

# TEACH

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Education for Today and Tomorrow • L'Éducation - Aujourd'hui et Demain

## LE PROF

### CURRICULA

#### The Smoke-Free Project

#### Food Fight

*With childhood obesity on the rise in Canada,  
what can schools do to ensure students eat right?*

#### Beauty is Media Deep

*How advertisers influence body image*

La beauté ancrée dans les médias,  
ou comment les annonceurs influencent  
l'image du corps.



# THE FUTURE STARTS NOW WITH POP! MAGAZINE



The back to school issue of **POP! Magazine** is all about the future and what amazing technology lurks ahead – from toys and games to health and fashion to the basic items making up the household. So, jump aboard our time machine and be part of our fun, imaginative journey into a world of possibilities.

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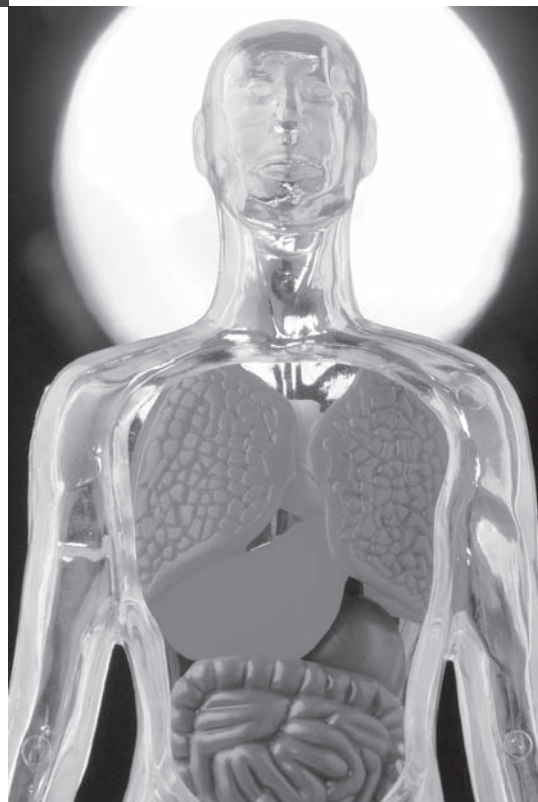
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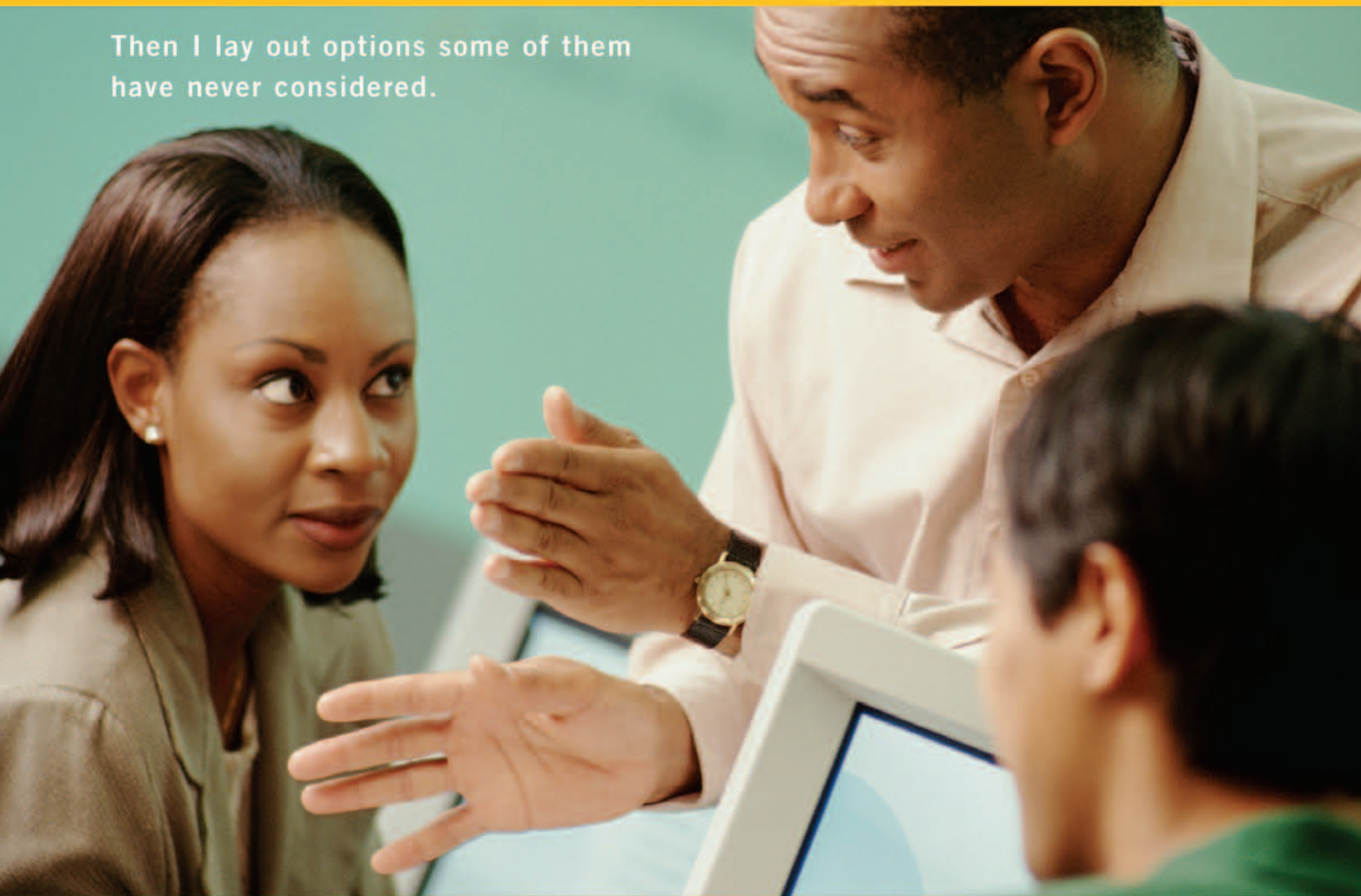
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People ask me how I advise my students on what they should do for a career. The first thing I do is listen.

