

CODE CHRONICLES

LES CHRONIQUES DU CODE

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WELCOME TO ISSUE TEN! BIENVENUE À LA DIXIÈME ÉDITION!
Read on and enjoy the contributions of our many writers from school districts across Ontario. Prenez connaissance des contributions de vos collègues de par tous les conseils scolaires de l'Ontario. Bonne Lecture!

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Letter from the Editors

Brian Finnigan, Nancy Tully-Peever

WE ARE pleased to bring you our tenth edition of CODE Chronicles. Our focus in this issue is on the Hewlett-Packard (HP) – International Society for Technology in Education (ISTE) Professional Learning Project.

Several school boards worked in the spring of 2010 and fall of 2011 on this CODE project with Hewlett-Packard Canada in collaboration with ISTE. Hewlett-Packard (HP) has been partnering with educational leaders for a number of years to make learning opportunities more broadly available. They have been training educators, students, and aspiring entrepreneurs on essential business and information technology skills. ISTE has been committed to helping teachers and educational leaders connect with each other and with great ideas for over 30 years. They have also advocated for excellence in learning and teaching through innovation and effective uses of technology.

Through this dynamic partnership, boards involved worked on a variety of projects

including using research-based strategies, online training and methods of integrating technology to improve teaching and learning. They explored Universal Design for Learning, existing software, and online means of networking with students or teachers.

By exploring various ways to share professional development with teachers and allowing alternative ways for students to access the curriculum, we will be able to reach more learners and provide them with the tools to demonstrate their learning in many more ways than the traditional methods of the past.

We hope you enjoy this edition and would like to encourage you to post comments to the authors by using the email links provided at the end of each article. We also welcome your feedback and encourage you to continue to share your successes and challenges in your own school districts, as well as with colleagues across the province.



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Let Us Know How We're Doing

WE'D LOVE to hear from you.

We're happy to say that issues of CODE Chronicles have been coming to you since 2008, and we're interested to hear how you've used these editions in your professional or personal life. Tell us a story, send us a photo, or just drop us a comment using the contact information below.

Miss An Issue?

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Contact CODE

IF YOU have a response to any of the articles in this or any issue of the CODE Chronicles Les chroniques du CODE please use the email link found at the end of each article, or if you have a general suggestion for this publication please drop us a line.

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CODE ISTE-HP Project: Exploring Technology Use in the 21st-Century Classroom

Suzanne Kennedy, North West Area Resource Teacher
Bluewater District School Board



Recognizing the omnipresent use and importance of technology in the twenty-first century, the Bluewater District School Board continues to explore how we offer access to technology to all students, whether at home or at school, and ways to provide professional development to our staff through alternatives to face-to-face instruction. With this in mind, a group of Bluewater employees worked for 14 weeks in the fall of 2010 on a project through CODE and Hewlett-Packard (Canada) in collaboration with ISTE (International Society for Technology in Education) that explored Universal Design for Learning, existing software, and online means for networking with students or teachers.

The group represented various departments who all work toward improving learning for students: Donna Torrie, Speech and Language Pathologist; Suzanne Kennedy, Area Resource Teacher; Wendy Louwerse, System Curriculum Lead Teacher; and Patti Ottewell, Crystal Stobbe, and Pam King, Communicative Disorders Assistants. Together with Chris Bugaj, adjunct professor at George Mason University, host and producer of A.T. TIPSCast podcast series, and an assistive technology trainer for Loudoun County Public Schools in the United States, the group developed a goal for the project geared specifically to our board's needs: to experience technology to help teachers differentiate instruction and to help develop professional development materials/experiences for teachers.

Since the project's focus was technology, the method of communicating and participating was online using Moodle. Once comfortable with this format, the team was able review materials for the weekly online discussions. Discussions were generally based on watching videos or podcasts, reviewing articles online, exploring websites, and experimentation. We started the project with a general discussion on Universal Design for Learning, in the forefront with the Ministry of Education's *Education for All* and, more recently, *Learning for All* documents. Although in the past, our board has focused on the use of specific software for students with learning disabilities, developmental disabilities, or specific physical disabilities, we have recently been working toward providing more access for all students through the use of software that all students can access. This fall, we were excited to purchase an additional "at home" license (in addition to the school license that has been in place for some time) for Premier Assistive Technology that allows access for all students and parents/guardians to software that can meet a variety of learning needs.

