



EIR Anita Ramroop of Honeywell Aerospace presenting at the October 7 Orientation Session.

## Welcome New Teams!

We would like to welcome 20 new EIR teams that have joined us for the 2009-2010 school year. We take this occasion to welcome the following engineer and teacher pairs in Bolton, Etobicoke, Fort Frances, Guelph, Kingston, Kitchener, North York, Ottawa, Petawawa, Pickering, Richmond Hill, Stoney Creek and Toronto:

\*EIR Joanne Borotlotto, P.Eng. is matched with teacher Leonia Cellini at Immaculate Heart of St. Mary School in Stoney Creek.

\*EIR Beth Burrows, P.Eng. of AquaResource is matched with teacher Pat Sproat at Westwood Public School in Guelph.

\*EIR Gemma Duley, P.Eng. of Edge of Control is matched with teacher Danielle Belle-Hopkins at James Bolton Public School in Bolton.

\*EIR Jason Easton, P.Eng. of General Motors Canada Ltd. is matched with teacher Julie Pashby at Bruce Junior Public School in Toronto.

\*EIR Timea Fleury, P.Eng. of AbitibiBowater is matched with teacher Angela Petsnick at J.W. Walker Public School in Fort Frances.

\*EIR John Hazel, P.Eng. of Acatel-Lucent is matched with teacher Yannick Gagnon at Broadview Avenue Public School in Ottawa.

\*EIR Robert Hemmerich, P.Eng. of Alcatel-Lucent is matched with teacher Helen Nowell at John Young Elementary School in Ottawa.

\*EIR Don Kaluzny, P.Eng. of Canatom NPM Inc. is matched with teacher Jody Soehner at Edna Staebler Public School in Kitchener.

\*EIR Clayton Kotzer, P.Eng. of Royal Military College is matched with teacher Paul Couture at St. Martha's Catholic School in Kingston.

\*EIR Esme Kwong, P.Eng. is matched with teacher Bill Mackenzie at Bliss Carmen Senior Public School in Toronto.

\*EIR Johnathan Linton, P.Eng. of University of Ottawa is matched with teacher Paula Walker at Longfields-Davidson Heights Secondary School in Ottawa.

\*EIR Debanjan Mookerjee, P.Eng. of R.J. Burnside & Associates is matched with teacher Agnes Wong at Crosby Heights Public School in Richmond Hill.

\*EIR Vesna Nikolic, EIT of Honeywell Aerospace is matched with teacher Christiana Tsiopanas at Hollycrest Middle School in Etobicoke and teacher Fiona Bennett at Wellesworth Junior School in Etobicoke.

\*EIR Jennifer Nodwell, P.Eng. of Ontario Power Generation is matched with teacher Catherine Mitchell at Westcreek Public School in Pickering.

\*EIR Zefe Osime, EIT of Enbridge Electric Connections Inc. is matched with teacher Esther Yang at Brian Public School in North York.

\*EIR Christina Waters, EIT of Atomic Energy of Canada Limited is matched with teacher Leslie Peplinskie at St. Francis of Assisi School in Petawawa.

\*EIR David Wilder, P.Eng. is matched with teacher Julie Laderoute at Pinecrest Public School in Petawawa.

\*EIR Alex Wong, P.Eng. of Honsel is matched with teacher Marla Palermo at Silverpines Public School in Richmond Hill.

\*EIR Jason Young, P.Eng. of TAC Controls & Automation Inc. is matched with teacher Jyoti Oberoi at Richmond Rose Public School in Richmond Hill.

## NRC Engineering Challenge and National Engineering Week

Every year, in celebration of National Engineering Week, NRC organizes an Engineering Challenge for grade 5, 6, and 7 classes from across the Ottawa region. Volunteer engineers begin visiting the classroom in February, to help the students with their design and building work. With the help of engineer mentors, students design, build, and test an engineering prototype.

In past years, these have included a device to protect an egg from a 10-foot drop, a car made of recycled materials and powered by rubber bands, a device designed to transport fragile cargo in the Arctic, and a catapult from Mars to Earth. The project culminates at a final event held during National Engineering Week - the first week of March.

Contact [education@nrc-cnrc.gc.ca](mailto:education@nrc-cnrc.gc.ca) If you are interested in the NRC Challenge. NRC organizes the Engineering Challenge in the National Capital Region. Many other events are celebrated across the country for National Engineering Week.

