

**Dedicated to Improving
Science and Technology
Education through:**

- Teacher support
- Student employability
- Curriculum development
- Assessment
- Applied R&D
- Partnerships

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YSISTE News is published
three times each year and is
available in electronic
format.

YSISTE is supported by:
York University, Seneca
College, the Imperial Oil
Charitable Foundation and
22 District School Boards in
Ontario

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**York/Seneca Institute for Science, Technology
and Education opens for business**

The decision to build a Seneca College campus at York University was made over four years ago. At the time, we envisioned that the close proximity of the two institutions would provide the stimulus for joint degree/diploma programs and special projects to capitalize upon their respective strengths. One such venture, which illustrates the complementary strengths of both the college and the university, is the new *York/Seneca Institute for Science, Technology and Education (YSISTE)*.

Directors of the Institute, Graham Orpwood of York University and Laurel Schollen of Seneca College, are excited about the opportunities for faculty and students of both institutions as well as for teachers and students in Ontario. YSISTE is already home to York University's teacher education program in Mathematics, Science and Technology and to ASAP (the Assessment of Science and Technology Achievement Program, an elementary science and technology project involving 22 Ontario school boards) as well as a growing number of new projects.

The official opening of the Institute was held on November 12, 1999 and was attended by more than 80 representatives of government, education and industry. On that occasion, Barbara Hejduk, President of the Imperial Oil Charitable Foundation, was presented with a plaque acknowledging the Foundation's support.

**Canada Foundation for Innovation supports
Internet-based in-service education**

Technology is increasingly being integrated into curriculum delivery and while this can enhance access to learning opportunities, there is an urgent need to assess the quality of such educational strategies. Ministry policies expect teachers to use computers in teaching and learning. In addition, the curriculum for the teaching of broad-based technology in Ontario Secondary Schools is being revised and teachers who have to teach the new curriculum need assistance in organizing that content to provide for effective learning. We are pleased to announce that a grant from the Canada Foundation for Innovation has been awarded to support research in this area and that a matching grant has also been received from the Ontario Innovation Trust Fund.

Project leader Katharine Janzen of Seneca College together with Ron Owston of York University intend to evaluate the viability and effectiveness of an on-line in-service course delivery model – its strengths and limitations – and to determine an appropriate mix of face-to-face instruction and on-line learning. As well, Katharine and Ron will look at how a practicum project or field experience can be built into the on-line model. The project consists of Internet-based in-service education for secondary school teachers to help them implement the new curriculum in Broad Based Technology Education at Grades 10, 11 and 12. Faculty from Seneca’s School of Civil and Resources Engineering Technology are working closely with the CFI project team to develop the content for the first module (Construction Technology). For more information, contact Katharine Janzen at (416) 491-5050 ext. 2080.

Assessment of Science and Technology Achievement Project

This project, better known simply as “ASAP”, has recently delivered in-service workshops to more than 1000 teachers in 22 school boards across Ontario. These workshops are focussed on familiarizing teachers with the assessment resource *Classroom Assessment in Science and Technology: A Handbook for Teachers*. The 800+ assessment tasks on a user-friendly CD-ROM have elicited positive responses from many elementary teachers. Further workshops will be delivered over the next 6 months. These will build on the experiences of the first workshops and aim to provide teachers with assessment strategies that will enhance the implementation of *The Ontario Curriculum, Grades 1-8: Science and Technology*. YSISTE has also been contracted by the Ministry of Education to develop the provincial exemplars in science and technology for Grades 1-8. For more information, contact Lisa Soughyan-Hayes, YSISTE Program Coordinator or Michelle Marks, ASAP Project Officer.

YSISTE Partnerships

YSISTE cannot make improvements to science and technology education on its own. Our principal strategy for making good things happen is the formation of partnerships – with teachers, with schools, with school boards, with the Ministry of Education, and with other public and private sector organizations. YSISTE itself is of course a partnership – between York University, Seneca College, and the Imperial Oil Charitable Foundation. Elsewhere in this newsletter is a report of the Assessment of Science & Technology Achievement Project (ASAP) which is one such partnership. In future issues we shall report on others. Here are some examples.