We also spent some time at the beginning of the project reviewing and discussing alternative PD initiatives. The Bluewater District School Board encompasses a large geographical area, with the majority of schools situated in rural settings. This means that driving distance for employees is a factor in planning professional development. Added to this is our infamous setting in the traditional snow belt of southern Ontario. Our close proximity to both Lake Huron and Georgian Bay translates into frequent snow squalls in the winter months (and sometimes spring), which close schools and roads, necessitate cancelling events, and generally make driving dangerous. For example, a recent board-wide professional development day for elementary educators held in early February was a lovely sunny day. However, the day before, when out-of-town presenters were travelling to us, many roads were closed due to stormy winter conditions. Presenters flying in for very popular workshops on Premier Assistive Technology were unable to make it and we were left scrambling to place people in other workshops. As a result, participants were not able to experience the full level of professional development. Online learning and discussion groups make sense, but we also need to take into account the fact that some areas within our board do not yet have access to high-speed internet. As part of the project, the team discussed traditional PD models versus new technology-based models (Moodle, podcasts, Twitter, and other methods of social networking) and the pros and cons of each. Alternatives to traditional face-to-face interaction included discussions about video-conferencing or the use of online services such as Skype to bring people together without necessitating travel far from home or school.

From this discussion, the team proceeded to focus on software available to students and how this can be used to differentiate instruction for students. Most notably, the team looked at voice recording and screen capturing: how to do them, what is available, ease of use, and how they would be useful to both teachers and students. Many people in the group are part of the Specialized Equipment Technology Team (SETT) for the board. SETT provides training and support for students and teachers in their access to technology. From the CODE HP Project, SETT further explored voice recording and screen capturing and is implementing these methods to create video tutorials which provide step-by-step instructions for a number of features already available to all students through board-licensed software. Recently, the team has posted these tutorials in the board's electronic communication system so that, combined with some face-to-face workshops, more teachers have access to the information and can, in turn, implement it in classrooms.

As the twenty-first century commences, we need to recognize the importance of technology in everyone's life. "Talking to friends" has a much different meaning to our students than it did a couple of decades ago, as cell phones are no longer just for phoning and social network sites grow in importance. By being able to explore a variety of means to share professional development with teachers and allow alternative ways for students to access the curriculum, we will be able to reach more learners and provide them with the tools to demonstrate their learning in many more ways than the traditional book, paper, and pencil methods of the past.

Comments about this article? Email suzanne_kennedy@bwdsb.on.ca

Universal Design for Learning for Adults in Online Courses

Christopher R. Bugaj

Multiple Ways to Experience the Content Within this Article –

- A. Listen to this content (www.cyberears.com/cybrss/12035.mp3)
- B. Watch a short video about this content (www.bit.ly/udlexplained)
- C. See a comic about this content (www.bit.ly/udlonlinecomic)

On February 1, 2011 The Center for Applied Special Technology (CAST) released an updated version of the guidelines for the Universal Design for Learning (UDL) framework. Like version 1.0, the guidelines continue to focus on educators structuring curricula and lessons so as to provide options to meet the variety of needs of all learners. Educators using these guidelines consider multiple ways to represent information, multiple means for individuals to express what they know, and multiple methods of engaging the participants. A wide array of technologies are utilized by educators to provide these options to participants in the learning environment.

One of the major changes embedded within version 2.0 of the UDL guidelines is an adjustment in terminology. Rather than calling the participants "students," the new guidelines address those participating in the educational environment as "learners." This change in terminology was applied to help widen the scope of UDL to include any individual, regardless of age.

With this change in mind, the underlying principles of UDL should be applied not only to school-aged students, but to adult learners as well. When conducting online professional-development workshops, educators providing the training can use the UDL principles to differentiate the experience for every learner. To do this, the professional developer can use the three pillars of UDL to provide a rich, multi-modal learning experience. Online professional development courses provide an opportunity and environment for educators to plan a variety of modalities by which the participants can experience content, demonstrate knowledge, and make meaningful interactions.

When creating an online course, the educator develops a plan of learner outcomes. Similar to the curricula for school-aged learners, these become the goals of the course and provide a foundation upon which the entire course is designed. From there, the educator begins to think about all the different methodologies for presenting the content. Traditionally, text can be used as a starting point, but in order to engage all learners, multiple means need to be incorporated from the beginning. Therefore, along with text, professional developers might consider providing audio clips, images, video clips, and interactive simulations for the learner to experience.