Visit <http://www.engineeringweek.on.ca> to find out more about events in your city.



EIRs and teachers after an afternoon of tower building exercises at the October 7 Orientation Session.

# ENGINEER-IN-RESIDENCE NEWS

## PEO Buys New Headquarters to Enhance Operations and Showcase the Profession

Professional Engineers Ontario (PEO) has purchased an office building along the Yonge Street subway corridor in Toronto to increase the profile of the profession and ensure it continues to provide a high level of service and accessibility to its stakeholders, including licence holders, applicants, volunteers, staff and the public.

The facility at 40 Sheppard Avenue West has a floor plate of approximately 14,000 square feet and over 100,000 square feet of usable space spread over eight storeys. PEO had been leasing just over 30,000 square feet spread over one and a half floors of a 21-storey tower at its current location. It plans to occupy approximately 50,000 square feet of the new location. PEO will be moved into its new location by December 31, 2009.

### EIR BULLETIN BOARD

EIR Megan McMurray, EIT of Halsall Associates and the students of Kamla Rambaran from McMurrich Junior Public School in Toronto learned about evaporation, condensation and precipitation by making grass biomes (growing grass in cups housed inside plastic bags to trap water).

The grade 4 class of teacher Nancy Pacecca at Mother Theresa Catholic School in St. Catharines learned about the properties of light with the help of EIR Sam Pirritano, P.Eng. of Gennum Corporation. Sam showed the students the motion and velocity of light and how it travels through objects that are transparent, translucent and opaque. Sam brought along transmitters and receivers used in optical communication and the students were able to see how light travels and carry's information along an optical fibre.

The students of teacher Steven Kelenc at St. Albert of Jerusalem School in Mississauga learned about blocks/tackles and pulleys system with the help of EIR Benjamin Bilton, EIT of AMEC Americas ltd. At the end of the exercise, the students successfully lifted Ben using a pulley system.

EIR Clayton Kotzer, P.Eng. of Royal Military College and Paul Couture's grade 5 students at St. Martha's Catholic School in Kingston learned about gears and pulleys and mechanical advantage, when Clayton hooked up a block tackled system using his truck.

Myra Macdonald's grade 6 students at Lancaster Drive Public School in Kingston learned and compared the physical properties of wood, with that of Kevlar49, carbon fibre composites and aluminum honeycomb with help from EIR Sohail Umar-Khitab, P.Eng. of Service Canada. Sohail demonstrated the strength of a shelf made from the items and compared its weight to that of a standard wood shelf. The students also took apart pens to identify the engineering involved in making its parts, and reconstructed them to keep and use.

## Activity Recording Forms

Every year we update the EIR Program Guide with exciting classroom activities. The 2009-2010 version consists of 95 classroom tested activities indexed by grade and strand. All of the K-8 activities have been updated and re-aligned to the new curriculum and they are available online at [www.eir.ca](http://www.eir.ca)

Please complete the Activity Recording Form included in your package with any activities that you found successful. This form is also available online. We would love to share your success with members of the Program and continue building on future editions of the Program Guide.

With help from EIR Christina Waters, EIT of Atomic Energy of Canada Ltd., the students of teacher Leslie Peplinskie from St. Francis of Assisi in Petawawa learned about circuits in series and in parallel. Christina began by getting the students to design and label their circuits on paper. The next step was for the students to build the circuits according to their blueprint. The students were ecstatic when their circuits worked and the light bulbs were illuminating.

EIR Vesna Nikolic, EIT of Honeywell Aerospace is very busy working with grade 8 students from two different Etobicoke schools. Paired up with Hollycrest Middle School and Wellesworth Junior School, Vesna demonstrated the principles of aerodynamics and helped the students design and build design paper airplanes. The students recently finished a Straw Tower Challenge and Vesna is already planning an activity building Lava Lamps.

Julie Laderoute's grade 5 students at Pinecrest Public School in Petawawa learned how the human heart works with the help of EIR David Wilder, P.Eng. Using siphon squeeze pumps to mimic the chambers, David was able to show the properties, functions and problems of the human heart. David and Julie are planning on more projects related to joints in the human body.

## Best Wishes for the Holidays and the Coming Year!

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