

Students arrive with their notes, sketches, and materials and are ready to build their 'device'. Several hours will be given to the construction of the 'devices' during which time Professional Engineers will interact with the teams. Once the 'devices' are built, there will be a testing period where the performance and efficiency of each device compared to engineering specifications will be determined. Each team will have the opportunity to give an oral presentation on their invention and what they learned about Engineering. While the judges deliberate over the performance of each team, a Professional Engineer will give a talk to the group either on Engineering as a Profession or as an expert in the Technology just explored by the teams. Lunch will be provided, photos will be taken, prizes will be announced, and awarded.

What is the commitment from the school?

The following commitments are required to make Engineering Idol successful:

1. The competition will not work if one team is unable to make the competition day. Please do not agree to participate unless you are certain you can send a team.
2. **January 8, 2010** – Teachers submit their team member's names to Richard Weldon at Richard@cdwengineering.com and receive the information they require for the *unveil* package.
3. **Week of January 11, 2010** – Teachers arrange for their teams to view the *unveil* package on www.engineeringidol.com. A PDF of the details will be available for download.

www.engineeringidol.com



4. **January 15, 2010** - Teachers submit to us their form listing the team's T-shirt orders.
5. **February 8, 2010** – Teams submit their design reports
6. **Saturday, March 6, 2010** - The Team needs to be available for most of the day to compete in the activity.
7. The competition is a volunteer event for the Professional Engineers and others involved. The event is intended to be fun and educational. Please be respectful of this objective, your team members, the other teams, the volunteers and the public.

What is the commitment from Professional Engineers Ontario Etobicoke Chapter?

1. Help and support the teams leading up to and the day of the competition.
2. Organize the event including location, event lunch and reimbursement of building material costs.
3. Provide judges and prizes.



Team Selection Form – Due January 8, 2010

School Name: _____

Supervising Teacher or Volunteer: _____

Names of Students (4 – 6 in total)

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Please return (on or before the due date) to:

Richard Weldon, P.Eng.
4 Maydolph Road
Etobicoke, ON
M9B 1V8
Email: Richard@cdwengineering.com



Choosing Teams

The schools are responsible for choosing the particular members of their teams. Sometimes, the best and most creative engineers are not necessarily the strongest students academically. Ideally, those who may not have explored, but might be interested in exploring engineering as a career option, are those who are ideal for the competition.

Contact Information

The members of the National Engineering Week Sub-Committee for the Etobicoke Chapter are below:

Chair	Richard Weldon, P.Eng.	Tel: 416-239-7955 richardweldon@sympatico.ca
Member	Linda Drisdelle, P.Eng.	Tel: 416-233-6130 Linda_Drisdelle@praxair.com
Member	Subhi Alsayed, P.Eng.	Tel: 416 823 0386 s.a.alsayed@gmail.com
Member	Paul Short, P.Eng.	Tel: 416-231-9115 pshort@ryerson.ca
Member	Roy Sue-Wah-Sing, M. Eng, C.E.T.	Tel. 416-767-5153 roy.oacett@gmail.com

Notice

PEO, its employees, contractors and volunteers shall not be responsible for, and all contestants hereby release and forever discharge PEO, its employees, contractors and volunteers from any and all claims, suits and demands for any loss, damages or injury howsoever arising except of caused by the gross negligence of PEO, its employees, contractors and volunteers.



www.engineeringidol.com