Audio clips can be auto-generated by using a text-to-speech converter, such as www.vozme.com. Alternatively (perhaps preferably), the educator can create audio through the use of a voice-recording system, such as www.vocaroo.com or the open-source software program Audacity (www.audacity.sourceforge.net). Yet another way to provide content using audio is to refer the learner to a podcast episode on the topic. A wide range of free and openly shared content is available in audio format via podcasts. The iTunes application is one example of a free podcast aggregator that can be used to find relevant audio content.

The old adage "A picture is worth a thousand words" continues to ring true for 21st-century learners. Creating images or sharing found images provides visual representation of concepts. Still images, such as individual digital photos, are only one type of visual representation. Multimedia slideshows, such as those found or created on sites like www.photopeach.com or www.vuvox.com, can also be used. Furthermore, comic generators, such as www.bitstrips.com and www.pixton.com, enable users to create visual representations using cartoons.

Video provides another medium to engage learners. As with audio and images, professional developers can choose to generate their own video clips or use the multitude of free and openly shared content available on the Internet from sites such as www.youtube.com, www.schooltube.com, and www.teachertube.com. Even the most basic of digital cameras can be used to create short video clips, while tools such as web cameras or digital video cameras can also be used to create digital videos. Sites like www.xtranormal.com, www.voki.com, www.blabberize.com, and www.kerpoof.com enable users to create short digital videos and animations without the use of a digital camera. Using the tools built into the websites, professional developers can quickly incorporate an engaging and entertaining video into their courses as a way to demonstrate a topic.



Interactive websites enable users to engage in active learning. Reading text, listening to audio, and viewing video are all passive ways to acquire information. Interacting with an environment (or others within an environment) provides learners with a dynamic experience. Sites like www.secondlife.com allow users to create a three-dimensional representation of themselves which navigates and interacts within a virtual environment. Two-dimensional games, simulations, and social interactions can help learners to experience content.

Through multiple modalities the learner has the opportunity to experience content by listening to it, watching it, reading about it, and interacting with it. These same modalities can then be used by the learners to express what they have learned. Learners can be expected to use text, audio, images, video, or simulations to create rich projects that are meaningful on a personal level. In this way, learners aren't just completing a project to demonstrate what they've learned, but creating something authentic that can be used in their own practice.

It is important to remember that the professional developer is not requiring each participant to experience every modality, but rather is providing options from which the learners can choose. Some learners may choose to read blog posts about the topic,

« Universal Design, continued

while others might choose to listen to audio, while still other might choose to play an interactive game or watch a video. Of course, some learners may choose to experience content in more than one way as well. The role of the professional developer of an online course is to provide learners with as many options as possible to experience the content and express what they have learned. When an online course is developed and executed using the principles of Universal Design for Learning, the result becomes something that transcends the traditional learning experience. Participants leave the course with a sense that the experience was customized to their unique styles of learning, which ultimately results in a more internalized synthesis of the content.

Chris Bugaj is an author for The International Society for Technology in Education (ISTE) and also facilitates an online course in Assistive Technology. ISTE is the premier membership association for educators and education leaders engaged in improving learning and teaching by advancing the effective use of technology in PK–12 and teacher education. ISTE represents more than 100,000 education leaders and emerging leaders throughout the world and informs its members regarding educational issues of national and global scope. ISTE is home to the NETS, the leading digital age education standards in the U.S. and many countries. ●

Chris Bugaj

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The Facebook Fan Page - www.bit.ly/atbookfb

The Podcast - www.attipscast.wordpress.com

The A.T.TIPScast Facebook Fan Page - www.bit.ly/attipscastfb

Free Fiction for Kids - www.nightlightstories.net

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Digital Student Profiles

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- CODE Special Education Team – John Fauteux and Michelle Forge
- HP (Hewlett-Packard) – Joan Rocha and Kim Hammond
- ISTE (International Society of Technology Education) – Janice Krause and Susan Brooks Young
- PVNC CDSB (Peterborough Victoria Northumberland Clarington Catholic District School Board) – Deb Heslinga, Nicole Simpson, and Gerard Winn

This dynamic partnership worked on a variety of projects that examined the Special Education Leader's role in relation to technology. It included research-based strategies, online training, and methods of integrating technology to improve teaching and learning. One successful project from this initiative was the development of a Digital Student Profile. HP and ISTE provided support through consultation, online conferencing, and the CD resource titled *The Digital Briefcase for Administrators*. This support assisted us in acquiring the necessary skills to develop and design templates to meet our needs. This student profile was originally developed for consultants to use at School Resource Team meetings but has grown into an effective tool for all administrators.

