

## **Report - Engineer-in-Residence Program Committee of WTPEO**

**Georg A. M. Kralik, P.Eng., FEC, Chair - WTPEO EIR Program**

The EIR Program is an education outreach program of the PEO, which partners Professional Engineers with Science Teachers in all grades in Ontario Schools, to help teach the practical applications of the scientific principles the students learn from their teacher in class. For the EIR it is a commitment of about 10 hours per month in preparation, and classroom demonstrations. The EIR takes his lead from the teacher.

Currently, the program is being administered by Engineers Without Borders (EWB). There is currently no charge to the chapter in the administration of the program. The EWB have a fund available to reimburse the EIR for material used in classroom demonstrations and experiments.

There are thousands of schools in Ontario which could benefit from the presence of an EIR. If you are a parent of a student, visit the school and find out if they have an EIR Program. If they don't, have them contact me, or the EIR Program Office directly at <http://eir.ewb.ca/about-eir/>.

I am an EIR to a Grade 8 class at the Cedarvale Community School. They are learning about liquids, solids, magnetism, forces, and gravity. As the EIR it is my job to help the students understand these abstract concepts in real world engineering terms. In my first lesson I introduced the students to what a professional engineer is and what we do. Then I introduced them to the concept that "*Engineering is all around us, and in everything*", by having them take a closer look at the common clickable ball point pen, and what kind of engineering went into its manufacture (ie. mechanical, petrochemical, material properties, chemical, ergonomic, etc.). With the cooperation of their teacher, I am organizing a year end project to test the performance of a variety of student designed water wheels in a simulated hydro-electric power plant.