# TEACH

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# LE PROF

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## Technology Supplement

**Technology Roundtable Discussion: Part 1 of 3**

**Table ronde sur la technologie : Première de trois**

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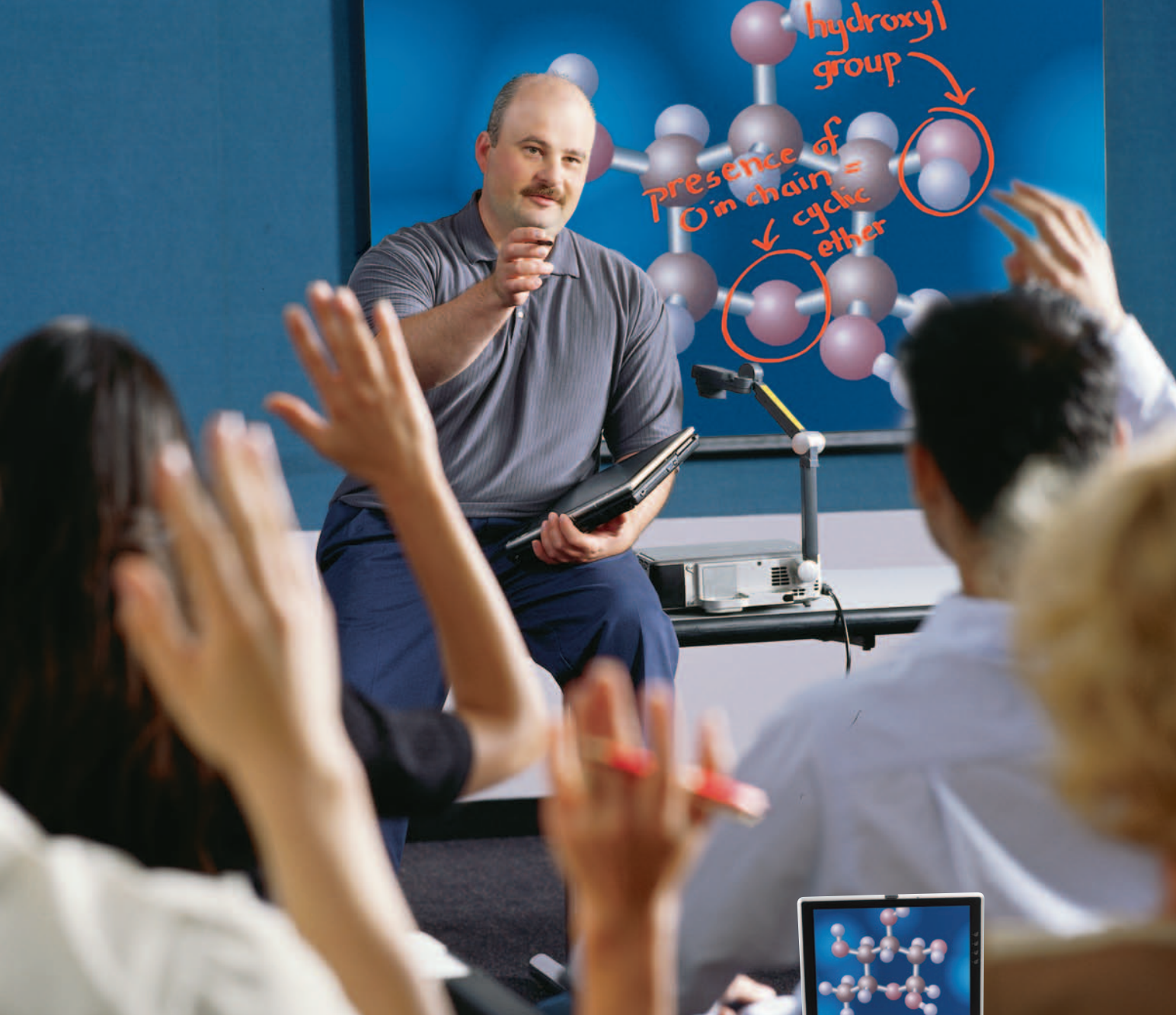


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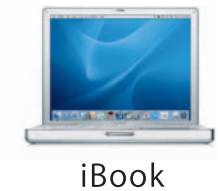
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**Welcome to spring, finally. Every year, it seems like it takes longer and longer to get there.**

This issue is chock full of great content. Once again, we are pleased to present our annual Technology Supplement. This is a listing of products and services that may help you out in the classroom. We position this content as informational only – it does not constitute an endorsement or a review. If you find something that piques your interest, however, make certain you inquire about educational pricing.

Ten years ago, we convened our first Educational Technology Roundtable where we invited experts in to discuss the integration of technology into the classroom. That discussion was lively and useful and appeared in successive issues of TEACH Magazine. This past fall, we reconvened the Roundtable (with different participants) to talk about those issues and determine where current thinking is headed. Once again, we will be running the Roundtable in successive issues of TEACH Magazine.

We are also extraordinarily proud to announce that TEACH Magazine is involved in co-producing a television series, *Get Outta Town!* (***www.getouttatown.tv***). This dynamic series sees a young host travel to cities around the world, meet up with a local teenager and experience the life and culture of that city through the eyes of a local co-host. TEACH Magazine has developed an entire set of teacher-based resources that explore the theme of Global Citizenship (please see the insert accompanying this issue) and lesson plans that explore the culture and history of each destination visited. If you live in Ontario or Saskatchewan, you can catch the television series on TVOntario beginning April 2nd and SCN beginning April 4th. Otherwise, check out the Web site for background information on the show, the personalities involved and all of the educational resources (in English only). The television series has been sponsored by EF Educational Tours (***www.eftours.com***).

**Le printemps est enfin arrivé ! C'est comme si, chaque année, il se faisait attendre de plus en plus longtemps.**

Ce numéro déborde d'articles tous plus intéressants les uns que les autres. Nous avons de nouveau le plaisir de vous présenter notre supplément technologique annuel, liste de produits et de services pouvant s'avérer utiles en classe. Il ne s'agit que d'une information ; il n'y a ni aval ni examen de la question. Pourtant, si vous y découvrez un élément qui suscite votre intérêt, demandez bien le tarif enseignants.

Il y a dix ans, nous organisions notre première table ronde sur la technologie éducative ; nous y avions invité des spécialistes pour parler de son intégration en classe. L'échange, utile et vivant, parut dans plusieurs numéros de LE PROF. L'automne dernier, nous avons renouvelé l'expérience (avec d'autres participants) pour reparler de cette question et voir les orientations de la pensée actuelle. Cette fois-ci encore, l'échange paraîtra dans les prochains numéros de LE PROF.

Nous sommes aussi particulièrement fiers d'annoncer que notre revue participe à la réalisation d'une émission télévisée, *Get Outta Town !* (***www.getouttatown.tv***). C'est une série passionnante avec un jeune présentateur qui visite plusieurs grandes villes du monde ; il y rencontre un (e) jeune qui lui fait découvrir la vie et la culture de cette ville. TEACH a préparé un jeu complet de ressources pour les enseignants sur le thème « *Global Citizenship* (Citoyens du monde) » (voir l'encart) ainsi que des plans de cours qui introduisent à la culture et à l'histoire de chaque ville. Si vous habitez en Ontario ou en Saskatchewan, vous pouvez voir cette série respectivement dès le 2 avril sur TVOntario et dès le 4 avril sur SCN. Sinon, visitez le site web pour avoir des précisions sur l'émission, les personnes concernées et la liste des ressources pédagogiques. (Uniquement en anglais). La série a été commanditée par EF Educational Tours (***www.eftours.com***).

*Wili Liberman*

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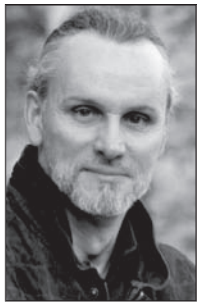
# Behind the Curve





By Richard Worzel

If you ask most educators about technology in the classroom, they'll nod knowingly and talk about the Internet, CD-ROMs, Google searches and plagiarized term papers, all of which certainly represent technology. However, these examples represent yesterday's classroom technology, not its future. At best they represent where many (not all) classrooms are today. But as technology continues to advance, it will leave teachers behind again. In fact, it's leaving almost everyone behind – except perhaps students, who tend to surf on the waves of technological change as if it were a game.

Enter Ray Kurzweil. He is a bona fide propeller-head, a genuine techie and important inventor who also writes controversial books, the most recent of which is titled, The Age of Spiritual Machines (Penguin, New York: 1999). In it he posits a number of uncomfortable things, including the idea that by 2020 we will be able to buy a computer for USD$1,000 that has the memory capacity and computational ability of a human being (although human "intelligence" will have to wait a few years longer). Along the way, he tests the famous Moore's Law: that computers will double in speed and halve in price every 18 months. To do so, Kurzweil goes back to the beginning of the 20th century to plot the increasing power of computation, starting with the cost-effectiveness of mechanical calculators, then electro-mechanical calculators, then electronic calculators, then electronic mainframe computers and so on, up to today. In his assessment, he finds that the rate of change in the cost-effectiveness of computers does not conform to Moore's Law. Whereas Moore's Law is an exponential growth function (i.e., cost effectiveness doubles every 18 months), Kurzweil found that the expansion rate is actually faster than that – it's a fourth-order polynomial. For those who aren't themselves techies, this means that if Moore's Law implies a doubling every 18 months today, then in the future, cost-effectiveness will double in 16 months, then 13 months, then nine months and so on.

In other words, not only is the rate of change accelerating, but at the same time, the rate of acceleration is also increasing. Now think back 10 years (which coincidentally is about how long I've been writing this column). A violent debate erupted as to whether computers should be used in the classroom. There was uncertainty about the value of CD-ROMs versus printed reference materials, and many teachers insisted on printed books for research. In all but today's most hidebound traditional schools, these debates were settled long ago. Moreover, 10 years ago, the vast majority was not using the Internet and hadn't even heard of e-mail. "Google" was not a verb – it wasn't even a word, let alone a multibillion-dollar company.

My point is this: The changes over the next 10 years will be more dramatic than the changes we've just experienced. If you found those changes difficult, you're going to find the changes to come even harder.

I don't know what lies ahead, but I can give you some informed guesses. Before I do, though, let me caution you on two key points. First, it's relatively easy to see the primary effects of a new technology, but the domino effects are much harder to imagine. The primary purpose of the Internet, when it was invented, was to create a robust communications system that would allow the U.S. military to coordinate operations following a thermonuclear attack. Nobody working on DARPANet, as it was called, imagined that it would revolutionize business, retailing and personal communications, yet these things are far more important to us today than military communications.

Second, I'm pretty comfortable telling you what the technology will be capable of doing, but it's far more difficult to tell what people are going to want done. If you had conducted a survey in 1990 asking people if they would be interested in paying money to have e-mail, taking the time to explain what it was and how it would affect their lives, most people would probably have said, "No." Technology will make it possible to do things that we've never done before, and with which we have no experience. Because of that, people are going to find options open to them that they've never had, and cannot, today, imagine. It's only when those options become available, and people experience them first-hand, that they decide whether they'll use them or not. Accordingly, to predict which technologies are going to become popular is far harder than predicting which ones are going to be possible.

With these two caveats in mind, let me split the infinitive and "boldly go" into the future of technology:

• Computers will become so cheap and so small that virtually everyone will have them almost anywhere they might prove useful. Today's cell phone will morph into a wearable computer that becomes a constant companion. Kids will use wearables all the time, and access the Internet in class, on exams and to do assignments. These wearables will be so cheap that they will be at least as popular as cell phones and

may even be given away by advertisers, yet will be more powerful than today's supercomputers. Teachers, not having grown up with the same proximity to computers, will struggle to keep pace with their students' computer aptitude and will resist their use in class.

• Communications will be omnipresent, and students (through their wearable computers) will be always-on walking Internet nodes, in constant touch with each other, regardless of physical proximity. Entire cities will be blanketed with always-on, broadband, wireless Internet access using WiMax technology, much as we today "enjoy" universal cell phone coverage. This will create new metagroups that exist in cyberspace, supporting and assisting each other. This means students will cheat on tests together, supply answers to classroom questions and become, when they are motivated to be, a cohesive force within schools with a group mind that many adults will perceive as akin to the hive mind of ants or bees. Adults will find this scary. Kids will find it natural – and a neat tool to use against authority.