School Partners

Westview Centennial Secondary School (TDSB) and York have a long-standing summer science project in which students from the school spend 6 weeks working in the research labs of the university. The students are paid for part of their time and receive a co-op credit for other parts of the work they do. This program has had a significant impact on the ways students think about science and the ways they think about themselves and their potential futures. Westview is a founding YSISTE Partner School and the next issue of YSISTE News will have reports from last summer’s student participants.

Mary Ward Catholic High School (TCDSB) and Thomas L. Kennedy Secondary School (Peel DSB) are just two YSISTE Partner Schools for the MST teacher education program which currently enjoys partnerships with 10 secondary and 5 elementary schools. This partnership enables Teacher Candidates to enjoy student teaching experiences in the schools while York contributes financially to the schools. In the future YSISTE Partner schools will also receive specially designed professional development as well.

School Board Partners

The York Catholic District School Board has committed significant resources (eight full-time teachers for a year) to helping teachers implement the new Ontario Curriculum, Science and Technology, Grades 1-8. In a new partnership, YSISTE staff is working with the YCDSB to help them evaluate the impact and success of this special initiative. A special framework for evaluating teachers' professional growth in science and technology has been designed for this project which will be implemented soon. More on this in a future issue!

The Toronto District School Board (TDSB) is our "home" board, since YSISTE is located in the City of Toronto. A project currently in planning calls for YSISTE staff to work with teachers and students from 11 elementary schools and one high school to develop activities based on the ASAP performance tasks. For their part, the teachers will contribute student exemplar materials from their activities to the ASAP project at YSISTE.

For more information about becoming a YSISTE Partner School or a Partner Board, contact Graham Orpwood (YSISTE Director).

Master of Arts in Mathematics for Teachers – Information Session

York University's Department of Mathematics offers a part-time graduate program in mathematics specifically designed for in-service teachers of mathematics. The program consists of six full courses offered one night per week in the fall/winter and two nights a week in the summer. Candidates should possess an honours degree or equivalent (a bachelor's degree plus a B.Ed.) with a B average, although applicants with a lower standing may be considered under special circumstances. Although a degree in mathematics is not a requirement, candidates should have one year of calculus and one year of linear algebra. Some of the courses include: Fundamentals of Mathematics for Teachers, Mathematical Literature Seminar, and Geometry for Teachers.

Interested mathematics teachers are invited to attend an information session on this exciting program to be held on **Wednesday, February 23, 2000 at 5:00 pm at N620 Ross Building, York University, 4700 Keele Street, Toronto**. To register for the information session or to obtain information on the program, contact Primrose Miranda at (416) 736-5250 extension 33974 or e-mail: gradir@mathstat.yorku.ca. You may also want to visit the program web site at <http://www.math.yorku.ca/grad/teachers.html>

Seneca College Announced as a Novell Education Academic Partner

Novell Canada Ltd. recently announced that Seneca College has become a Novell Education Academic Partner (NEAP), allowing Seneca to teach Novell-authorized courses as part of its programs. Seneca is also being set up as an Internal Campus Training (ICT) NEAP, allowing Seneca to offer Novell certification programs to Ontario high school teachers. Tony Tanner, Dean of the Faculty of Technology at Seneca feels that the partnership has many benefits. "The Novell partnership provides our students with the latest technology on the market while offering the faculty the opportunity to stay current with technology trends and pass on that knowledge to Ontario high school teachers." For more information about courses for teachers, contact Laurel Schollen (YSISTE Director).

Did you know?

YSISTE News is available in electronic format? If you are interested in receiving an electronic version of this publication please e-mail Teresa Hunter at thunter@edu.yorku.ca.