Education for All (2005) initiated the importance of student profiles, and *Learning for All (2009)* reinforced this practice to provide more personalization and precision.

*“Developing class profiles and student profiles can help teachers plan daily instruction that enables every student to learn and achieve success—instruction that is **necessary for some and good for all**”*

Learning for All

What is a student profile?

- Provides one-page summary of critical student information
- Provides outline of formal and informal student assessment data
- Provides overview of background information including strengths, needs, and learning style
- Provides information gathering prior to and throughout IEP development
- Summarizes accommodations, DI strategies, and services provided
- Provides information about health services and agency support and assessments
- Provides synopsis of report card data and additional academic information

Who develops and uses a student profile?

- Classroom teachers
- Special Education Resource Teachers
- Administrators
- Special Education Consultants
- Specialized Assessment Staff (SLP, Psychology)

How to use student profile?

- Created from a teacher OSR search
- To track differentiated instruction and assessment
- To share information at a School Resource Team Meeting
- To develop programs based on student strengths and needs
- To assist teachers in developing student groupings by ability, learning style, and interest
- To provide a gap analysis for targeted instruction

A student profile will:

- Identify gaps in learning
- Help drive further programming
- Determine if additional assessments are required
- Investigate outside services or agency involvement

Benefits of digital student profile application:

- Pull-down menus (for school names, strengths and needs, exceptionalities, etc.)
- Date picker
- Expandable boxes
- Checkboxes
- Easy storage and retrieval

Student Profile Example:

Student: first and last name here Grade: Choose an item.		Exceptionality: Choose an item			School: Choose an item									
Background		Classroom Data							SERT Data					
Strengths: Choose an item Choose an item Choose an item Add Other Option Here Learning Style: Choose an item		Needs: Choose an item Choose an item Choose an item Add Other Option Here		Letter Recognition Sound Rec. Word Wll List PM and gr lvi DRA and gr lvi Behav. RtingScale LORS EQAO Grade Choose an item N Choose an item R Choose an item W Choose an item		*Date /26 /26	*Date /26 /26	*Date /26 /26	School KTEA L&WR % R.C. % MC&A % MC % Sp % W.E. % LC % OE %			TAPS W.D. % Ph.S. % Ph.B. % N.F. % N.R. % S.M. % A.C. % A.R. %		
D.I. Strategies Click here to enter text		IEP Acc <input type="checkbox"/> Mod <input type="checkbox"/> Alt <input type="checkbox"/> Click here to enter text		System Psychological <input type="checkbox"/> Speech <input type="checkbox"/> Language <input type="checkbox"/> Social Work <input type="checkbox"/> Consultant Observation <input type="checkbox"/>			Outside Agency Psychological <input type="checkbox"/> Pediatrician <input type="checkbox"/> Hearing <input type="checkbox"/> Vision <input type="checkbox"/> OT/PT <input type="checkbox"/> SLP <input type="checkbox"/> Social Work <input type="checkbox"/>							
Summary of Reports in OSR 														
Report Card Summary 														

The Digital Student Profile created summarizes student data on one page. This information can be recorded once, while allowing updates. The digital format saves staff time and provides a visual representation of a student that can be stored centrally for administrative access. Thanks are due to CODE, ISTE, and HP, who assisted our team in developing a Digital Student Profile that can be used by our consultants and administrative staff to record data in a streamlined professional manner and that will assist us in providing and recording interventions in an effective and timely manner. 🟡



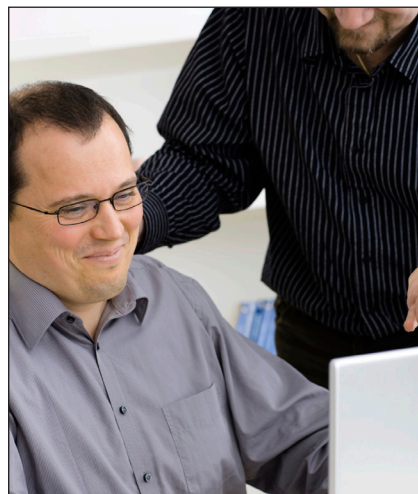
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HP-ISTE Professional Development Program

Michelle Forge, Co-Chair, CODE Special Education Project
John Fauteux, Co-Chair, CODE Special Education Project

The Council of Ontario Directors of Education (CODE) has supported the 72 district school boards in projects focused on transforming the delivery of special education programs and services throughout the province. Much of our work was to develop processes for knowledge transfer and mobilization of key lessons learned from these projects.