• As part of their wearable computers, users will employ what I've called "Looking Glasses," which might look like sunglasses but are really computer monitors projecting information and images directly into the eyes of the wearer. Or they might be worn as contact lenses. This will give users enhanced vision – such as the ability to see around corners and share images, thus creating a "hive image" of an entire school in which the images from each user are pooled.

• Video games will become the dominant form of entertainment among students and young people (including young adults). This will include shared alternate worlds, much like today's "EverQuest," which students will inhabit even while they are in school, including during classes, causing even further distraction. Computer gaming consoles will move from the basement and displace televisions as the centre of home entertainment systems. In the process, they will bring the Internet with them into the centre of the home, and even "television" signals will run through the home gaming console, via the Internet. This means broadcast schedules will become irrelevant, and viewing on demand will move towards the norm.

Video games will offer more variations – but especially more sexually explicit material and violence. Adults will be largely powerless to keep this from kids, even young children, and it will cause significant societal consequences. It will continue today's trend towards kids being less sensitive and more depersonalized, and will accentuate the trends towards violence.

• There will also be a backlash against technology, mostly by adults, but shared by many students. One of the consequences of being always-on and always connected is that students will live in the global village that we only talk about. This is leading to the emergence of a global ethos, an accepted morality of tolerance and against commercial exploitation. Kids will lead in the emergence of this global ethos – and it will be a real boat race between rising global awareness and involvement, and the objectification and desensitization of people. Both will probably coexist – and people will fail to see the contradictions.

• If you look at what's happening in business today, you can plainly see what will happen in education tomorrow. Specifically, business is moving towards a model of mass customization – away from mass production. The history of education, at least since the Industrial Revolution, has largely been about mass production – pushing students through a more-or-less uniform curriculum. The next 10 years will see that model start to crumble, as computer-supported instruction and distance learning, combined with the employment market's demands for thoughtful, creative graduates, leads to curricula customized to each student's abilities and needs.

It's going to be a difficult time to be a teacher – one development that will not be new.

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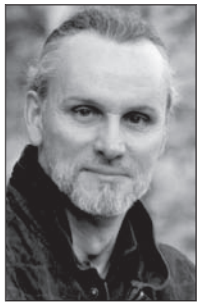
*Richard Worzel is Canada's leading futurist. He is paid to speak to over 20,000 business people a year, but volunteers his time to speak to high school students. He can be reached at* ***futurist@futuresearch.com****.*

# Derrière la courbe





Richard Worzel

Si vous parlez de technologie à des éducateurs, ils opineront du bonnet, pour la plupart, et parleront de l'Internet, des CD-ROMs, des recherches dans Google et des plagiats dans les rédactions ; certes oui, tout ça c'est bien de la technologie. Pourtant, ces exemples illustrent la technologie d'*hier,* pas celle de demain. Au mieux, ils représentent la situation actuelle dans bien des classes (mais pas toutes). Et, à mesure que la technologie évolue, elle va, une fois encore, laisser les enseignant(e)s à la traîne.

Arrive Ray Kurzweil. C'est un sourisard, un fana de technologie, et un inventeur de génie, qui écrit aussi des livres controversés dont le plus récent s'intitule *The Age of Spiritual Machines.* Il y raconte que, d'ici 2020, on pourra acheter, pour 1 000 dollars américains, un ordinateur pourvu d'une mémoire et d'une capacité de calcul équivalant à celles d'un être humain. Il analyse au passage la fameuse loi de Moore selon laquelle les ordinateurs doublent de vitesse et coûtent deux fois moins cher tous les dix-huit mois. Il remonte au début du XX$^{e}$ siècle, retrace la puissance croissante des calculs, en commençant par la rentabilité des calculatrices mécaniques, des calculatrices électromécaniques, puis des calculatrices électroniques et des ordinateurs centraux, et poursuit jusqu'à nos jours. À son avis, le taux de changement dans la rentabilité des ordinateurs ne vérifie pas la loi de Moore. Alors que celle-ci suit une croissance exponentielle (c'est-à-dire que le taux de rentabilité double tous les dix-huit mois), Kurzweil trouve que le taux d'expansion est plus rapide que ça – c'est une polynôme du quatrième degré. Pour ceux et celles qui ne sont pas technophiles, cela veut dire que si la loi de Moore suppose un doublement tous les dix-huit mois, à l'avenir le rapport coût-efficacité doublera tous les seize mois, puis tous les treize mois, puis tous les neuf mois, et ainsi de suite.

Autrement dit, non seulement le taux de changement s'accélère mais, parallèlement, le taux d'accélération s'accroît également. Reportez-vous maintenant dix ans en arrière.Un violent débat faisait rage autour de la place des ordinateurs dans la classe. On se demandait si les CD-ROMs présentaient un réel intérêt par rapport au matériel imprimé, et bien des enseignant(e)s insistaient sur l'utilisation des livres pour faire ses recherches. Dans toutes les classes, à l'exception des plus traditionnelles, ce débat est enterré depuis longtemps. De plus, il y a dix ans, la plupart des gens ne se servaient pas de l'Internet et n'avaient jamais entendu parler de courriel. Google n'était pas un vocable usité, et encore moins une entreprise valant des milliards de dollars.

Tout cela veut dire que les changements des dix prochaines années seront plus spectaculaires que ceux que nous avons connus jusqu'à présent. Si nous les avons trouvés pénibles, les suivants le seront davantage encore.

Je ne sais ce qui nous attend, mais je peux hasarder quelques conjectures. Auparavant pourtant, je veux vous mettre en garde sur deux points. Le premier, c'est que, s'il est assez facile d'observer les effets primaires d'une nouvelle technologie, il est beaucoup plus difficile d'en imaginer l'effet domino. Le premier but de l'Internet, lorsqu'il a été inventé, était de créer un solide système de communication qui permette à l'armée américaine de coordonner ses opérations dans l'éventualité d'une attaque thermonucléaire. Aucun de ceux qui travaillaient sur DARPAnet, comme on l'appelait alors, n'avait imaginé que ce système allait révolutionner les affaires, le commerce de détail et les communications personnelles.

En second lieu, si je suis très à l'aise pour vous dire de quoi la technologie sera capable, il m'est beaucoup plus difficile de vous dire ce que les gens voudront en faire. Si on avait fait un sondage en 1990 pour demander aux gens si cela les intéresserait de payer pour avoir le courriel, en prenant la peine de leur expliquer de quoi il s'agirait et comment cela allait changer leur vie, la plupart auraient probablement répondu « non ». La technologie nous permettra de faire des choses que nous n'avons jamais faites. Autrement dit, les gens vont avoir des options inédites qu'ils ont, aujourd'hui, peine à imaginer. Ce n'est que lorsque ces options apparaîtront et que les gens en feront l'expérience directe qu'ils décideront s'ils veulent ou non s'en servir. Il est donc beaucoup plus difficile de prédire les technologies qui seront populaires que celles qui seront possibles.

Gardant à l'esprit ces deux avertissements, je me risquerai donc à plonger dans l'avenir de la technologie.

• Les ordinateurs seront tellement bon marché et tellement petits que pratiquement tout le monde en aura un là où ce sera utile. Le téléphone cellulaire d'aujourd'hui se transformera en un ordinateur-vêtement qui deviendra un compagnon de tous les instants. En classe, les enfants se serviront en permanence de ce type d'ordinateur et de l'Internet pour leurs examens et pour faire leurs devoirs.

Ces ordinateurs seront tellement bon marché qu'ils seront aussi répandus que les téléphones cellulaires, mais ils seront plus puissants que les superordinateurs actuels. Les enseignant(e)s qui n'auront pas grandi avec les ordinateurs faisant partie de leur vie auront de la peine à rester au niveau de leurs élèves et seront réticents à les utiliser en classe.

• Les communications seront omniprésentes et les élèves (grâce à leur ordinateur-vêtement) seront connectés en permanence, véritables nœuds Internet ambulants, constamment en contact les uns avec les autres, quelle que soit leur proximité physique. Des villes entières seront connectées en tout temps à l'Internet à large bande sans fil, grâce à la technologie WiMax, tout comme aujourd'hui nous jouissons d'une couverture téléphonique universelle. Ceci créera de nouveaux méta-groupes qui existent dans le cyberespace et se soutiennent mutuellement. Les élèves tricheront ensemble aux examens, donneront les réponses aux questions posées en classe et deviendront, s'ils sont motivés, une force de cohésion au sein de l'école avec un esprit de groupe que bien des adultes assimileront à celui des fourmis ou des abeilles. Les adultes en seront effrayés. Les enfants, eux, trouveront cela tout naturel et en feront un instrument bien pratique contre l'autorité.

• Leur ordinateur-vêtement comportera ce que j'appelle des « bésicles » qui ressembleront à des lunettes de soleil mais qui, en réalité, seront des moniteurs informatiques projetant des images et des renseignements directement dans l'œil de leur porteur. Ces bésicles pourront également être portées comme des verres de contact. Les utilisateurs auront une meilleure vue et ils pourront, par exemple, voir derrière un angle, et partager des images, créant une « image-ruche » d'une école tout entière, avec une mise en commun des images de chaque utilisateur.

• Les jeux vidéo deviendront la forme dominante de loisirs chez les élèves et les jeunes. Ils intègreront des mondes parallèles partagés – un peu comme l'« Everquest » d'aujourd'hui – que les élèves habiteront tout en étant à l'école, y compris lorsqu'ils seront en classe, ce qui entraînera des distractions supplémentaires. Les consoles de ludiciels sortiront des sous-sols, supplanteront les téléviseurs et deviendront le centre des chaînes audiovisuelles domestiques. De ce fait, l'Internet sera au cœur de la maison, et même les signaux de « télévision » passeront par la console des ludiciels, via l'Internet. Adieu donc aux horaires de radiodiffusion ; c'est la visualisation sur demande qui deviendra peu à peu la norme.

Les jeux vidéo proposeront de nombreuses variantes – notamment davantage de scènes de sexualité explicite et davantage de violence. Les adultes seront largement impuissants pour empêcher les enfants, même les très jeunes, d'y jouer et les conséquences sociétales seront profondes. Tout cela est dans la ligne de la tendance actuelle – enfants moins sensibles, plus dépersonnalisés – et accentuera la tendance à la violence.

• On notera aussi un retour de manivelle vis-à-vis de la technologie, surtout de la part des parents, mais aussi de celle de nombreux élèves. Conséquence – une parmi d'autres – d'être toujours connectés : les élèves vivront dans un village planétaire qui n'existe aujourd'hui que dans les conversations. Les enfants commanderont l'émergence d'un ethos planétaire – et ce sera une véritable course entre sensibilisation et participation globales croissantes d'une part, désensibilisation et transformation des personnes en objet d'autre part. Pire, les contradictions nous échapperont.

• Ce qui se passe aujourd'hui dans les affaires donne une idée très claire de ce qui se passera demain dans l'éducation. Les premières vont vers un modèle de personnalisation de masse – très éloigné de la production de masse. Or, l'histoire de l'éducation, au moins depuis la Révolution industrielle, a largement tourné autour de la production de masse – ce qui a poussé les élèves à avoir un cursus uniforme. Dans les dix prochaines années, ce modèle commencera à s'effondrer, alors que l'enseignement informatisé ou à distance, combiné à une demande, sur les marchés de l'emploi, de diplômés attentionnés et créatifs, conduira à un cursus personnalisé adapté aux capacités et aux besoins de chaque élève.

Il sera très difficile d'être enseignant(e) – mais à cela *rien* de nouveau.

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*Richard Worzel est un éminent futurologue au Canada. Il est rémunéré pour parler à plus de 20 000 gens d'affaires chaque année, mais va bénévolement faire des présentations à des élèves du secondaire. On peut le rejoindre à* <***futurist@futuresearch.com***>.

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# Notable Sites for Teachers

By Marjan Glavac

### A Guide to Women in Canadian History

***www.heroines.ca***

A Guide to Women in Canadian History builds on our proud feminine history as it pulls amazing women from the past to the forefront, presenting famous and not-so-famous Canadian heroines.