Then I lay out options some of them have never considered.



**THESE DAYS, MORE AND MORE YOUNG PEOPLE** are figuring out that careers in the skilled trades can offer them a life they'll enjoy, doing work they're proud of. There's good pay and the opportunity that comes from being in demand all across Canada. There are a lot of benefits in considering an apprenticeship as a post-secondary option.

Visit [www.careersintrades.ca](http://www.careersintrades.ca). You'll see how great a career in the skilled trades can be and why encouraging young people to take an apprenticeship just makes sense.

[WWW.CAREERSINTRADES.CA](http://WWW.CAREERSINTRADES.CA)

  
**SKILLEDTRADES**  
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This project is funded by the Government of Canada's Sector Council Program.



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## Enter your students in The A&E® Canadian BIOGRAPHY® of the Year Essay Contest September 1-November 1, 2004

Students in grades 5-12 may enter by writing an essay based on someone they think made the biggest impact on Canadian society in 2004.

Prizes are awarded in two grade levels: 5th-8th grade and 9th-12th grade. Two winners will be selected in each level. Students, teachers and schools can win exciting prizes. For more information and official rules, go to our website [www.aetv.com/class/canadianclassroom](http://www.aetv.com/class/canadianclassroom)



### Grand Prize

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\$5,000 Prize  
Department/  
Classroom  
of Teacher:  
\$1,000 Cash  
School:  
A&E Television  
Networks  
Video Library  
(includes 25" Colour TV,  
DVD player, and 3 Classic  
A&E DVD Box Sets)

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\$2,500 Prize  
Department/  
Classroom  
of Teacher:  
\$1,000 Cash  
School:  
A&E Television  
Networks  
Video Library  
(includes 25" Colour TV,  
DVD player, and 3 Classic  
A&E DVD Box Sets)

### Bring Great Ideas Into Your Classroom

As part of the A&E commitment to Cable in the Classroom, A&E showcases informative programming that can be used as a teaching resource in the classroom each weekday morning from 7am-8am ET. Educators are encouraged to videotape the commercial-free and copyright-cleared programming and incorporate it into their classroom curriculum.

### Idea Book For Educators™

A&E has scheduled programs to complement curriculum in the areas of history, literature, performing arts, science and social studies. A free resource guide is offered to educators which includes a programming calendar, program descriptions, and lesson plans to accompany some of the programs.



For more information on all A&E educational programs and the Canadian BIOGRAPHY® of the Year Essay Contest, as well as access to 250 study guides, visit us online at [www.aetv.com/class/canadianclassroom](http://www.aetv.com/class/canadianclassroom)

# A&E Canadian Classroom



Welcome back to school. Not much has changed in our (nearly) 12<sup>th</sup> year of publishing here at TEACH Magazine: each fall debuts in a frenzy of activity. In the academic world, fall is a time of new beginnings, new classes, new schools and new situations for educators and students.

This issue is all about healthy choices that will lead to healthy living. We have developed content you will find very useful, featuring practical suggestions and listings of resources you may reference.

Everyone is concerned about the lack of good nutrition and how this affects obesity rates. We take a look at school cafeterias and highlight some ways the food they serve can be changed into something healthier.

Next is an article on body image, the effects of peer pressure and the media playing a defining role in how youth see themselves. You will also read about solutions and be referred to some programs you can use in the classroom.

This issue's CURRICULA explores the topic of tobacco and the media. The Smoke-Free Project is a hands-on resource allowing you to examine the impact of smoking and media influences at the same time. Because the topic is large, we couldn't fit the entire resource within these pages. Some pages will be posted on a Web site for you to download, ensuring the entire project remains intact and available to you.

Next Issue

- Professional Development Supplement
- Focus on Finance
- Media as a Teaching Tool

Vive la rentrée ! LE PROF termine sa douzième année de publication et chaque automne apporte son lot d'activités fébriles. Dans l'univers scolaire, c'est le temps de nouveaux départs, de nouveaux cours, de nouvelles écoles et de nouvelles situations, pour les éducateurs comme pour les élèves.

Ce numéro traite de choix... des choix sains qui mènent à une vie saine. Le contenu que nous avons choisi saura, nous l'espérons, vous être utile avec ses suggestions pratiques et la liste de ressources auxquelles vous pouvez vous référer.

La bonne nutrition intéresse tout le monde, tout comme son absence qui a un lien avec les taux d'obésité en énorme augmentation. Nous voyons la cafétéria de plusieurs écoles et suggérons quelques façons dont les cafétérias pourraient changer ce qu'elles proposent pour un choix plus grand de nourriture plus saine.

D'abord un article sur l'image du corps, la pression des camarades et le rôle que jouent les médias pour définir la façon dont les jeunes se voient. Vous trouverez aussi des solutions et des programmes à utiliser dans la classe lorsque vous aborderez ce sujet.

Le CURRICULA de ce numéro analyse le sujet du tabac et des médias. Nous vous proposons le projet de lutte contre le tabagisme, ressource pratique pour analyser les effets de la cigarette sur les jeunes tout en soulignant l'influence des médias. Le sujet étant vaste, nous n'avons pu y faire figurer la totalité du document ; certaines pages seront donc mises sur un site Internet pour que vous puissiez les télécharger facilement et que le projet vous soit disponible dans son ensemble pour votre classe.

Wili Liberman

# TEACH MAGAZINE

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The Yuckiest Site  
on the Internet

<http://yucky.kids.discovery.com/body>

Dandruff, gas, sweat, zits, earwax, digestion, circulation and more – this site allows kids to ask questions, play games and find out all about their own gross and yucky bodies. It's a fun and educational place where students can find answers to questions they could never ask teachers.

Users learn about bodily functions (complete with detailed descriptions, pictures and sounds) and biological systems from pop-down menus. The information is designed to appeal to students: it's brief, graphic and accompanied by audio. Clicking on hiccups, for example, leads to a series of questions: What are hiccups? What makes us keep hiccupping? How can you stop hiccups? Are there any good hiccup remedies? Students can't help but be engaged in learning about the things constituting a gross and cool body.