CODE dialogued with HP and discussed endeavours that might support the transfer of knowledge and professional development of staff in matters related to assistive technology. Together we agreed to pilot a program in two district school boards focusing on the individual needs of the boards and their leaders in special education. The outcome of this agreement was that Hewlett-Packard Development Company (HP) partnered with International Society for Technology in Education (ISTE) to provide professional services for 12 consultants and/or coordinators. CODE asked two district school boards—the Bluewater DSB, and the Peterborough, Victoria, Northumberland and Clarington Catholic DSB (PVNCC)—to pilot the activity



As stated in the HP-ISTE Professional Development Program Evaluation Report 2011, “The objective of this joint partnership was to coach the consultant/coordinators who focus on special education and curriculum and provide pedagogical and instructional support to classroom teachers on their mentoring of the teachers they support, on the integration of technology in their classrooms. The program is not about adding technology; it’s about transforming teacher practice and increasing student achievement, with the aid of technology tools such as assistive technology. ... With this project, HP will partner with CODE to explore broadening the use of assistive technology for all learners in the classroom. In addition, the scalability of the program could

mean positive ramifications for all of the 72 English school boards in Ontario." (HP-ISTE Professional Development Program Evaluation, 3/24/2011)

In this edition of *Chronicles*, you will find details of both the Bluewater DSB and the Peterborough, Victoria, Northumberland and Clarington Catholic DSB (PVNCC) projects and a response regarding the success of this practice. We invite you to read the details of their projects and contact the board leads to uncover more strategies that work and that could be helpful to your board as you plan for future learning opportunities for staff.

« HP-ISTE Program, continued

CODE agreed to coordinate this activity because we felt that there was a need to strengthen our strategies for professional development targeted for system leaders. After completing this limited study, we believe there are some good lessons to be learned and a valid reason to identify more opportunities for online professional development programs, especially those designed for system and school leaders. This is the digital age and educators must connect and collaborate using the technologies that are available to them, especially if they are going to be leaders for 21st-century learners.

We would encourage readers of Chronicles to visit the CODE web site at www.ontario-directors.org to view the entire HP-ISTE Professional Development Program Evaluation Report 2011. The Final Report shares next steps that could be considered as we move forward:

- 1. build on informal or formalized sharing centres (Professional Learning Network)
- 2. enlist a new group of educators to take part in the same training but led by our former participants
- 3. consider developing courses on topics such as cyber-bullying, Web 2.0 or social networking (a request to HP and ISTE would be required).

Participants from the Bluewater and PVNCC District School Boards expressed their satisfaction and gratitude for the opportunity to share in this new learning approach. They enjoyed the interactions with the facilitators and liked the structure of the program. We believe there is an opportunity to build on this successful experience. CODE would like to thank HP, ISTE, and the participants from Bluewater and PVNCC District School Boards for their efforts in this project. ●

Comments about this article? Email michelleforge@yahoo.ca or tjfauteux@gmail.com

Accessibility Via All Modalities of Learning Is Critical for Success

Karen Stefanishyn, Director of Business Development
FrontRow Canada

“Technology is a lot like freedom ... Once it’s uncorked, there’s no putting it back. Its fruits are there for everyone’s enjoyment and benefit. It is often said that assistive technology is liberating [for the individual with a disability] and that is certainly the case. But it is time to be clear that assistive technology is liberating not just for the individual with a disability but indeed for America as a whole.

Williams, 1991

The ability to hear, listen and process auditory information effectively is crucial to learning for all students. If a child cannot hear speech sounds clearly (hearing problem), does not have the skills to listen (processing or behaviour issues), is learning in a second language (French immersion, ELL or ESL), has a high incidence of ear infections (First Nations or Aboriginal), or if the learning environment does not allow instruction to be heard clearly (seating position, distance from person speaking, or high noise), then any teaching, testing or intervention that uses speech as the vehicle for interaction is most likely to fall short of the academic goal.

Many classrooms of today are committed to including visual aids (computers with projectors, interactive white boards and internet/video clips). While visually stimulating and engaging, these strategies fall short if not coupled with sound amplification dispersion systems, often called ‘sound field.’ Sound field systems take any auditory signal and project it evenly throughout the classroom, allowing every student access to auditory content which is critical for language development, literacy development and optimal classroom participation.