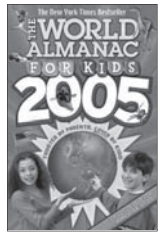
Roberta Bondar, Kim Campbell and Lucy Maud Montgomery are just a few of the well-known women chronicled on the site. Unknowns include Ann Harvey, a brave teenager who saved immigrants shipwrecked off the coast of Newfoundland; Fanny "Bobbie" Rosenfeld, an Olympian reputed to be the world's greatest female athlete; and Elsie MacGill, the first woman in the world to design an airplane.

The site includes hundreds of biographies, separated into six categories. Under the People category, kids can click on links to Heroines, Biographies and Group Histories. The Gallery contains links to Pictures, Cartoons and Posters. Celebrate connects kids to Stamps, Statues, Currency, Historic Sites and Women's History Month, while the History category takes you back in time with links to Time Travel and Herstory. The Resources page links a user to Books, Shop, Recipes, Quotes, Classroom, Kid's World, Films & Videos. The News section keeps you up-to-date with the latest conferences and accomplishments of females in Canadian history.

The Classroom link informs teachers and students about monthly contests. One current contest, held in conjunction with Dundurn Press, presents an essay challenge. Celebrating the release of Merna Forster's book, 100 Canadian Heroines, students can submit a 500-750-word essay about their favourite Canadian-born heroine (or, a woman who achieved something significant in Canada) who is not featured in Forster's book. For more information, visit ***www.dundurn.com*** or ***www.heroines.ca/features/contests.html***. The winner receives a $100 cash prize and $300 worth of Dundurn books.

### World Almanac for Kids

***www.worldalmanacforkids.com/index.html***




The companion Web site to the popular book World Almanac for Kids is packed with information and activities that teach kids about the world.

The World Almanac Web site has five main links: Games, Explore, Fun & Games, Insider Info and a monthly Feature Article covering a timely subject.

The Games page includes seven different games. The Word Find challenges kids to find words in the English or Egyptian alphabets, or with Greek or Dot symbols—kids get 45 seconds and three guesses to find the words.

The Explore section contains 12 topics, including Animals, Environment, Inventions and more, each of which leads to additional subtopics. One link under the Animal category alone leads to information about 65 different species. Each page holds detailed information and pictures about the individual animals.

The Fun & Games page has a number of different contests and great prizes for kids. Fun activities include printable crosswords, match and find, and quick quizzes, where correct answers result in fun prizes.

The Insider Info section contains links to more information about the World Almanac. Here, students can ask the editor a question and join a mailing list for new content and contests.

The site is a great way to get students reading, whether it's online or with a printed copy of the World Almanac for Kids.

### Archimedes' Laboratory

***www.archimedes-lab.org***

This is a fun Web site where teachers and students can explore the world of puzzles, brainteasers and geometry. Archimedes' Laboratory activates the brain into "problem-solving mode" by presenting mind-bogglers. From there it's just a short scroll away to the visual puzzles, which vary as much as kids' imaginations do.

The Web site is divided into categories such as Puzzles to Solve, Tricks to Perform, Optical Illusions, Labyrinths and Mazes, Peculiar Puzzles, Online Games, Curiosities, Guides/Courses, World Eccentricities and more. These pages are also available in French and Italian.

Archimedes' Laboratory encourages students to become interested in puzzles by teaching them how to make their own. Simple instructions and templates are available.

Kids who want a challenge should check out the Puzzle of the Month page, where they can choose from three different mental activities including a puzzle of the month, a quiz/test of the month and a Wunderkammer section containing outstanding facts.

The Optical Illusions page will intrigue kids to no end. It is just one of many puzzles that stimulate the brain, giving students something to really think about.

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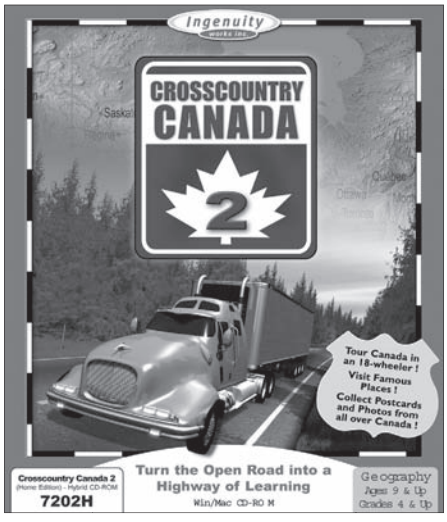
*Marjan Glavac is the author of the new book "How to Make a Difference: Inspiring Students To Do Their Best" available at:* ***www.howtomakeadifference.com.*** *Marjan can be reached at* ***marjan@glavac.com.***

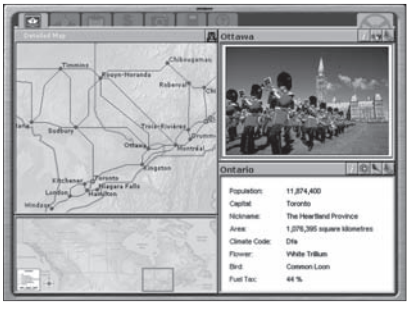
# CrossCountry Canada 2

COMPUTER

By Dan Lang




CrossCountry Canada 2 is a simulation program that puts students in the driver's seat of an 18-wheel truck. Trip assignments will have kids travelling across Canada, picking up different cargos and getting goods safely to their final destination. Students plan the trip themselves using on-board maps and compasses to determine the best route. Once on the road, they must avoid accidents or breakdowns, and ensure rest, food and gas are obtained at the right time.




At the beginning of each trip, students are presented with a driving assignment and starting point, what goods they must pick up and their final destination. Using a map and cargo guide, they decide which route to take and what cities to visit to get their cargo assignments. Using the on-board compass, they set the right direction, buckle up and go.

Travelling on the road with the scenery rolling by, students progress from city to city on their planned trip. The truck's instrument panel shows gas levels, time of day and, if the user checks their log, how many hours one has gone without sleep or food. The user decides when and where they are going to sleep and eat, but students be warned: if they don't take good care of themselves and their rig, they may wind up in an accident.

And so the game continues with the student setting the direction on the compass for each new city on the planned route, going city by city, picking up cargo, until the final destination is reached.


Peter, age 11, says, "I really liked trying to decide which route I was going to take and then seeing the country go by as I travelled. The sound of the truck engine was really neat."

Through this simulation experience, students become familiar with the locations of major cities and towns and the basic geography of Canada. They also get "first-hand" experience in map reading, compass navigation and the type of decision-making that is involved when operating a commercial vehicle.

Each trip assignment is different; there are 79 cities and towns that can be passed through, from Dawson City to Yarmouth. The program also includes QuickTime information movies about each of the 50 commodities the rigs might be carrying.

CrossCountry Canada 2 is a novel way to introduce a young person to Canadian geography and provide them with a tangible sense of the landscape in various parts of Canada. This program will appeal to anyone who likes the idea of driving their own truck and overcoming the challenges of navigating their way across Canada. It requires a logical mind and a good memory for important details.

"The first couple of trips, I kept getting into accidents until I figured out that I had to get more sleep and feed myself. There are lots of things you have to remember so you don't get into trouble," says Doug, age 14.

CrossCountry Canada has been used in Canadian schools for years and is now available for home use. The response from many younger boys, in particular those who have used this program in the past, was enthusiastic: they couldn't put it down. With new assignments each time it's played, plus the seemingly endless trip variations, this program has a lot of "re-playability." As a result, users will really learn Canada's basic cartography, as well the basics of compass navigation and map reading. It's a unique program with lots of potential "mileage" to it.

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*Dan Lang is a Toronto-based freelance writer and founder of Learning Village. He may be reached at* ***lang@dlang.com****.*

**Publisher:** Ingenuity Works Inc.

**Learning Areas:** Names and geographic locations of 79 Canadian cities, map reading, trip planning and compass navigation skills, distance estimating, travel cost management and problem solving skills.

**Grades:** 4/5-10

**Age Range:** 9/10-15

**Minimum Requirements:** Windows 95/98 and up or PowerMac OS 8.5 and up

**Ordering Info:** The CD-ROM Store: 1-800-250-9229 or ***www.cdromstore.com***

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# Curricula

Reproducible Insert

# THE GLOBAL CITIZENSHIP PROJECT: *An Exploration of Culture, History and Interconnectedness.*

## Lesson One: Equity

**Duration: 1-6 Class Periods**
**Grade Level: 9-12**

## INTRODUCTION

Welcome to The Canadian Studies Project. In successive issues of TEACH Magazine, you will find four lesson plans that explore the following themes: Equity, Diversity, Interdependence and Peace. Due to limited space, the curriculum links and additional content will be posted to the Web site: ***www.teachmag.com/canadianstudies***. The content of The Canadian Studies Project is also connected to a television series called *Get Outta Town!* (***www.getouttatown.tv***), where the hosts travel the world and meet up with teenagers to experience the life and culture of different communities from the local teenager's point of view. Video content from the series is posted on The Canadian Studies Web site.

Canada is a country of diverse peoples. Through the activities detailed in the following lesson plans, we are confident that you and your students will enjoy and celebrate Canada's unique status among nations.

We would like to hear from you. Please contact us at ***info@teachmag.com*** and let us know the kinds of projects and activities in which you have engaged. Send us your students' work and we will post the best entries on the Canadian Studies Web site.

**"In a world darkened by ethnic conflicts that tear nations apart, Canada stands as a model of how people of different cultures can live and work together in peace, prosperity and mutual respect."**

–Former U.S. President Bill Clinton

## KEY CONCEPTS AND ISSUES

This lesson plan explores the idea of Equity as it relates to ensuring that everyone in a given society has access to all the rights and freedoms available to them under the law without favouring one group over another.

Vocabulary List:

Oligarchy
Junta
Consolidate
Autonomy
Caudillo
Estancia

## LEARNING OUTCOMES

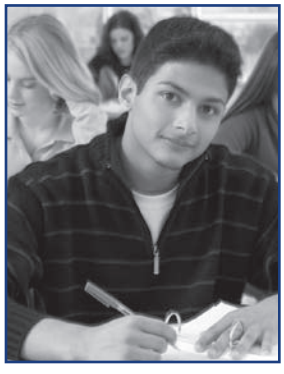
Students will learn:

- To appreciate the freedoms they currently enjoy and/or take for granted
- To recognize the different positions people occupy in a society or culture
- To assess challenges and determine solutions for those in inequitable situations
- To understand that many people on the planet live in difficult circumstances
- To deal with real world issues
- To work together in teams
- To sharpen critical assessment skills

## CASE STUDY

Eighteen-year-old Juan comes from a family of small landholders in Argentina. He came to Canada to live with relatives when he was 14.