The site includes teaching units for Grades K-2 and 3-8, which tie to common classroom science topics and contain scope and sequence charts, classroom activities and links to related sites, books, videos and software.

The scope and sequence charts are a great place to start. All topics – animal behaviour, human systems, digestive, muscular and skeletal systems, nervous system, circulatory and endocrine systems, reproductive system, respiratory system, skin and life cycles – are neatly displayed, with links to lesson plans and ideas.

A fun and educational site, once students log on, you'll have a tough time getting them to leave again!



Tobacco Facts

[www.tobaccofacts.org](http://www.tobaccofacts.org)

The first thing you see when you view this site – built and maintained by the B.C. Ministry of Health Services – is the Poster Child at the right of the page, B.C.'s anti-tobacco ambassador for the past seven years showing, in graphic detail, the damaging effects of tobacco. It's a jarring image, which will impact any student.

The message, like the images, is direct: "We're not here to tell you what to THINK or what to do. We'll just give you the facts about tobacco. The stats, the gross pictures, the people, ALL REAL. We don't need to exaggerate what tobacco does to people. Because the loss, the damage and the pain are all real too. But browse this site and see for yourself, then MAKE UP YOUR OWN MIND."

This no-holds-barred attitude of giving just the facts on tobacco extends to each site link. Games & More reinforces the dangers of tobacco, with access to such pages as the Puke Page, which warns: "You are one click away from one of the grossest pages on this Web site." Extreme Smoking Makeover also features some gross pictures. Other sections – Killer Stats, Puzzle, In The Know, True and False, Play It Clean, Burn Your Money and Butt Out – reinforce the message: tobacco kills.

This site ought to be mandatory material for students who think smoking is cool. If the graphic pictures and blunt statistics don't get the message across, the story of Barb Tarbox, a 41-year-old mother who lost her battle with lung cancer caused by smoking, will.

Stay Alert... Stay Safe

[www.sass.ca](http://www.sass.ca)

Stay Alert... Stay Safe (SASS) is an ongoing, national streetproofing program for children (7-10) and adults, aiming to spread safety awareness by building circumstantial understanding and children's confidence in the face of potentially dangerous situations.

SASS makes streetproofing resources available to teachers, parents, police, community and youth leaders, and kids themselves. Teachers Resources include creative activities for home or classroom use, puzzles, word games, an animated video featuring the SASS mascots, a tips booklet, a downloadable computer game and babysitters' pamphlets on bullying and streetproofing.

The Just For Kids section features four links students will enjoy: Clubhouse, Games, Booklet and Scavenger Hunt. The Clubhouse includes Cool Links, Random Tips, Netiquette, Internet Safety, Smileys, Net Speak, Surfing Tips and Contests. Games are easy-to-use and interactive and reinforce making safe decisions: go on a bus trip to find 10 common places kids often put themselves in danger, write your own story, play a slider or memory game, do an interactive crossword puzzle and more. The Booklet connects students to a guide reinforcing safety tips through rules, tips, quizzes and real-life situations. The Scavenger Hunt tests students on their knowledge of SASS with 10 interactive, multiple-choice questions.

This site is sure to fit easily into any curriculum teaching students how to keep safe.

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*Marjan Glavac is author of "The Busy Educator's Guide To The World Wide Web." He can be reached at [marjan@glavac.com](mailto:marjan@glavac.com) or [www.glavac.com](http://www.glavac.com).*



## “MON INSTITUTEUR DIT QUE JE SUIS VRAIMENT DOUÉE POUR APPRENDRE.”

Il n'est pas rare que les élèves Kumon se distinguent à l'école. Après tout, Kumon est un programme parascolaire de mathématiques et d'anglais différent des autres.

La méthode unique de Kumon, basée sur la pratique, donne aux enfants une solide maîtrise des notions fondamentales, ce qui facilite ensuite leur compréhension des concepts plus complexes.

De plus, Kumon peuvent aider les enfants de tous âges et de tous niveaux d'aptitude à améliorer leurs habitudes d'étude, leur compétence d'apprentissage et leur confiance en eux – ce qui peut les aider à réussir non seulement en classe, mais bien au-delà.

Pour en savoir plus sur Kumon, appelez-nous ou visitez notre site web dès aujourd'hui.

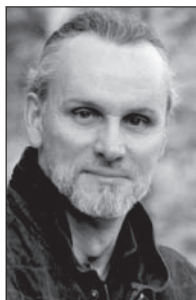
Il y a des réussites Kumon partout autour de nous. Si vous souhaitez raconter la vôtre, n'hésitez pas à contacter Kumon Canada au 800.ABC.MATH ou par courriel au [inquiriescanada@kumon.com](mailto:inquiriescanada@kumon.com).







# Our toxic society



By Richard Worzel

Only perverted parents would feed their children food they knew was poisoned. Yet, many parents poison their children physically, emotionally and spiritually through inaction and indifference, unaware they are doing so. But, we mustn't blame parents alone; we are all responsible for permitting the emergence of an environment fostering unhealthy children. Let's deal with the physical side first.

Type 2 diabetes has long been considered an adult disease typically emerging in the mid-50s, in part because the onset of diabetes can be accelerated by excess weight and inactivity, which both tend to go with age. Now, however, type 2 is showing up in an increasing number of children, largely because they are grossly overweight. This can be blamed partly on access to large amounts of indiscriminately chosen food and partly on lack of parental supervision and intervention. Children are being allowed to eat themselves to poor health and, since children are, by nature and by law, not responsible, parents are to blame.

There's another major contributing factor at work. When I was a kid, I probably overate, too. I certainly ate more cake, sweets, chips and pop (as well as breakfast, lunch and dinner) than I should have, yet I was skinny as a rake because, in addition to eating like a

horse, I was also in perpetual motion, as were most of my friends. I played outside all the time, in all weather, and was active virtually from the time I woke up until I went to bed (except for after supper when my family watched TV). Today, children "play" at a computer or in front of video games for hours. I hardly ever see kids playing in a schoolyard or park. The combination of overeating and inactivity is creating fat, unhealthy kids.