Teachers too may be adversely affected by compromising learning environments where they must constantly project their voices during instruction, which may lead to vocal strain.



Implementing initiatives based on the principles of universal design (UD) and sound field amplification, then, can help make classrooms more conducive to hearing and listening for all. Universal design is an approach to designing environments, products and communications that are “usable by all people to the greatest extent possible, without the need for adaptation or specialized design” (Bluestone 2004). It

is based on the principle that changes made to physical spaces to accommodate persons with disabilities will benefit everyone. For example, entrance ramps to buildings allow easier access not only for people using wheelchairs but also for parents with strollers, and those who find it difficult to climb stairs. In the classroom, UD addresses the need for learning environments that work for all students and meet a wide variety of learning needs (Millett 2009).

With the current revolution introducing more and more technology in the classroom to assist in the learning process, it makes sense to ensure that the implemented technology supports the greatest number of students and provides the best return on investment. Considerations for value include, but are not limited to: equipment investment, ease of use, student engagement, hours of use during the day, teacher training and acceptance as well as research documented results for academic outcomes.

Debbie Tschirgi (2010) describes six characteristics of sustainable technology solutions:

- 1. Broad in scope: They can be used in classrooms, professional development, school board meetings, PTA meetings and community presentations.
- 2. Applicable to all classrooms: Primary and secondary, math, science, language arts, social studies, health, art, etc.
- 3. Easy to use: Easy to connect, easy to control, easy to zoom/focus/reposition, and gets high-end results.
- 4. Easy to integrate: Can be used for whole group and small group instruction, teacher demonstrations, sharing of student work.
- 5. Minimal training and support: Takes less than one hour to set up, less than one hour to train, less than one hour of annual support, and teachers can troubleshoot easily.
- 6. Stands the test of time: In 5+ years it will still be doing what it was intended to do and can be updated with free software downloads.

The above characteristics of sustainable technology are all about the ease of adoption, support, and using the technology. Also considered in the formula for success is:

What Technology Should Do to Accelerate Learning

- 1. Technology should help to create optimal learning environments.
- 2. Technology should help engage all students in the learning process.
- 3. Technology should support research-based instructional strategies.

Sound field systems require minimal training, work as the audio hub of the classroom to integrate anything and everything with an auditory signal, and have documented, peer-reviewed and published study results demonstrating positive academic results—many right here in school boards across Ontario. Being included in the McKay inclusive strategy report for New Brunswick and then further in the NB3-21C technology integration platform for the province has catapulted usage of this technology. This simple piece of technology has truly evolved into one of the universal design strategies that is providing accessibility for many students across Canadian classrooms. ●

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For more information, visit www.gofrontrow.com.

Comments about this article? Email karen@gofrontrow.com

Learning About the Life Cycle of Electronics

Jane Kelly, Education Segment Market Manager
HP Canada



Whether we’re aware of it or not, electronics are integral to our daily lives. How we choose, use and dispose of electronics can have tremendous impacts on the environment, and it’s important to help children become aware of these impacts.

As a responsible corporate citizen, HP has risen to the challenge of helping Canadian school teachers address these issues by co-developing a learning resource on these impacts and how to minimize them, called **Discover the Technology Loop** (www.techloop.ca)!

HP has a long history of giving back to the community, and this commitment is reflected in HP’s partnership with Learning for a Sustainable Future (LSF). LSF is a non-profit organization established to integrate sustainability education into the Canadian education system. HP partnered with LSF to help build **Resources for Rethinking** (www.resources-4rethinking.ca), a database of peer-reviewed, classroom-ready learning resources that explores the environmental, social and economic aspects of sustainable development issues. There are over 700 high-calibre learning resources that teachers can access for free.

Besides helping to create this database, HP and LSF also jointly produced Discover the Technology Loop!, which can be accessed from the database. This learning resource will help students explore the life cycle of electronic equipment, from design to manufacturing, use, and finally end-of-life, as well as all the stages in between.

Discover the Technology Loop! will help students analyze the life cycle of electronics in their lives. This learning resource uses action-oriented learning to help students understand that the actions of people can greatly impact other living things and the natural environment.

For more information and direct access to the database of learning resources, visit www.r4r.ca. ●

Comments about this article? Email janek@hp.com

Watch for the next issue of CODE Chronicles coming Fall 2011.