Here is Juan's story:



*Many families in the Argentinian countryside farm or operate ranches. Like many countries, there is a hierarchy of social classes in Argentina.*

*The elite are called "Caudillos," those who own large estates (estancias) throughout the land. For many years, the Caudillos ran the country as an oligarchy through much of the 19th and 20th centuries.*

*The Caudillos obtained their land holdings through royal grants or as a reward for being supportive of the government or ruler of the day. They controlled wages and contracts and as a result of their overall influence, the Caudillos influenced social, political and economic policies in the country. Not surprisingly, many of these policies favoured those in their own class. Comprised of cattle barons and merchants, the Caudillos acquired more and more land, squeezing out the smaller landholders like Juan's family.*

*Those opposed to the rule of the oligarchy, and subsequently the rule of the military-style junta that came afterward, attempted to enact reform. Some joined labor unions to help consolidate their influence, to see if they could make a difference in government policy that gave some control back to the smaller landholders.*

*The Caudillos realized their position was being threatened by the social activism of the smaller landholders and moved to neutralize this threat. Unofficially, this involved acts of violence against the leaders of the labor unions and those who spoke out against the Caudillos or challenged them for power.*

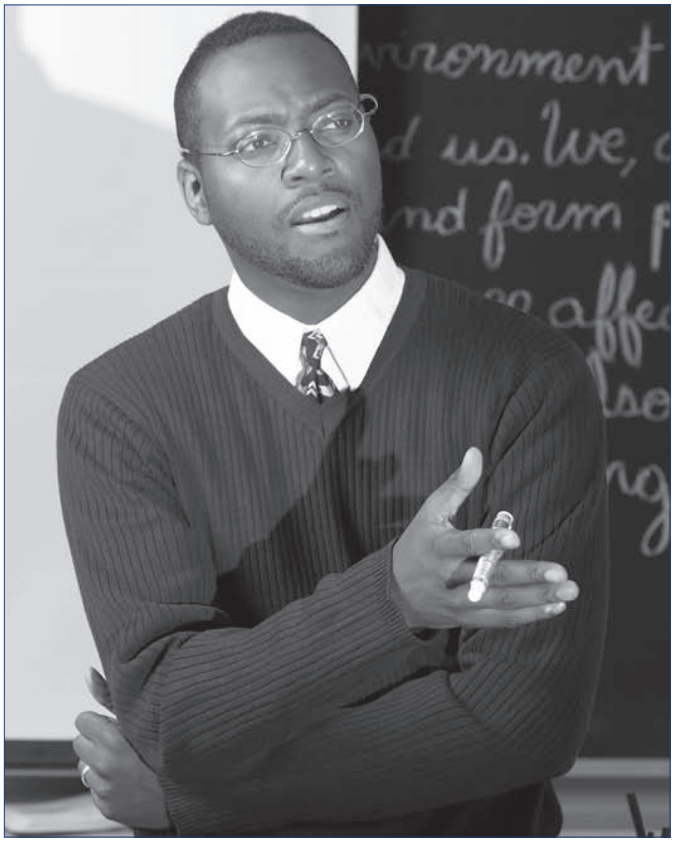
*Juan's father, Miguel, was just such a man. Miguel was afraid but reasoned he had no choice. If he and others didn't act, then their situation would only become worse. They'd never have any autonomy. They'd never be able to compete with the Caudillos and their monopolies or have the freedom to make their own decisions. The leaders of the protesters organized demonstrations to let the Caudillos and the government of the day know that the treatment they received was unfair and they were willing to do something about it. Sadly, their actions were met with a violent response. Some of the organizers were killed or simply disappeared.*

*As a teenager, Juan was denied many of the rights that North Americans take for granted. He wasn't able to attend school regularly, for example. He was needed to help out on the land. His family suffered financially because the Caudillos controlled the agricultural markets with the support of the government.*

*It is the goal of most parents to have their children progress, to realize educational opportunities, to get ahead in their careers and to do better financially. Juan felt like he was stuck in the same position as his father: they would continue to labor on just to get by and never get ahead.*

*On the surface, Juan was faced with the most difficult situation of all: that of no choice and to simply continue as his father and grandfather had before him. Juan admired his father and felt that he was a brave man and feared for his safety. Fear seemed to be their constant companion as those who opposed the Caudillos suffered.*

*For his own safety and well-being, Juan's family sent him to live with an uncle and aunt in Montreal.*



## TEACHER DIRECTED DISCUSSION

**Step One: Reading and Discussing the Scenario** (1 Period)

Have each member of the class read the story of Juan. Discuss the vocabulary words. Can they relate to his situation? If so, how? Is there anything that Juan's family could have done to change his situation? Remember this lesson is about equity and in the case study one group is in control and the other is not. How could Juan's family have gained equity given their circumstances? Brainstorm some ideas. Have the class think about their own circumstances or those of someone they know. For example, perhaps someone belongs to a team or a club where they have no say in how it operates despite saying they would like to be more involved in the operation of this team or club. What can they do to change the situation for the better? After talking about these scenarios among themselves, can they apply what they have discussed to Juan's situation? Perhaps there are those in the group or the class who have come from a different country and can share their perspective on the equity in some of the relationships they have had or have currently.

**Step Two: Creating an Action Plan** (1 Period)

Recall the brainstorming ideas from the previous period. Divide students into groups of three or four and have each group consider at least one of the following scenarios:

- Juan joins a youth movement in Canada, the mission of which is to lobby the Argentinian government to improve conditions for smaller landholders and give them more say in government policy.
- Juan makes a presentation to the United Nations detailing the plight of his family and many others in his country. His story is picked up by the world media.
- Juan concentrates on going to school in Canada to get a good education so he can eventually improve his position in society and help provide for his family.

Keep the same small discussion groups. Have each group select one of the scenarios they consider the best solution given Juan's situation. The group will then present a brief oral report to the rest of the class laying out the reasons for their selection. Make a list of the suggestions in each report and write them on the board for everyone to read. After which, reintroduce the concept of equity.

- Do the student responses explore this idea?

- Are the suggestions realistic and doable for someone like Juan?

- Allow the group to come up with alternative scenarios for Juan should they choose to do so. Again, their reasoning must be justified in the oral report to the class.

- Discuss how these scenarios can apply in a number of contexts. That is, to the students personally, to an organization to which a student may belong, to the situation of a particular group or culture and to a given country students may have read or heard about in the news.

**Optional Extension Activities** (1-2 Periods)

Students will complete at least one of the following:

1. Review the Canadian Charter of Rights and Freedoms (***ww.pch.gc.ca/progs/pdp-hrp/canada/guide/overview_e.cfm***). Is there an article within the Charter that most applies to Juan's situation? If so, write a short essay detailing how this aspect of the Declaration applies to Juan and if applied reasonably, might help improve his situation while in Canada and if he still lived in Argentina.

2. Consider the nature of equity in the following relationships:
   - members of opposing football teams
   - single mothers on welfare and social workers
   - a CEO and assembly line workers
   - family farmers and corporate farms
   - a married couple
   - Canada and the United States

Choose one and describe in a short report the nature of the relationship and what sort of equity is present in that relationship between the two parties. Back your reasons up with concrete examples. Length: 1/2 page to a maximum of one page.

**Step Three: Clarifying Inequality** (1 Period)

Once again, divide the students into small groups of three or four. Each group will devise a scenario that clearly demonstrates the level of equity in a given relationship. It might be a parent and a child, a worker and a supervisor, boyfriend and girlfriend, a new immigrant and a government official, a coach and a player, etc.

The team will devise a short script, fleshing out the situation. The scenario students create may have two to four characters in it. The group will rehearse either "acting out" or "reading out" the scenario for presentation to the class. After each performance, a few minutes should be allotted for response from the audience. Was the situation clearly presented? Were the "characters" believable and the circumstances realistic? Was there a resolution to the situation? Each presentation should have a duration of roughly five minutes.

**Step Four: A Second Action Plan** (1 Period)

Write the ending to Juan's story. What actions does he take and what resolutions appear realistic and plausible. Refer back to Step One of the lesson for reference. Once the story is written, have the class form into small groups and have each member of the group read their story to the others. Have the group select one of the stories and present it to the rest of the class, i.e., read out loud. The story should take about five minutes to read. Leave time for class discussion over each story read. All written stories are to be handed in to the teacher.

**Step Five: Comparison**

In the television series *Get Outta Town!* (***www.getouttatown.tv***), the host visits Costa Rica and Mexico City. Have students think about who Juan's counterpart in each of these destinations might be. How might the situation in each place compare? Would the Costa Rican Juan be better off or not? If so, why? Would the Mexico City Juan lead a similar life as the Argentinian Juan, but just in a different physical environment, i.e., rural in Argentina versus urban in Mexico City? Students will write a short essay on this topic. Maximum length: one page.

## ASSESSMENT AND EVALUATION

**Evaluate the class teams on their oral reports**

Suggested criteria:
- Content (was the content/strategy clearly articulated and well thought out? Were the points the team made persuasive?)
- Presentation (was the presentation well-delivered, easy-to-hear and understand with good vocal quality, gestures, postures, etc?)
- Effectiveness (were the points presented effective, and how practical were the suggestions?)
- Teamwork (did the group work well and effectively together?)

• *Continued on page 5 of French Curricula*

Curricula

Encart prêt à photographier

# PROJET D'ÉTUDES CANADIENNES

## Cours un : L'équité

**Durée : De une à six heures**
**Élèves de la 9e à la 12e année**

## INTRODUCTION

Bienvenue au Projet d'études canadiennes. Dans plusieurs numéros consécutifs de la publication *Le Prof*, vous trouverez quatre plans de cours qui portent sur les thèmes de l'équité, de la diversité, de l'interdépendance et de la paix. Pour des raisons d'espace, les liens avec le programme d'études et d'autres ressources seront affichés dans le site Web ***www.teachmag.com/canadianstudies***. Le contenu du Projet d'études canadiennes se rattache également à une série télévisée intitulée *Get Outta Town!* (***www.getouttatown.tv***), où les animateurs voyagent à travers le monde à la rencontre d'adolescents qui leur font découvrir à travers leur vision la culture et la vie de ces collectivités. Le contenu de la vidéo de la série est affiché dans le site Web du Projet d'études canadiennes. Le Canada est un pays caractérisé par la diversité de ses habitants. Grâce aux activités expliquées en détail dans les plans de cours qui suivent, nous sommes convaincus que vos élèves et vous saurez apprécier la situation privilégiée du Canada dans le monde et en tirer fierté.

Nous aimerions obtenir votre opinion. Veuillez communiquer avec nous à l'adresse ***info@teachmag.com*** et nous faire part des projets et des activités que vous avez amorcés. Faites-nous parvenir les travaux de vos élèves et nous afficherons les meilleurs dans le site Web du Projet d'études canadiennes.

**« Dans un monde où s'offre le spectacle affligeant de pays détruits par des luttes interethniques, le Canada s'est imposé comme un modèle de société où règne un climat de paix, de prospérité et de respect mutuel qui favorise la coexistence. »**

– Bill Clinton, ancien président des États-Unis

## CONCEPTS ET QUESTIONS CLÉS

Le présent plan de cours aborde la notion d'équité, c'est-à-dire le principe voulant que tous les individus d'une société donnée puissent jouir des mêmes droits et libertés sans qu'un groupe soit privilégié par rapport à un autre.

Liste de vocabulaire :

Oligarchie
Junte
Consolider
Autonomie
Caudillo
Estancia

## OBJECTIFS ET RÉSULTATS

Les élèves apprendront à :

- prendre conscience des libertés dont ils jouissent aujourd'hui ou qu'ils tiennent pour acquises;
- reconnaître les différentes places que les gens occupent dans une société ou une culture;
- évaluer les difficultés et trouver des solutions pour ceux qui se trouvent dans des situations inéquitables;
- comprendre que de nombreuses personnes sur la planète vivent dans des conditions difficiles;
- se pencher sur de véritables problèmes;
- travailler ensemble par équipe;
- améliorer leurs compétences en évaluation critique.

## ÉTUDE DE CAS

Juan vient d'une famille de petits propriétaires terriens en Argentine. Il a maintenant 18 ans et il est arrivé au Canada à l'âge de 14 ans pour vivre avec des membres de sa famille.

Voici son histoire.