How did this happen? A Scout leader of 14 years, I am continually flabbergasted by the reactions of parents who marvel at how I and the other leaders get their kids to do things at Scout camps. "I can't get them to turn off the computer!" they complain. "What can I do with them?" I explain if their children won't turn off the computer, they – the parents – should do it themselves. "I can't do that," they moan. "They make such a fuss when I try!"

Many parents fail to accept responsibility for raising their children. They let their kids' whining and wailing determine what parental actions they take (or don't take), resulting in children who grow up unhealthy and spoiled rotten. Bad as it is, it's not the worst sin they commit.

Increasingly, children are exposed to inappropriate TV programs, videos, movies and computer games ranging from grossly violent to explicitly pornographic and unsuited to young (or even adolescent) children. I get the same kind of reaction from parents about this: they can't control what their children watch or play. If games and videos are restricted at home, the kids just go over to friends' houses. This amounts to parents failing to act like parents. What do you do? Know what your kids are watching and playing. If that means restricting their TV and computer access to times of the day

you'll be around to monitor them and prohibiting them from spending time at homes of friends whose parents allow inappropriate material, so be it.

The alternative is children with cynical, jaundiced views of the world, who are hyper-tense, insecure, have short attention spans, do not value others, are unable to form healthy relationships and have no sense of civic virtue or responsibility. In addition to being fat and flabby, they are, in short, emotionally and spiritually unhealthy.

I know certain "researchers" claim access to inappropriate video or computer gaming materials does not influence children, but they are wrong. Here's proof: the hundreds of billions of dollars corporations pour into advertising to influence consumer behaviour, adult and child alike. They wouldn't part with a penny of this unless they had hard evidence videos and games affect attitudes and behaviours.

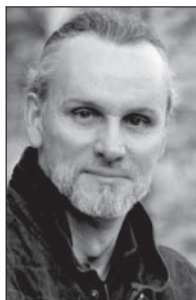
I've been pretty hard on parents so far and, unfortunately, I think some deserve it. Most parents aren't like this. But there is a minority (an increasing minority) of parents ignoring their responsibilities. Unfortunately, the undisciplined brats they are producing are polluting society and the school system for everyone else. Teachers are spending more time disciplining badly behaved brats and less time teaching and with deserving children. You feel like grabbing and shaking the spoiled parents of the spoiled kids, hoping they'll wake up and realize they're dumping their problem children on the rest of us.

Again, they are not alone in deserving blame for the unhealthy children they are raising. We are all allowing the emergence of what some call a "toxic society,"

• *Continued on page 11*



# Une société toxique



Richard Worzel

**S**euls des parents pervers donneraient à leurs enfants des aliments empoisonnés. Et pourtant, nombre d'entre eux empoisonnent leurs enfants sur le plan physique, affectif et spirituel, par leur inaction, leur indifférence, inconscients de ce qu'ils font. Mais nous ne devons pas blâmer uniquement les parents ; nous sommes tous responsables de permettre l'émergence d'un environnement formant des enfants à l'esprit malsain dans un corps malsain. Voyons d'abord le côté physique.

Le diabète type 2 a longtemps été considéré comme une maladie d'adultes, contractée généralement dans la cinquantaine, en partie parce qu'un excès de poids et une inactivité — deux choses associées plutôt à l'âge — peuvent en accélérer l'apparition. Pourtant, de nos jours, on voit de plus en plus d'enfants en être atteints, largement parce qu'ils ont une forte surcharge pondérale. On peut mettre cela d'une part sur le compte de grandes quantités de nourriture choisie sans discrimination et d'autre part sur le manque de surveillance et d'intervention des parents. Les enfants sont libres de manger ce qu'ils veulent de telle sorte qu'ils ne sont pas en bonne santé et, puisque les enfants, de par la nature et de par la loi, ne sont pas responsables, ce sont les parents que l'on incrimine.

Autre facteur important : l'inactivité physique. Enfant, j'ai probablement aussi trop mangé. J'ai certainement mangé plus de gâteaux, de sucreries, de chips et bu plus de boissons gazeuses (avec petit déjeuner, déjeuner et dîner) que j'aurais dû, et pourtant j'étais maigre comme un clou parce que, bien que je mangeasse comme quatre, je remuais constamment, comme la plupart de mes amis. J'étais toujours dehors pour jouer, par tous les temps, actif quasiment du lever au coucher (excepté les fois où, après le dîner, on regardait la télé en famille). De nos jours, les enfants « jouent » à l'ordinateur ou à des jeux vidéo pendant des heures. J'en vois rarement dans la cour de récréation ou dans le parc. La conjonction d'hyperorexie et d'inactivité donne des enfants gros qui n'ont pas l'air en bonne santé.

Que s'est-il passé ? Chef scout pendant quatorze ans, je suis toujours stupéfait par les réactions des parents qui se demandent comment j'arrivais, moi et les autres responsables, à faire faire des choses à leurs enfants durant les camps. « Je n'arrive même pas à leur faire éteindre l'ordinateur ! », se lamentent-ils. « Qu'est-ce que je peux faire ? » Je leur dis que si leurs enfants ne veulent pas éteindre l'ordinateur, c'est à eux — les parents — de le faire. « Je ne peux pas », se plaignent-ils. « Si jamais j'essaie, ils me font un tas d'histoires. »

De nombreux parents faillent à leurs responsabilités d'éducateurs et ce sont les protestations de leurs enfants qui déterminent les mesures qu'ils prennent (ou ne prennent pas). On a alors des enfants qui grandissent sans garde-fou et sont gâtés pourris. Ceci est déjà mauvais en soi, mais ce n'est pas le pire péché des parents.

De plus en plus, les enfants regardent des émissions de télévision, des

bandes vidéo, des films ou jouent à des jeux électroniques qui ne sont pas pour eux et vont de l'odieusement violent à l'explicitement pornographique. Or ceci ne convient ni à des enfants ni à des adolescents. Ici aussi, j'ai la même réaction des parents : il leur est impossible de contrôler ce que leurs enfants regardent ou ce à quoi ils jouent. Si les jeux et les vidéos sont limités à la maison, ils vont tout simplement chez les copains. Les parents ont abdiqué et n'agissent plus en tant que parents. Que faire ? Sachez ce que vos enfants regardent et ce à quoi ils jouent. Si cela veut dire limiter la télé et l'ordinateur aux périodes où vous êtes là pour vérifier ce qu'ils font et leur interdire d'aller chez les copains à qui les parents laissent regarder n'importe quoi, pourquoi pas.

Du coup, les enfants ont du monde une vision cynique et amère. Ils sont hypertendus et inquiets ; leur champ d'attention est limité ; ils ne respectent pas les autres, sont incapables de créer des relations saines et n'ont aucun sens civique. Outre le fait qu'ils soient gros et amorphes, ils sont aussi déséquilibrés sur le plan affectif et spirituel.

Je connais certains « chercheurs » qui prétendent que les bandes vidéo ou les jeux électroniques déplacés n'ont aucune influence sur les enfants, mais ils ont tort. En voici la preuve : les grosses sociétés engloutissent des centaines de milliards de dollars dans la publicité pour influencer le comportement des consommateurs, adultes et enfants sans distinction. Ils ne déboursaient pas un sou s'ils n'avaient la preuve tangible que lesdits jeux et bandes vidéo transforment les attitudes et les comportements.

J'ai été jusqu'ici un peu brutal à l'égard des parents mais, malheureusement, je pense qu'ils le méritent. Bien entendu, la plupart ne sont pas comme

ça, mais il y a une minorité (grandissante) de parents qui renoncent à leurs responsabilités. Malheureusement, les mêmes indisciplinés qu'ils produisent polluent la société et le système scolaire et empoisonnent tout le monde. Les enseignants passent plus de temps à faire de la discipline et moins de temps à enseigner aux enfants qui le méritent. Vous avez envie de secouer ces mauvais parents d'enfants gâtés, pour qu'ils se réveillent et se rendent compte qu'ils font de leurs enfants difficiles une charge pour les autres.

Encore une fois, ils ne sont pas les seuls à blâmer pour les paumés qu'ils élèvent. Nous permettons tous l'émergence de ce que d'aucuns appellent une « société toxique », c'est-à-dire qui agit sur les enfants de façon destructrice, qui les exploite et aiguise leurs appétits malsains pour que les grosses sociétés s'enrichissent et arrivent à leurs fins égoïstes et commer-

ciales. Ceci va des chaînes de télévision diffusant des émissions pour adultes dans des créneaux pour enfants aux fabricants de jeux électroniques en passant par les annonceurs qui choisissent des produits sexy, provocateurs et choquants pour des enfants de plus en plus jeunes. Nous permettons l'émergence d'une culture de l'exploitation sans la moindre désapprobation.

Pourquoi ? Parce que nous sommes occupés, fatigués et indifférents. Occupés à travailler dur pour joindre les deux bouts, à faire face à nos propres problèmes et à nos urgences perpétuelles, à vitupérer contre le gouvernement que nous élisons et à nous plaindre de la façon dont nous sommes traités. Nous évitons nos responsabilités de citoyens qui sont celles de créer un environnement protégeant les enfants et favorisant des enfances saines, parce que nous sommes trop absorbés dans nos propres besoins et nos propres

désirs pour que cela nous préoccupe. C'est bien trop embêtant de combattre cet assaut d'irresponsabilité culturelle.

Lorsqu'on sème le vent, on récolte la tempête. Élever des enfants dont l'esprit et le corps ne sont pas sains donne une société malsaine et peu faite pour que nous y vivions tous. C'est la façon dont les sociétés décadentes émergent — et disparaissent. Ce n'est pas simplement l'avenir de nos enfants que nous risquons, c'est le nôtre.

---

*Premier futurologue du Canada, Richard Worzel compte parmi ses clients des sociétés comme IBM, Bell Canada, Ford Motor Company et Nortel. Il donne bénévolement des conférences pour les élèves du secondaire quand son emploi du temps le lui permet. On peut communiquer avec lui à l'adresse [futurist@futuresearch.com](mailto:futurist@futuresearch.com) ou par l'intermédiaire de son site Web, à [www.futuresearch.com](http://www.futuresearch.com).*

• *Continued from page 9*

one that behaves toward children in a predatory fashion, exploiting them and their unhealthy appetites for the enrichment of corporations' own selfish and commercial ends. This ranges from TV networks broadcasting adult material in time slots aimed at children to computer-game makers to advertisers who target sexy, provocative and inappropriate products at increasingly younger children. We are allowing the emergence of a culture of exploitation without so much as a murmur of disapproval.

Why? Because we're busy, tired and indifferent. Busy working hard to make ends meet, coping with our own problems and perpetual emergencies, berating the government officials we elect and complaining about how we're treated. We are avoiding our responsibilities as citizens to create an environment that

protects children and promotes healthy childhoods, because we're too engrossed in our own needs and wants to care. It's too much trouble to fight this onslaught of cultural irresponsibility.

But, when you sow the wind, you reap the whirlwind. Raising children who are unhealthy in mind, spirit and body produces a society that is an unfit, unhealthy place to live for us all. That's how decadent societies emerge – and fall. It's not just our children's futures we are putting at risk; it's our own.

---

*Richard Worzel is Canada's leading futurist and the author of the recent bestseller, "Who Owns Tomorrow?" He volunteers his time to speak to high school students as his schedule permits. Contact him at [futurist@futuresearch.com](mailto:futurist@futuresearch.com).*

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# At the Centre for Addiction and Mental Health, Children and Youth are a Priority

By Rosalicia Rondon and Margaret Kittel Canale

Mental health involves finding a balance in all aspects of one's life: physically, mentally, emotionally and spiritually. Mental health is how we think, feel and act. It's how we look at ourselves, our lives and the people we know and care about. Mental health is the ability to enjoy life. It is the ability to interact with other people. It is the ability to make choices and decisions. And, it's the ability to deal with stress and everyday challenges, including adapting to and coping with difficult situations.

Although much of what we read and hear about in the media today focuses on how to reach optimum physical health, mental health is just as important – in every stage of our lives.