*De nombreuses familles dans la campagne argentine ont une exploitation agricole ou une ferme d'élevage. Et comme dans plusieurs pays, il existe des classes sociales très hiérarchisées en Argentine.*

*Ceux qui font partie de l'élite, les « caudillos », possèdent de vastes domaines (estancias) dans tout le pays. Pendant une grande partie du XIX$^{e}$ et du XX$^{e}$ siècle, les caudillos ont formé une puissante oligarchie qui détenait le pouvoir politique.*

*Les caudillos ont obtenu leurs terres au cours de l'histoire par des concessions royales ou en récompense de leur appui au gouvernement ou aux dirigeants d'alors. Ils avaient la haute main sur les salaires et les marchés et en raison de leur ascendant, les caudillos ont influencé les politiques sociales et économiques de leur pays. Naturellement, nombre de ces politiques privilégiaient la classe dirigeante à laquelle ils appartenaient. Capitaines d'industrie ou marchands de bétail, les caudillos n'ont cessé d'agrandir leur domaine, évinçant les petits propriétaires terriens comme la famille de Juan.*

*Les opposants au régime oligarchique et par la suite à celui de la junte militaire qui lui a succédé ont essayé d'amorcer une réforme et certains ont fait front commun avec les syndicats afin de consolider leur influence, pour avoir un poids suffisant dans la politique gouvernementale pour essayer de redonner aux petits propriétaires une certaine marge de manœuvre.*

*Les caudillos ont compris que le militantisme social des petits propriétaires terriens menaçait leur position et ont pris des mesures pour neutraliser cette menace. Par des moyens détournés, ils ont eu recours à la violence contre les dirigeants des syndicats et ceux qui s'élevaient contre eux ou remettaient en question leur pouvoir.*

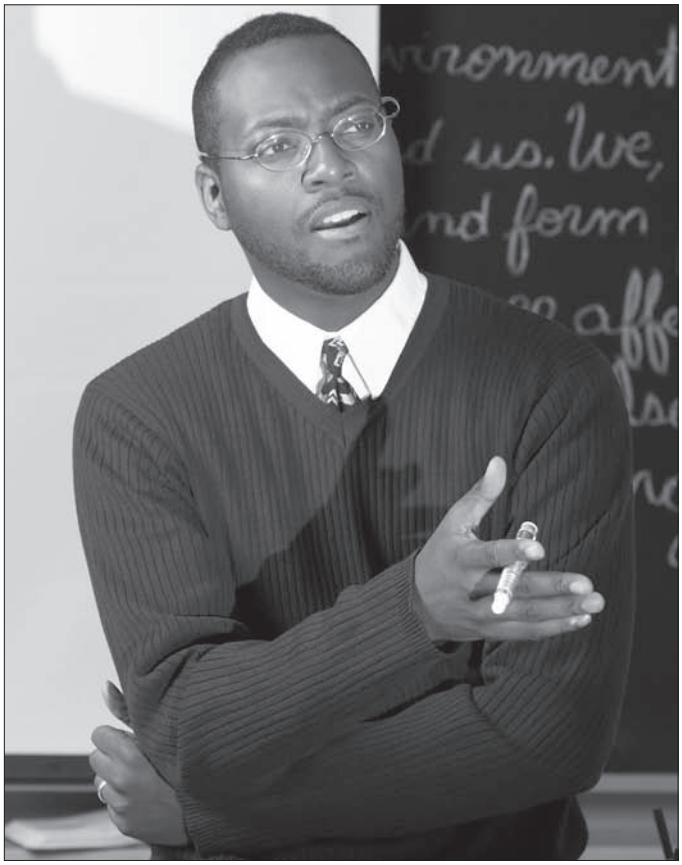
*Le père de Juan, Miguel, était un de ceux-là. Miguel avait peur, mais il affirmait qu'il n'avait pas le choix. L'inaction n'aurait fait qu'empirer leur situation. Jamais ils n'avaient eu d'autonomie. Jamais ils n'avaient pu se mesurer à armes égales avec les caudillos et leurs monopoles. Jamais ils n'avaient eu la liberté de prendre leurs propres décisions. Les chefs des contestataires ont organisé des manifestations pour faire savoir aux caudillos et au gouvernement de l'époque que le traitement qu'on leur réservait était injuste et qu'ils voulaient des changements. Malheureusement, ils se sont heurtés à la violence purement et simplement. Certains organisateurs furent tués et d'autres disparurent.*

*Alors qu'il était adolescent, Juan avait été privé de nombreux droits que les Nord-Américains tiennent pour acquis. Il ne pouvait fréquenter l'école régulièrement, par exemple. Il devait aider dans les champs. Sa famille avait des difficultés financières car les caudillos contrôlaient les marchés agricoles avec l'appui du gouvernement.*

*Le vœu le plus cher des parents, c'est que leurs enfants progressent, qu'ils s'instruisent, qu'ils fassent carrière et qu'ils s'en sortent mieux financièrement. Juan avait l'impression qu'il se retrouvait dans la même situation que son père, qu'il continuerait à travailler dur pour à peine s'en sortir mais qu'il ne progresserait jamais.*

*De prime abord, Juan était aux prises avec la situation la plus difficile qui soit : l'absence de choix. Poursuivre la voie tracée par son père et son grand-père avant lui. Juan admirait son père et le trouvait courageux mais il craignait pour sa sécurité. Il vivait avec la peur au ventre, comme tous ceux qui s'opposaient aux caudillos.*

*Pour sa propre sécurité et son bien-être, sa famille l'envoya vivre avec son oncle et sa tante à Montréal.*



## DISCUSSION ANIMÉE PAR L'ENSEIGNANT

**Première étape : Lire le scénario et en discuter** (une heure)

Demandez à chaque élève de lire l'étude de cas ci-dessus, l'histoire de Juan. Discutez des mots de vocabulaire. Peuvent-ils comprendre sa situation? Le cas échéant, comment? La famille de Juan aurait-elle pu faire quelque chose pour changer sa situation? Rappelez-vous que le cours porte sur l'équité et que dans l'étude de cas, un groupe exerce le pouvoir et l'autre non. Comment la famille de Juan aurait-elle pu obtenir l'équité compte tenu de sa situation? Lancez quelques idées. Demandez aux élèves de réfléchir à leur propre situation ou à celle de quelqu'un qu'ils connaissent. Par exemple, l'un d'entre eux est peut-être membre d'un club ou d'une équipe où il n'a pas son mot à dire dans le mode de fonctionnement bien qu'il ait indiqué vouloir participer de plus près au fonctionnement de cette équipe ou de ce club. Que peut-il faire pour améliorer la situation? Après avoir parlé de ces scénarios ensemble, peuvent-ils appliquer les idées qu'ils ont développées à la situation de Juan? Il y a peut-être dans le groupe ou la classe des jeunes qui viennent d'un autre pays et qui peuvent exposer leur point de vue sur l'équité dans certains des rapports qu'ils ont entretenus ou entretiennent actuellement.

**Deuxième étape : Établir un plan d'action** (une heure)

Rappelez les idées lancées au cours précédent. Répartissez les élèves en équipes de trois ou quatre et demandez à chaque équipe d'examiner au moins l'un des scénarios suivants :

- Juan se joint à un mouvement de jeunesse au Canada, qui a pour mission d'exercer des pressions auprès du gouvernement argentin pour améliorer le sort des petits propriétaires terriens et leur permettre d'avoir leur mot à dire dans la politique gouvernementale.
- Juan fait parvenir un mémoire aux Nations Unies où il explique en détail les difficultés de sa famille et de nombreuses autres personnes de son pays. Son récit est repris dans les médias du monde entier.
- Juan essaie avant tout d'aller à l'école au Canada et d'obtenir une bonne formation afin d'améliorer en fin de compte sa situation dans la société et d'aider à subvenir aux besoins de sa famille.

Gardez les mêmes petits groupes de discussion. Demandez à chacun de sélectionner le scénario qui représente à ses yeux la meilleure solution dans le cas de Juan. Le groupe présentera ensuite un bref compte rendu oral au reste de la classe et exposera les raisons de son choix. Dressez la liste des suggestions formulées et inscrivez-les au tableau pour que chacun puisse les lire. Ensuite, réintroduisez le concept d'équité. Les réponses des élèves abordent-elles cette idée?

• Les suggestions sont-elles réalistes et faisables pour quelqu'un comme Juan?

• Il n'est pas interdit au groupe de proposer d'autres scénarios pour Juan si le groupe le souhaite. Là encore, leur raisonnement doit être justifié dans le compte rendu oral à la classe.

• Discutez de la façon dont ces scénarios peuvent s'appliquer à plusieurs contextes. C'est-à-dire aux élèves personnellement, à un organisme auquel l'élève peut appartenir, à la situation d'un groupe particulier ou à une culture et à un pays sur lesquels les élèves ont lu ou dont ils ont entendu parler aux nouvelles.

**Activités complémentaires facultatives**
(une ou deux heures)

Les élèves accompliront au moins l'une des tâches suivantes :

1. Lire la *Charte canadienne des droits et libertés*. Y a-t-il un article dans la Charte qui s'applique particulièrement à la situation de Juan? Si tel est le cas, rédiger une courte rédaction expliquant en quoi cet aspect de la Déclaration s'applique à Juan et si ça n'est pas trop tiré par les cheveux, comment il pourrait aider à améliorer sa situation au Canada ou en Argentine s'il y vivait encore.
2. Examiner la nature de l'équité dans les relations suivantes :
   - les membres de deux équipes de football adverses
   - une mère célibataire bénéficiaire de l'aide sociale et des travailleurs sociaux
   - un président-directeur général et les ouvriers de la chaîne de montage
   - une exploitation agricole familiale et une ferme constituée en société
   - un couple marié
   - le Canada et les États-Unis.

Choisissez un des exemples et décrivez dans un court rapport la nature de la relation et le type d'équité qui caractérise la relation entre les deux parties. Étayez vos raisons d'exemples concrets. Longueur : 1/2 page jusqu'à une page maximum.

**Troisième étape : Donner des précisions sur l'inégalité**
(une heure)

À nouveau, répartissez les élèves en petits groupes de trois ou quatre. Chaque équipe élaborera un scénario qui montre clairement le degré d'équité dans une relation donnée. Il peut s'agir d'une relation entre un parent et son enfant, un travailleur et son superviseur, un jeune et sa petite amie, un nouvel immigrant et un responsable gouvernemental, un entraîneur et un joueur, etc.

L'équipe rédigera un court texte étoffant la situation. Le scénario qu'élaborent les élèves peut comporter deux à quatre personnages. L'équipe répétera afin de jouer ou de lire à haute voix le scénario à présenter à la classe. Après chaque présentation, on donnera à l'auditoire quelques minutes pour réagir. La situation a-t-elle été présentée clairement? Les « personnages » étaient-ils crédibles et les circonstances réalistes? Existait-il une issue à la situation? Chaque présentation devrait durer environ cinq minutes.

**Quatrième étape : Établir un deuxième plan d'action**
(une heure)

Rédigez la fin de l'histoire de Juan. Quelles mesures prend-il et quelles résolutions semblent réalistes et plausibles? Reportez-vous à la première étape du cours aux fins de référence. Une fois que l'histoire est rédigée, demandez aux élèves de former des petites équipes et à chaque membre de l'équipe de lire son histoire aux autres. Invitez l'équipe à sélectionner l'un des récits et à le présenter au reste de la classe en le lisant à haute voix. La lecture du récit devrait prendre environ cinq minutes. Prévoyez du temps pour que la classe puisse discuter de chaque récit lu. Toutes les rédactions doivent être remises à l'enseignant.

**Cinquième étape : Comparaison**

Dans la série télévisée *Get Outta Town!* (***www.getouttatown.tv***), l'animateur se rend au Costa Rica et au Mexique, à Mexico. Demandez aux élèves de voir qui pourrait être l'homologue de Juan à chacune de ces destinations. La situation à ces deux endroits est-elle comparable? Le Juan costaricain serait-il mieux loti? Le cas échéant, pourquoi? Le Juan mexicain mènerait-il une vie similaire au Juan argentin, mais dans un environnement physique différent, c'est-à-dire rural en Argentine et urbain à Mexico? Les élèves écriront une courte rédaction sur le sujet. Longueur maximale : une page.

## ÉVALUATION

**Évaluez les élèves d'après leur exposé.**

Critères proposés :

- Contenu (le contenu ou le raisonnement étaient-ils bien articulés et réfléchis? Les arguments présentés par l'équipe étaient-ils convaincants?)
- Exposé (l'exposé a-t-il été bien présenté, l'élève était-il audible et facile à comprendre, et la qualité vocale, les gestes et les postures étaient-ils adéquats?, etc.)
- Efficacité (les arguments avancés ont-ils été présentés efficacement? Les suggestions étaient-elles réalistes?)

- Travail d'équipe (l'équipe a-t-elle bien travaillé ensemble et efficacement?)
- Utilisation efficace de la communication orale et visuelle

**Évaluez les élèves d'après leur travail écrit.**

Critères proposés :
- Correction grammaticale et respect de la syntaxe, c'est-à-dire utilisation de structures de phrases complexes, de temps de verbe adéquats, bonnes orthographe et ponctuation.
- Compréhension des mots et des expressions – le sens des phrases est clair.
- Les idées sont exprimées clairement.
- L'information est bien organisée.