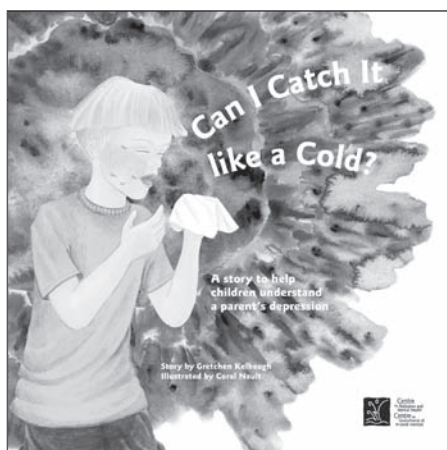
Yet, mental health problems are common. In Canada, almost one in five children and youth has a mental health problem. These problems can show up in different ways. Children may be frequently sad or rebellious. They may have difficulty paying attention. They may have problems eating, sleeping or getting along with others. They may skip school. As adolescents, they may use alcohol or other drugs.

There are many factors that can lead to a child developing a mental health or addiction problem: family predisposition, biochemical imbalances in the brain, stress, trauma (e.g. physical or sexual abuse, witnessing violence) and broader environmental factors (e.g. racism, homophobia and other forms of discrimination).

Young people who have substance use or mental health concerns require help tailored to their needs. The Centre for Addiction and Mental Health (CAMH), a Pan American Health Organization/World Health Organization Collaborating Centre in mental health and addiction, has developed a wide range of publications to meet these needs.

CAMH's publications emerge from the best practices of one of the world's most respected mental health and addiction

facilities. The publications are based on years of research into the health and well-being of children and youth. Each publication has been evaluated by clinicians and other experts who work in addiction, mental health, social services and related fields. CAMH offers an integrated set of resources from health promotion to prevention to treatment and relapse prevention. CAMH resources address the needs of various audiences, including children and youth themselves, parents, teachers and others who work in the educational system, and people working in clinical and social service settings.



Two CAMH resources were recently awarded Curriculum Services Canada's Seal of Quality and are now recommended for teachers and other school professionals who work with children and youth. *Can I Catch It Like a Cold? A Story to Help Children Understand a Parent's Depression* supports teachers, parents and health professionals in leading a discussion with children about depression. *Antisocial and Violent Youth, Volume II* is a useful resource for teachers and other school professionals in helping individual students when their behaviour interferes with their learning or the learning of others.

The endorsement of Curriculum Services Canada is important in CAMH's ability to continue to provide the educational system

with credible resources and aid in the delivery of effective prevention and health promotion curriculum to a diverse range of children and youth in Ontario and across Canada. Some proposed publications in development for 2004-05 include resources on bullying, resilience, aggressive behaviour, substance use problems in the family and other relevant and up-to-date topics.

In addition to resources for and about children and youth, CAMH offers a wide range of practical publications in the areas of substance use, mental health, concurrent disorders, trauma, policy and research, clinical tools and public education. Whatever the topic, CAMH resources share one key feature: a foundation of solid research and evaluation, giving readers the confidence no better information is available in the field. Some titles are also available in French.

For more information about CAMH publications or to place an order, please contact Marketing and Sales Services in Toronto at (416) 595-6059 or toll-free in North America at 1-800-661-1111, or visit [www.camh.net/publications](http://www.camh.net/publications).

To receive a free copy of CAMH's bilingual Youth Catalogue, please contact Rosalicia Rondon, Marketing Co-ordinator at [Rosalicia\\_Rondon@camh.net](mailto:Rosalicia_Rondon@camh.net).



Centre for Addiction and Mental Health  
Centre de toxicomanie et de santé mentale

Rosalicia Rondon is a marketing co-ordinator and Margaret Kittel Canale is a publishing developer in Education & Publishing at the Centre for Addiction and Mental Health.



## Food Fight

*With childhood obesity on the rise in Canada, what can schools do to ensure students eat right?*

By Noa Glouberman

**M**ystery meat. Greasy fries drenched in gravy. Day-old doughnuts, Jell-o molds, Coca cola and chocolate bars. Sound like a nutritious lunch to you? Probably not, but it is the type of fare served to students in schools across the country. With one of the world's worst records when it comes to battling the childhood bulge, obesity is an epidemic among Canada's children.

One in three Canadian kids – two million total – is overweight; almost half of those obese. But, it's the rate at which the numbers have climbed that's really worrisome. Statistics Canada reports childhood obesity has at least tripled in the last 20 years. And it's getting worse.

The consequences are equally disturbing. More than 60 per cent of overweight kids have at least one additional risk factor for heart disease, like high blood pressure; 20 per cent have two. In kids, rates of type 2 diabetes are escalating so much the term "adult-onset" is no longer used for the variety. In fact, 85 per cent of youngsters diagnosed with type 2 diabetes are overweight or obese. And there are other related, though no less serious, maladies: gall bladder, respiratory and liver disease, arthritis and orthopaedic problems. It's also been shown conditions such as obesity can impact the psychological well-being of children, possibly making them more prone to bullying, peer pressure and failure at school.

While many factors are to blame – a waning emphasis on physical education and the new era of video and computer games – a major part of the problem is unhealthy food. Chips, candy, pop – if it’s around, kids will gobble it up. With so many unhealthy options at their fingertips outside the playground’s boundaries, how can schools – teachers, staff, parents and pupils – encourage students to eat more nutritiously within their walls?

Several organizations across Canada focus on helping school communities better their level of nutrition. We will introduce you to three of these groups, familiarize you with their mandates and help you get in touch with them, should you wish to involve yourself (and your class) in effecting change within your own school.



### EarthSave Canada’s Healthy School Lunch Program

EarthSave Canada is a Vancouver-based, non-profit, educational organization promoting awareness of the health, environmental and ethical consequences of food choices. Currently in its exploratory stage, the Healthy School Lunch Program (HSLP) aims to bring healthy food and information to school cafeterias and students via a live presentation (English only), which can assist a school community in developing a nutrition policy and strategies to implement it. Since good eating patterns are best acquired in environments where healthy food is available, nutritious food options need to be offered in school cafeterias.

Dave Way, president of EarthSave Canada, says nutrition in schools is “generally terrible. Some schools are serving some nutritious food and some are improving.” According to Way, however, financial concerns (among other reasons) over the last few years have seen many schools contract food services to for-profit companies, even fast-food chains (some newer schools’ “cafeterias” are food-fair style, and include fast-food chains like Kentucky Fried Chicken), eroding the

level of nutrition of the food they serve students.

While there is a lot of concern today about the food served in schools, Way says “many of those who are concerned don’t feel they can cause change, and those with the power to make changes, primarily principals, have other constraints.” He says school cafeterias are often expected to break even or turn a profit, while other departments within the school would never be expected to operate at zero cost. “Can you imagine the computer department being expected to have students do data entry for companies to pay for school equipment and textbooks?”

Way says one of the key strategies for schools to implement better nutrition in their cafeterias is to “make the healthy choice the easy choice.” This could involve removing certain foods altogether or programming vending machines to charge \$1.50 for pop and 75 cents for water or juice. A second strategy is using healthy foods for fundraising (bake sales, hot dog days): “Parents may be more willing to give their kids money for snacks or meals if they know healthier food will be available.”

The issue of nutrition in schools is important, says Way, because, beyond the cost of health care down the road, there’s also a clear link between well-fed children and better behaviour and learning outcomes. “If we delivered to principals or school boards a solid study showing students with a regular diet of nutritious food scored 15 per cent higher on standardized tests, I think there would be a rush to implement these policies.”

Way hopes the HSLP helps reverse the current trend toward a diet high in processed foods, which are generally lower in nutrients and high in sugar and fat. “Growing bodies need to be fueled appropriately,” he says. “I think the key is there must be a strong will to effect change as well as buy-in from those in the affected school community.”

For more information on EarthSave Canada and the HSLP, visit [www.earthsave.bc.ca/materials/hslp.html](http://www.earthsave.bc.ca/materials/hslp.html) or phone (604) 731-5885.



## Eat Smart! School Cafeteria Program

The Eat Smart! School Cafeteria Program aims to help reduce food-borne illness and chronic diseases in Ontario. Managed by the Nutrition Resource Centre at the Ontario Public Health Association (with funding from the Ontario Ministry of Health and Long Term Care), the program endeavours to achieve its goal by increasing awareness and knowledge of healthy eating and food safety, and increasing the availability of and promoting healthier food choices in school cafeterias.

The School Cafeteria Program is an Ontario Award of Excellence program for school cafeterias meeting high standards in healthy food choices and food safety. Sarah O'Brien, Co-ordinator of Provincial Programs for the Nutrition Resource Centre of the Ontario Public Health Association, says, "An Eat Smart! school cafeteria gives students the choices and the environment to make healthier lifestyle decisions. The nutrition standard supports Canada's Food Guide to Healthy Living." ([www.hc-sc.gc.ca/hpfb-dgpsa/onpp-bppn/food\\_guide\\_rainbow\\_e.html](http://www.hc-sc.gc.ca/hpfb-dgpsa/onpp-bppn/food_guide_rainbow_e.html))

O'Brien says schools participating in the program offer a variety of nutritious food choices, including an assortment of vegetables and fruit, lower-fat milk products, whole grains, meats and alternatives prepared in a lower-fat way and substitutions to create healthier food choices. "The program doesn't prohibit any foods," she says. "It promotes healthier choices and, in doing so, teaches students to opt for a balanced, healthy lifestyle."

This is done through distribution of the Eat Smart! Heart Beat Cafeteria Program Kit, a fully bilingual, self-contained, easy-to-operate nutrition-education kit used to transform cafeterias into healthier places to eat. The kit includes nutrition messages giving information about specific foods to post in the food service area, table-tent messages providing in-depth nutrition information to help students make informed choices and cafeteria-operator materials providing tips on low-fat cooking.

The program is executed by local public health units in Ontario, in collaboration with school boards, individual schools and food-service operators. There are currently about 18 public health units implementing the School Cafeteria Program, and approximately 45 participating school cafeterias.

"Offering and promoting healthy options is an important component of comprehensive school health," says O'Brien. "Eat Smart! is part of the larger effort of making all aspects of the school environment conducive to better student health."

For more information on the School Cafeteria Program, visit [www.eatsmart.web.net](http://www.eatsmart.web.net) or call Sarah O'Brien at the Nutrition Resource Centre (416) 367-3313 ext. 231.

## Healthy Foods at School's Brown Bag Olympics

The Brown Bag Olympics – created in 1995 by public health nutritionists for an existing program offered by Nova Scotia Public Health Services called Healthy Foods at School (HFAS) – is a nutrition education activity for students promoting healthy eating in school. The activity (English-only) is offered annually to all elementary grades in the Capital Health district, the largest integrated health district in Atlantic Canada.

HFAS supports learning, health and healthy decision-making related to food in school and encourages everyone to be involved in creating healthy eating environments for children. "The concept works best when it involves the partnership of parents, teachers, principals, food-service staff, students, community members, public health and other health staff, and anyone who's interested in making the school environment a healthier environment," says Michelle Murton, a public health nutritionist with the School Health Program run by Capital Health in Dartmouth, NS.

Murton suggests schools begin the process of creating a healthier and more nutritious environment through discussion of food issues in the school, like choices and services available in the cafeteria, at special class events and during fundraising activities. She also suggests forming a school food and nutrition committee involving students, parents, teachers and other school staff to work on nutritional issues. "Schools should also access resources available to them in the community," she says.

The Brown Bag Olympics is a program specifically designed for classroom use. Students earn gold, silver or bronze "medals" for the nutritional value of their lunch or snack, based on Canada's Food Guide and Capital Health's Healthy Foods at School criteria ([www.cdha.nshealth.ca/publichealth/healthyFoodInSchool.html](http://www.cdha.nshealth.ca/publichealth/healthyFoodInSchool.html)); the number of medals earned as a class is recorded on a chart and submitted for a certificate of recognition from Public Health Services and individual prizes for students. "If schools adopt a 'Healthy Foods at School' philosophy, the Olympics could become an everyday event supported by school administration, staff, parents, children and the broader community," says Murton.