**Auto-évaluation du travail d'équipe par les élèves.**

Critères proposés :
- Contribution au savoir du groupe
- Préparation sous forme de recherche et d'enquête
- Formulation des objectifs, conception de solutions de rechange et choix des meilleures solutions
- Établissement d'objectifs personnels pour travailler efficacement avec d'autres

**Évaluez les élèves d'après leur travail de présentation.**

Critères proposés :
- Clarté de présentation de l'information
- Efforts pour améliorer la présentation

« Ce projet a reçu l'aide financière du Programme des études canadiennes, ministère du Patrimoine canadien. Les opinions exprimées n'engagent pas le gouvernement du Canada. »

Patrimoine canadien Canadian Heritage

• *Continued from page 4 of English Curricula*

**Assess students on their written work**

Suggested criteria:
- Grammatically correct with sentences properly structured, i.e., use of complex sentence structure and correct verb tenses, spelling and punctuation
- Comprehension of the word/phrases—sentences clearly reveal the meaning
- Ideas are expressed clearly
- Information is well organized

**Student self-assessment of team work**

Suggested criteria:
- Contribution to group knowledge
- Preparation undertaken for research and investigation
- Articulating goals, devising alternate solutions, selecting best alternatives
- Setting personal goals for working effectively with others

**Evaluate students on their presentation work**

Suggested criteria:
- Present information clearly
- What have they done to enhance the presentation
- Effective use of oral and visual communication?

"This project has been supported by the Canadian Studies Program, Canadian Heritage; the opinions expressed do not necessarily reflect the views of the Government of Canada."

Canadian Heritage Patrimoine canadien

# Technology Supplement

*Welcome to TEACH Magazine's twelfth annual Technology Supplement. Over the years we have presented new products and services for you. We carefully provide narrative descriptions only. They do not qualify as critical reviews or endorsements. Make sure you inquire about educational discounts and pricing. Some products come with teacher's guides.*

## Software

### Phonics 3b Advanced Level II: Sports Edition

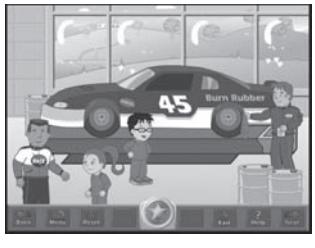
***www.helpme2learn.com***


From the Help Me 2 Learn Company comes Phonics 3b, a software program designed to help students who need to improve their reading and comprehension skills.

Designed for Grades 3 to 8 and above, Phonics 3b's sports theme keeps both boys and girls engaged while he/she explores the educational content. The program includes two levels of grammar, covering nouns, pronouns, verbs, adjectives, subject-verb agreement and verb tense, as well as literature, writing, punctuation, capitalization, spelling, reading comprehension and more.

The program features a number of interactive lessons that present each topic with simple instruction, supported by animated graphics and sound effects. In the Coach Time lesson section, expert "coaches" introduce each topic and teach the vital points of phonics while giving instructions on how to play a sport. In Learn the Words, students can study over 400 words presented in syllables and over 2,500 spoken words in sentences. Also included are pre- and post-test assessment programs, teacher/lab program controls, a user guide and lesson plans.


Phonics 3b is both PC and Mac compatible – both school and home versions are available. The School, Lab and Site versions come complete with a User's Guide and Lesson Plans. They include step-by-step instructions for using the program in the classroom, black line masters of the activities, lyrics to the songs and suggestions for extra activities.




Phonics 3b prices range from USD $32.95 to USD $949.95, depending on the package purchased. For more information on pricing and packages, please visit ***www.helpme2learn.com/products.htm#5007***. You may purchase Phonics 3b by cheque, phone (800-460-7001), fax (909-797-4541) or with a school purchase order. A free demonstration is also available.

### MY Access! 5.0

MY Access! VERSION 5.0

From Vantage Learning, MY Access! 5.0 is an online, portfolio-based writing instruction program that allows students and teachers to track students' writing progress over time.

Using MY Access! 5.0, students can write, review and revise their work, as well as receive feedback on several important writing dimensions, from organization to mechanics. Teachers can then review students' work and provide additional feedback.

Version 5.0 of MY Access! adds more features that allow teachers to tailor the teaching and learning environments to students' specific needs.

MY Access! is a Web-based assessment and diagnostic writing tool that scores student essays and provides individualized

feedback, which engages and motivates students to improve their writing skills. The online reporting feature provides up-to-the-minute student performance data, enabling teachers to make timely, data-driven decisions for individual and appropriate instruction. MY Access! analyzes more than 300 semantic and syntactic characteristics and works on five major areas: focus and meaning; organization; content and development; language use and style; mechanics and conventions.

For pricing and ordering details, visit ***www.vantagelearning.com/product_pages/full-myaccess.html***

#### Quiz-Buddy 4.0

Do your students need help memorizing facts, dates and names? If so, they just might need this "study buddy" from Sierra Vista Software.

Quiz-Buddy 4.0 is a Windows-based teaching tool that aims to improve student results in vocabulary building and learning foreign languages. The program is helpful in preparation for the SAT, PSAT, GRE, GMAT and other standardized tests.

Quiz-Buddy 4.0 includes over 40 study modules on subjects such as vocabulary, math, Spanish, French, Chinese and geography. Each study module contains several dozen questions and answers, and some include pictures.

Students learn as they answer a number of automatically generated multiple-choice and yes/no questions. Once students have completed all the tests and studied all the material, teachers and students can create and save new study modules and quizzes with Quiz-Buddy's built-in editor. Free video tutorials and user guides are available on the Quiz-Buddy Web site.

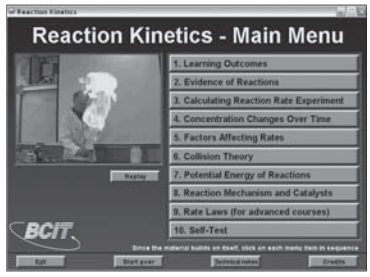
As an added feature, teachers and students using the Palm OS can save study modules in Palm OS format with one click of the mouse – the free Palm OS version is available on the Web site at ***www.quiz-buddy.com***.

Quiz-Buddy sells for USD $39.95, with a 90-day money-back guarantee. Educational discounts and site licenses are available. For more information on pricing and to request a free demonstration CD, please visit ***www.quiz-buddy.com***. A trial version can be downloaded from the Web site as well.

#### Virtual Chemistry Lab – British Columbia Institute of Technology

Instructional New Media researchers at the British Columbia Institute of Technology (BCIT) Technology Centre, in collaboration with the Vancouver School Board in British Columbia, have developed Canada's first virtual chemistry lab for Grade 12. Peter Fenrich, BCIT's award-winning Instructional New Media designer, created the virtual lab.

This program covers both the hands-on and theoretical concepts of the reaction kinetics topic in chemistry and is relevant to every Grade 12 (or comparable level) chemistry student across Canada and around the world.




The virtual lab complements concepts demonstrated in traditional labs. It contains video clips of numerous experiments, including some of which that are difficult, expensive or dangerous to show. The program also simulates an actual lab where students record observations, perform calculations, draw a graph, analyze data and draw conclusions.

The program allows students the freedom to learn at their own pace and to review experiments and concepts until they clearly understand the theory. The animations (e.g., showing how catalysts work and how varying the concentration of reactants affects the reaction rate), discovery learning techniques (e.g., varying the temperature of reactants to see how temperature affects the reaction rate), questions, feedback and summaries help students learn effectively. This resource is useful for students preparing for exams or for those who miss classes.

The virtual lab is available on CD. The program is priced at CDN $349.95 for a site license and CDN $99.95 for a single-use license. To order, please contact Susan Ostermann at 604-432-8373. A demonstration version can be downloaded from ***www.bcit.ca/appliedresearch/gait/projects/reactionkinetics.shtml***.

## Web

#### DiscoverySchool

***http://school.discovery.com***

Always a favourite among science aficionados, the Discovery Channel has created the Web site DiscoverySchool, which offers fun and interactive approaches to classroom learning. Providing teachers with a gateway to the best Web sites for teaching and learning (more than 2,000) is Kathy Schrock's Guide for Educators.

Looking for innovative ways to teach science? The Curriculum Center contains classroom activities tackling the core science curriculum for upper elementary and middle school grades.

Browse the Lesson Plans by grade and subject, where you'll find printable versions of lessons that include Gladiators: Rome's Violent Past and Animal Classification. Lessons are available for students from K-Grade 12.

Teachers will appreciate the Custom Classroom feature. With access to fantastic online teaching tools (Quiz Center, Worksheet Generator, Lesson Planner and Puzzlemaker), you can create and save your documents in a personal online account for future use. Best of all – it's free.

To ensure that students enjoy this site too, DiscoverySchool included the kids' section Homework Helpers. With links like Fun & Games, Study Tools and Learning Adventures (where users embark on an underwater ocean exploration or back in time to the Salem Witch Trials), kids will have their pick of engaging activities and learn educational material in the process.

**First Among Equals: The Prime Minister in Canadian Life and Politics**
***www.collectionscanada.ca/primeministers/kids/index-e.html***


Library and Archives Canada has created an easy-to-navigate Web site, complete with interesting facts and links, for students researching Canadian prime ministers. Presented in a logical format, First Among Equals explains how a prime minister gets elected, what his or her responsibilities are (found in such links as Choosing a Cabinet and Dealing with the Provinces), and the role of the Queen in Canadian politics. The Facts section lists our prime ministers and their dates in office, along with a corresponding link to their biographical information. Several games and a neat picture gallery can also be found on the site.

To aid with student comprehension, important terms, such as *mandate* and *constitution*, contain links to their definitions. The reoccurring feature Did You Know? prompts students to read interesting information that may be new to them, such as Prime Minister Mackenzie King's famous dog, Pat.

Educators looking for a lesson and activity should go to the Teachers link in the Introduction section. Presenting…the Prime Minister of Canada asks students to conduct research on the Web site and create a presentation based on their findings. Instructions and a student handout are available to download for free in HTML, .PDF and RTF format.

Image above:


**Kids' Stop – Indian and Northern Affairs Canada**
***www.ainc-inac.gc.ca/ks/index_e.html***


From Indian and Northern Affairs Canada comes the comprehensive Web site Kids' Stop, where teachers and students can find information about the history of Aboriginal people in Canada, their culture and their contributions to Canadian society.

The achievements of newsworthy Aboriginals are included in the People section, while students can listen to different Aboriginal words in Languages. Look for the story Claire and her Grandfather in the Cool Stuff section. Intended to increase student awareness about the contributions Aboriginals have made to Canadian society, not only is the story intriguing, the activities and teacher resources are also great fun.

And don't miss out on the Teachers' Section. Available for download in .PDF format is Through Mala's Eyes – Life in an Inuit Community, a teaching resource that educates students about the history and traditions of the Inuit people. Along with a narrative about a fictional Inuk boy, it contains 13 lesson plans for students aged nine to 12, some of which can be adapted to different grade levels. Each lesson contains a story or narrative, activities sheet and a list of required resources. Useful Web sites and a glossary of terms are also included.

**PBS TeacherSource**
***www.pbs.org/teachersource***

**PBS Kids Don't Buy It**
***http://pbskids.org/dontbuyit***

Developed by educators, PBS TeacherSource is appropriate for teachers from preschool to Grade 12. Complete with video and online resources, more than 3,000 lesson plans and activities are posted on the site. Lessons are organized by subject, and contain a recommended book list and links to further information. Within each subject stream, lesson plans can be searched by grade and topic of choice. Lessons and activities that are a Standards Match (i.e. match a specific area of curriculum) are always indicated.

Interested in professional development? Technology & Teaching brings you the latest information about how technology is changing the teaching profession. Self-guided tutorials help to explain current technology, and cover such topics as creating digital graphics to developing an HTML Web site.

Also a great place for information and games, PBS Kids has developed the site Don't Buy It to teach students how media can affect the choices they make. Students learn how to evaluate advertisements and spot a pitch before buying into corporate gimmicks. Intended for children in Grades 3-5, the activities offer suggestions to incorporate media education into your curriculum. A section for teachers also provides lesson plans devoted to media literacy.

## Search Engines for Kids

**Yahooligans!**
***www.yahooligans.com***

The ever-popular Internet search engine Yahoo! has a little sister site that's worth a second look. Yahooligans! provides kids with all the safe Internet searching tools they could possibly need. The search results are age-appropriate and the site is packed full of activities, from countless games to the Joke of the Day. Also included is the Teachers' Guide, which explains

the concept of Internet literacy and how to teach it to your students.

### Fact Monster

***www.factmonster.com***

This award-winning site is the place to find fun, fascinating and important facts. The subject matter is broad, covering everything from Science to People. Easy-to-navigate and stocked with useful information, Fact Monster is the perfect companion for a student working on any assignment, be it science-related or a spelling lesson. Reference tools include an atlas, almanac and encyclopedia.

### How Stuff Works

***www.howstuffworks.com***

Curious about how your car's cruise control works? What about food preservation? These questions, and many more, are explained for easy teacher and student comprehension on the site How Stuff Works. Simply type in your perplexing queries and the answers to life's most fascinating questions will be just a mouse click away.

## Misc

### Computer Craig

Computer Craig is a set of interactive computer learning videos for children aged 6-12. Six educational videos teach kids to become computer savvy and also give parents the chance to help develop their child's computer education.

The Computer Craig series of videos teach computer basics, graphic design, word processing, Internet, e-mail and electronic presentations such as PowerPoint. Children can watch the videos on their home television and complete related lessons on their home computer or at their local library using the Computer Craig workbook.

The Computer Craig program is available in DVD or VHS and includes six Computer Craig videos, a Computer Craig workbook and a "CC Jr." puppet. The program is available for purchase online, and is currently offered with a 30-day risk-free trial for USD $14.95, plus shipping and handling. The trial has a money-back guarantee (less shipping and handling).

To learn more about the program and to watch video clips, visit ***www.computercraig.com*** or call toll free 800-848-6105.

*Welcome to TEACH Magazine's second roundtable discussion. This is part one of a three-part series. Participants are talking about the current state of technology in education, effective teaching practices and technology as an enabler – where and how technology is playing an instrumental role in helping students to collaborate and learn.*

# Technology Roundtable Discussion

## Part 1 of 3

Transcribed and Edited by Noa Glouberman

**Paricipants:**
**Dan Lang (DL), D.Lang and Associates, Moderator**
**Avi Oaknine (AO), Adobe, Education**
**Simon Geoghegan (SG), Microsoft, E-learning**
**Janet Murphy (JM), K-12 Education, York University and York District School Board**
**Bob Kennedy (BK), Apple, Education and Technology**
**Richard Worzel (RW), Futurist, TEACH Magazine columnist**

**DL:** What do you feel is the current state of the use of technology in education?

**JM:** There are two perspectives on this: the students' and the teachers'. While most teachers are familiar with technology at a personal level—for example, e-mail or online banking—they're not as comfortable using it in the classroom. Part of the problem is most classrooms aren't equipped to support technology—they have an electric plug at the front and back, but nothing to accommodate, for example, a computer that shares information via an overhead projector. Further, schools are under-serviced in terms of access to hardware—for instance, a computer-department head may hold the lock-and-key to all the school's media resources, or one person manages all the administrative software. How well that person communicates or what kind of team player he or she is determines how well the resources get distributed. There also isn't enough professional development focusing on the best, most effective use of technology in the classroom, and workshops that do show teachers how to use an application don't have the impact they should because, when the teachers go back to their classrooms, there's either no computer there, the computer is broken or they don't have access to the software.

On the other hand, students are very technologically savvy; most have access to a computer and don't even remember a world without the Internet. There's a gap between what kids know and understand technology to do, and how they are applying it for learning purposes. Teachers could do a better job of preparing students for post-secondary education and beyond if they had more consistent access to technology, in a better thought-out program.

**RW:** When it comes to the struggle of technology in education, we're entering the second generation. The Canadian education system is divided; there's a range of applications in use, from things that will still be useful 20 years from now to things befitting a 19th-century one-room schoolhouse. The first generation of tech wars in education has been won. The forces seeking to stop technology—principally teachers—have been defeated. Technology is now entrenched in the classroom (despite the fact many teachers were violently opposed to the idea), partly because parents think it's an important competitive advantage, career-wise, for their children. As a result of this parental and societal pressure, school-board trustees and administrators now embrace the concept of technology in the classroom and computer literacy, even though they don't necessarily know what it's going to be used for. Technology in the classroom has become a motherhood issue: it must be there or our school system is failing in its responsibilities. So, that war has been won.

The next war to be won is about actually using the technology to help students learn and teachers teach – anything else is a distraction. In fact, for the exact reasons Janet's identified, we're losing that battle, because of the hodgepodge of technology out there, obsolete equipment sitting next to state-of-the-art equipment, dollars misallocated to inappropriate technology and a teacher core that doesn't really know how to use it. Simultaneously, students are far ahead of their teachers. One refinement I'd make to what Janet said is students don't necessarily know the technology perfectly well, but they're able to intuit/feel the technology because they grew up with it, unlike teachers. For students, it's like breathing. No student in public school today lived before computers were around. Very few lived before the Internet was popularized (except those in senior high school). They have an intuitive feel for technology that teachers lack. Because of this, partly, technology is wasting valuable resources. We should ban technology and use the money to hire more teachers – that might be a better use of dollars currently being wasted. Of course, that's not true everywhere. There are places where technology is doing wonderful things, but not many. Essentially, technology isn't an entirely positive force right now.

Moreover, technology is a tool, not a result. School boards approach and legislate it as a result, i.e., "We must have technology." But it's a tool – a very powerful tool that can accomplish great things if it's used well. If it's used badly, it's an equally powerful tool that does harm. Currently, the fight is in the balance; at the end of the day it will only be won when the current generation of teachers turns over and is replaced by younger people who have a greater technological feel and understanding of technology.

***"We're losing that battle, because of the hodgepodge of technology out there, obsolete equipment sitting next to state-of-the-art equipment, dollars misallocated to inappropriate technology and a teacher core that doesn't really know how to use it."***
***RW***

**SG:** Discussing the state of technology integration in education in Canada is difficult because there's so little consistency across provinces and school boards. There are places where technology and appropriate support and training are available, where technology is being used in the classroom in such a way as to impact teaching and learning. But it's hard to predict where that is. I can only tell you when technology is being used significantly in the classroom – when there's leadership at the provincial, the board or, most commonly, the school level (with the principal or vice principal), that's where technology is in a significant way.

**DL:** Where have you seen that leadership? Where are there technology resources available? What have you seen in terms of good or effective teaching and learning practices?

**SG:** I'm not sure if the consistency varies based on the kind of technology the curriculum requires, but the most interesting thing I've seen when technology and education meet is the level of engagement by teachers and students – a student-centric classroom where students collaborate and share and the class is run on an even playing field. It's possible to have a classroom like that without technology, so I don't think we can necessarily say it's because of technology these classrooms are run well or good things are happening. But certainly, technology is being used in these classrooms as an enabler or, in some cases, an accelerator.

One example is a class where students, working in small groups, use computers to do a project. One teacher I spoke to in Kingston, Ont., does a project in his Grade 6 class, where the kids collaborate with students in Israel to learn about what their life is like in that country, and vice versa. What would have been very difficult and costly to do 10 years ago is now being done on a daily basis. Further, the students work in groups, independently of the teacher; he interacts with them from time to time in an ad hoc way. So, there are two kinds of collaboration going on – between the students themselves and between the students and Israeli children. It's also an environment that frees up the teacher to work with students who have special needs or require his intervention at certain points in their learning, rather than

have him sitting or standing in front of the class giving the same instructions to 30 individuals. It's a more dynamic classroom, one my parents would feel uncomfortable in because of the noise of students collaborating with each other, instead of just one person talking at a time.

Also, I agree with what Richard says in terms of, "The war has been won," but I don't think we should resign ourselves to that. There are still scrimmages going on and places where the concept of technology being used in the classroom itself is still being vigorously challenged, which I don't think is necessarily a bad thing. It's a good discussion to have and it's a discussion that's still being had across the country.

**RW:** It's important to bear in mind that, because technology is a tool, we often get conflicting studies. For example, a study from the University of Jerusalem indicated students learning in classrooms equipped with computers did worse than classrooms without computers, and that's without taking into account the resources devoted to installing those computers in the first classroom; clearly, it would have been a real net loss for the classroom with computers. On the other hand, a study done in the U.K. indicated high school students with access to IT resources were half a year to a year ahead of their peers. So, we get conflicting stories as to whether computers are good or bad, and we must conclude it's because of how they're used. When computers are used well, they're very powerful. When they're used poorly, they're a dead weight.

**JM:** I'm currently managing a program that's investigating where the best use of technology in the classroom would be and what teachers would be doing with it. Simon previously described an example of a classroom that's using technology well, where the curriculum comes first and the technology adds extra value to it, allowing the teacher to do things that he or she could not do in a traditional, face-to-face setting.

I think part of the problem is, in most jurisdictions, technology is treated as an add-on to existing practices in education, rather than an integral piece in how we must teach. This results in "pockets" of innovative teaching. Sadly, the innovation is not institutionalized well because the people who legislate how money flows through the system haven't figured out what pieces have to shift to support the kind of learning environment accommodated by technology. This contributes greatly to the state education is in right now and the sense of confusion we're currently puzzling through: Why we can't just embed technology into our teaching practices in a way that allows for the kind of results we know are possible when people use technology appropriately? The evidence says, when someone is teaching well, the technology is used well; when they're not teaching well, not even a textbook will help do the job. It's about developing standards and processes for effective practice that make the best use of technology in the classroom, and mainstreaming it.

# TEACH Magazine invites YOU to

**WWW.GETOUTTATOWN.TV**

TEACH Magazine in conjunction with
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*Bienvenue à la deuxième table ronde de la revue TEACH/LE PROF. Voici la première d'une série de trois parties. Les participants échangent sur l'état actuel de la technologie en éducation, sur les méthodes d'enseignement efficaces et sur la technologie en tant qu'outil pratique – où et en quoi la technologie joue un rôle important pour aider les élèves à collaborer et à apprendre.*

# Table ronde sur la technologie

## Première de trois

Texte transcrit et rédigé Noa Glouberman

**Participants :**
**Dan Lang (DL), D.Lang and Associates, modérateur**
**Avi Oaknine (AO), Adobe, Éducation**
**Simon Geoghegan (SG), Microsoft, apprentissage en ligne**
**Janet Murphy (JM), Éducation du J.E. à la 12e année, Université York et conseil scolaire du district de York**
**Bob Kennedy (BK), Apple, Éducation et technologie**
**Richard Worzel (RW), futurologue, collaborateur à TEACH/LE PROF**

**DL :** Pour chacun d'entre vous, quel est le bilan de l'utilisation de la technologie en éducation ?

**JM :** Il y a, à cet égard, deux perspectives : celle des élèves et celles des enseignants. Si la plupart des enseignants sont familiarisés avec la technologie au niveau personnel – ne serait-ce que par le courrier électronique ou les services bancaires en ligne – ils ne sont pas aussi à l'aise pour l'utiliser dans leur classe. Ce problème est en partie dû au fait que bien des classes ne bénéficient pas du soutien technologique nécessaire : elles ont une prise électrique d'un côté et une de l'autre, mais rien permettant d'installer, par exemple, un ordinateur pour présenter des informations au moyen d'un rétroprojecteur. Par ailleurs, les écoles sont mal organisées pour accéder au matériel. Ainsi, un chef de département informatique pourra garder sous clé toutes les ressources médiatiques ou une seule personne gèrer tous les logiciels administratifs. C'est donc la capacité de cette personne à communiquer ou à travailler en équipe qui déterminera la façon dont les ressources seront distribuées. Il n'y a pas non plus assez de perfectionnement professionnel axé sur les meilleurs moyens d'utiliser la technologie dans les classes, et les ateliers – il y en a – qui indiquent aux enseignants comment utiliser une application n'ont pas les effets désirés car lorsque les enseignants regagnent leur classe, ils n'ont pas d'ordinateur ou celui-ci est en panne ou ils n'ont pas le logiciel voulu.

Par ailleurs, les élèves sont, eux, très branchés sur la technologie, la plupart ont accès à un ordinateur et n'ont jamais connu un monde sans l'Internet. Il y a donc un décalage entre ce que les élèves savent en matière de technologie et la façon dont ils l'appliquent pour les aider à apprendre. Les enseignants pourraient mieux préparer les élèves à leur éducation post-secondaire et au-delà, s'ils avaient un accès plus régulier à la technologie dans le cadre d'un programme mieux pensé.

**RW :** Lorsqu'on parle du combat pour la technologie en éducation, nous abordons la seconde génération. Le système éducatif canadien est divisé. Il y a toute une gamme d'applications en usage ; cela va de choses qui seront toujours utilisées dans vingt ans à d'autres mieux adaptées à une classe du XIX$^{e}$ siècle. Nous avons gagné la première génération de la guerre technologique dans l'éducation. Les forces qui cherchaient à stopper la technologie – surtout les enseignants – ont été défaites. La technologie est maintenant bien inscrite dans les classes (en dépit du fait que les enseignants y étaient violemment opposés), notamment parce que les parents estiment qu'elle représente pour leurs enfants un important avantage concurrentiel eu égard à leur carrière. Suite aux pressions exercées par les parents et par la société, conseillers et administrateurs scolaires ont adopté le concept de la technologie dans la classe et de l'ordinoculture sans nécessairement bien savoir à quoi elle servira. La technologie dans la classe est devenue une valeur incontestée : si elle en était absente, le système scolaire ne s'acquitterait pas de ses responsabilités. Cette bataille a donc été gagnée.

***La technologie est maintenant bien inscrite dans les classes, notamment parce que les parents estiment qu'elle représente pour leurs enfants un important avantage eu égard à leur carrière.***

***–RW***

La prochaine bataille concernera l'utilisation de la technologie pour aider les élèves à apprendre et les enseignants à enseigner, seule chose véritablement importante. Cependant, pour les raisons avancées par Janet, nous sommes en train de la perdre en raison de la confusion technologique, de la coexistence d'équipements vétustes et ultramodernes, de la mauvaise affectation des crédits à des équipements inadaptés et de l'existence d'un noyau d'enseignants qui ne savent pas vraiment les utiliser. En même temps, les élèves sont bien en avance sur leurs professeurs. À cet égard j'aimerais apporter une précision à ce qu'a dit Janet, à savoir que les élèves ne connaissent pas nécessairement la technologie aussi bien que ça mais qu'ils la sentent intuitivement parce que, contrairement aux enseignants, ils ont grandi avec. Pour eux, c'est automatique, comme la respiration. Aujourd'hui aucun élève d'une école publique n'a vécu avant l'invention de l'ordinateur. Très peu d'entre eux ont vécu avant la généralisation de l'Internet (à l'exception des élèves des dernières années du secondaire). Ils ont, pour la technologie, un instinct qui fait défaut à leurs enseignants. Ceci explique en partie le gaspillage de précieuses ressources technologiques. Il serait préférable d'éliminer la technologie et d'utiliser les fonds pour recruter davantage d'enseignants. Ceci serait une façon plus judicieuse d'utiliser l'argent si souvent gaspillé actuellement. Mais ce n'est évidemment pas vrai partout. La technologie fait parfois des merveilles, mais c'est rare. En fait, actuellement, la technologie n'est pas une force entièrement positive.

De plus, la technologie est un outil et non un résultat ; c'est pourquoi « il nous faut la technologie ». C'est un outil puissant si nous savons bien l'utiliser. Par contre, c'est un outil tout aussi puissant pour faire des dégâts si nous ne savons pas l'utiliser. À l'heure actuelle, le combat consiste à trouver l'équilibre. En fin de compte, la bataille ne sera gagnée que lorsque l'actuelle génération d'enseignants aura disparu et sera remplacée par des jeunes qui sentiront et comprendront mieux la technologie.

**SG :** Il est difficile de faire le bilan de l'intégration de la technologie dans l'éducation au Canada parce qu'il n'y a aucune uniformité, que ce soit entre les provinces ou entre les conseils scolaires. Dans certains endroits, la technologie est très présente, de même que le soutien et la formation, et elle est utilisée à bon escient dans la classe, pour l'apprentissage comme pour l'enseignement. Mais il est difficile de savoir où. Tout ce que je peux dire, c'est que lorsqu'on constate un leadership au niveau de la province, du conseil scolaire ou, plus généralement, de l'école (avec la direction ou la direction adjointe), la technologie est utilisée de façon intelligente.

**DL :** Où avez-vous constaté ce type de leadership ? Où les ressources technologiques sont-elles disponibles ? Quels types de bonnes pratiques d'enseignement et d'apprentissage avez-vous vus ?

**SG :** Je ne sais pas si l'uniformité est fonction du type de technologie requis par le programme ou le niveau scolaire, mais ce que j'ai constaté, c'est que lorsqu'il y a adéquation entre la technologie et l'enseignement, les enseignants et les élèves sont très engagés – il s'agit généralement d'une classe centrée sur l'élève où les élèves collaborent et partagent, et où la partie est égale. Or, on peut très bien avoir une classe comme ça sans technologie ; on ne peut donc pas dire que c'est en raison de la technologie que ces classes sont bien gérées ou qu'on y enregistre de bons résultats ; mais il est certain que dans ces classes la technologie est un outil pratique et même parfois un accélérateur. Citons l'exemple d'une classe où les élèves, travaillant en groupes, utilisent des ordinateurs pour

réaliser un projet. Un enseignant de Kingston m'a expliqué qu'il avait un projet dans une classe de 6e année où les élèves collaboraient avec des élèves d'Israël pour découvrir la vie dans ce pays et vice versa. Cette démarche, qui aurait été difficile et coûteuse il y a dix ans, est maintenant possible tous les jours. De plus, les élèves travaillent en groupes, indépendamment de leur professeur ; celui-ci intervient de temps à autre de façon ponctuelle. Cette formule permet donc une double collaboration : d'une part entre les élèves, et d'autre part entre les élèves et les enfants israéliens. Cet environnement libère l'enseignant qui peut donc se consacrer aux élèves en difficulté ou qui ont besoin de lui à certains moments de leur apprentissage au lieu de s'asseoir devant sa classe à donner les mêmes consignes à trente personnes. Cela donne une classe plus dynamique, une classe dans laquelle mes parents seraient mal à l'aise à cause du bruit que font les élèves travaillant ensemble plutôt que de parler chacun leur tour.

Je suis tout à fait d'accord avec ce que dit Richard sur la « bataille qui a été gagnée », mais je ne pense pas que nous devrions nous y résigner. Il y a encore quelques offensives et, en certains endroits, le concept d'utilisation de la technologie dans les classes est encore vivement contesté, ce qui ne me paraît pas nécessairement une mauvaise chose. C'est une discussion nécessaire et qui a toujours cours partout au pays.

***Ainsi, nous avons des résultats divergents quant à l'utilité ou à l'inutilité de la technologie, et force nous est de conclure que cela est dû à la façon dont elle est utilisée. Lorsque les ordinateurs sont bien utilisés, ce sont de puissants alliés. Dans le cas contraire, ils constituent un poids mort.***

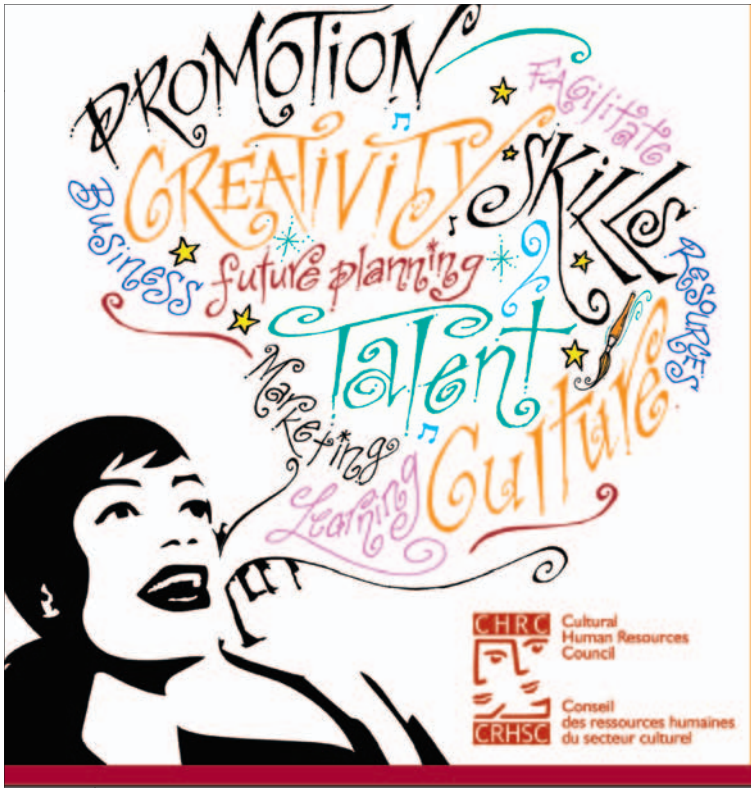
***–RW***

**RW :** Il ne faut pas oublier qu'attendu que la technologie est un outil, les recherches ne sont pas unanimes. C'est ainsi qu'une étude faite à l'Université de Jérusalem révèle que les résultats des élèves qui travaillent dans des écoles équipées d'ordinateurs étaient pires que ceux des élèves qui n'en avaient pas, et ceci sans tenir compte des ressources consacrées à l'installation de ces ordinateurs dans la première classe ; il est clair que l'échec aurait été évident pour la classe équipée d'ordinateurs. Par contre, une étude effectuée en Grande-Bretagne montre que


les élèves du secondaire qui avaient accès aux technologies de l'information étaient d'un an à un an et demi en avance sur leurs congénères. Ainsi, nous avons des résultats divergents quant à l'utilité ou à l'inutilité de la technologie, et force nous est de conclure que cela est dû à la façon dont elle est utilisée. Lorsque les ordinateurs sont bien utilisés, ce sont de puissants alliés. Dans le cas contraire, ils constituent un poids mort.

**JM :** Je gère actuellement un programme qui enquête sur le meilleur moyen d'utiliser la technologie dans la classe et sur ce que les enseignants pourraient faire avec. Simon nous a fourni un exemple de bonne utilisation de la technologie dans une classe, où le programme passe en premier et où la technologie apporte un plus, permettant à l'enseignant/e de faire des choses qui lui auraient été impossibles dans un cadre traditionnel de face à face.

Je crois que le problème tient en partie au fait que, dans la plupart des secteurs, la technologie est traitée comme un ajout aux pratiques existantes plutôt que comme une partie intégrante de notre enseignement. Ceci entraîne des « poches » d'enseignement novateur. Malheureusement, l'innovation n'est pas bien institutionnalisée car les personnes qui gèrent le flux de l'argent dans le système ne savent pas quelles pièces il faut déplacer pour soutenir le type de milieu d'apprentissage qui se prête à l'utilisation de la technologie. Ceci contribue grandement à l'état actuel de l'éducation et à la confusion que nous connaissons. Pourquoi ne pas intégrer la technologie à nos méthodes d'éducation de façon à faciliter les résultats que nous savons possibles lorsque la technologie est utilisée à bon escient ? À l'évidence, lorsque quelqu'un enseigne bien, la technologie est bien utilisée, et lorsque quelqu'un enseigne mal, même un manuel scolaire sera sans effet. Pour faire le meilleur usage de la technologie et l'incorporer dans l'enseignement ordinaire, il faudra établir des normes et des méthodes pour une pratique qui marche.

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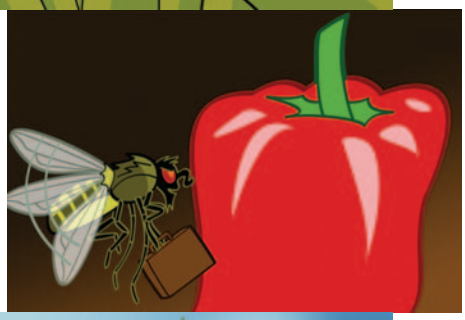

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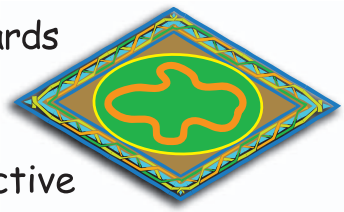

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