Murton says the Olympics and other experiential nutrition activities are important because healthy food choices need to be a reality for students. "Through activities like the Olympics, students can actually experience the components of healthy meals, what they consist of and how to pack them for lunch or



snacks, and learn to evaluate meals for their nutritional value – how they compare to Canada’s Food Guide.”

Since children and youth spend much of their day in school, Murton believes *that* environment has an important role to play in supporting and promoting healthy eating behaviours by ensuring the cafeteria, fundraising choices, etc., support the nutrition curriculum taught in the classroom, so “students have opportunities to make healthy food and beverage choices throughout the day.”

The nutritional quality of the food and beverages served in schools in Nova Scotia has become a contentious issue, says Murton; a majority of these snacks, meals and drinks do not comply with national nutrition guidance. “Given the increasing rate of obesity in Nova Scotia, along with poor provincial health statistics for diabetes and heart disease, many groups have expressed concern regarding the nutritional quality

of the food and beverages offered to children in school. Despite the criticisms, schools have received few resources and supports to help them improve in this area.”

Capital Health works to bring the idea of health and nutrition to the classroom. But the co-operation and participation of other groups is necessary. “There needs to be active involvement and buy-in from students, their parents, teachers and school administrators, community, businesspeople, boards of education, departments of education and each province that school food and nutrition are important and linked with academic success as well as good health,” says Murton. “Various levels of support need to be built in at all levels to make healthy school food a reality for students.”

For more information on Capital Health, HFAS and the Brown Bag Olympics, visit [www.cdha.nshealth.ca](http://www.cdha.nshealth.ca), phone (902) 473-2194 or e-mail [capitalnews@cdha.nshealth.ca](mailto:capitalnews@cdha.nshealth.ca).

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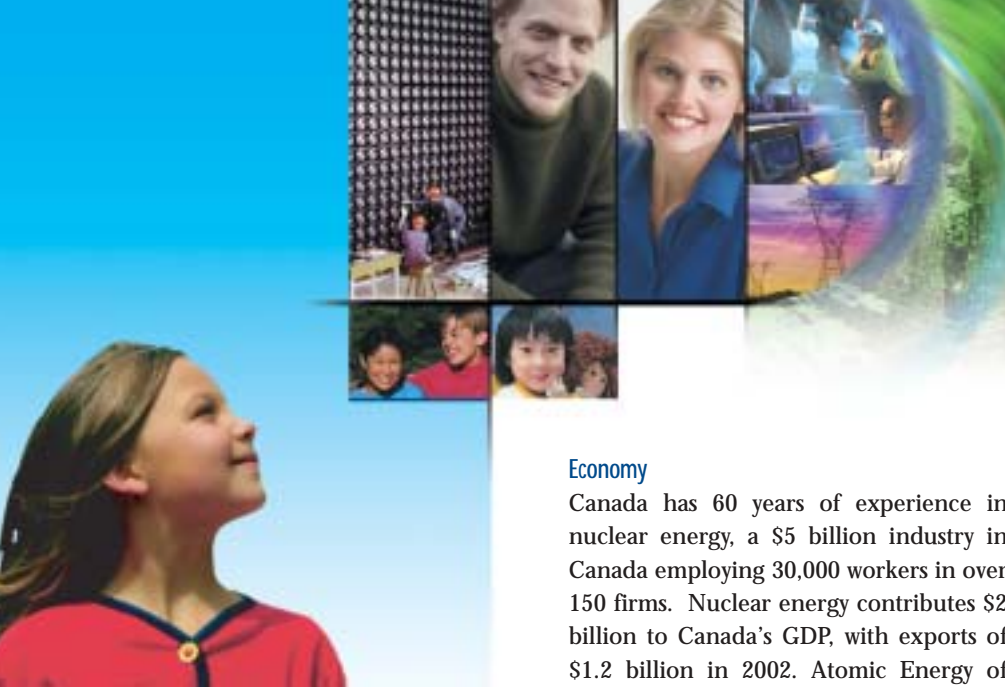
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# CANADA'S BEST KEPT SECRET...



Canadian Nuclear Association

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*Did you know that:*

- Nuclear science and technology has changed and improved our lives.
- Canada is a leader in nuclear science including medicine, manufacturing, agriculture and electricity generation.
- Canada's nuclear industry is for peaceful purposes only.
- Canada is a signatory of the Non-Proliferation Treaty which prohibits the trade of nuclear technology for nuclear weapons.
- Canadian designed CANDU reactors safely provide clean electricity, enough to supply 7.5 million Canadian homes every year.
- Canada is the world's major supplier of radioisotopes used in 45,000 daily medical diagnostic procedures worldwide.
- Nuclear technology improves the production and quality of global food supplies.
- Nuclear techniques are used in many fields of research from aeronautics to cosmetics, smoke detectors to medical supplies and sterilization.

## Economy

Canada has 60 years of experience in nuclear energy, a \$5 billion industry in Canada employing 30,000 workers in over 150 firms. Nuclear energy contributes \$2 billion to Canada's GDP, with exports of \$1.2 billion in 2002. Atomic Energy of Canada (AECL) is a leading exporter of nuclear reactors worldwide. Since 1990, AECL has successfully built six nuclear reactors on time and on budget, 3 in South Korea, 2 in China, 1 in Romania with another under way in Romania (Cernavoda 2).

## Clean electricity

In 2004, there were 17 operating CANDU nuclear power reactors in Canada located in Ontario, New Brunswick and Quebec providing about 16% of Canada's electricity. In Ontario, there are 20 reactors of which 15 are in service and providing over 45% of the electricity supply, equivalent to the power needs of every home in Ontario. A further five CANDU reactors in Ontario are being evaluated for refurbishing to ensure Ontario meets its electricity supply needs, now and in the future. When all 22 nuclear reactors in Canada are in service, they will provide the country with about 20% of Canada's electricity and over 60% in Ontario.

## Nuclear Power Equals Clean Air

A growing number of experts now say that one of the best ways to provide clean, low cost, reliable baseload electricity – a must for economic growth – is nuclear. When used to make electricity, it produces virtually none of the emissions that contribute to smog, acid rain or global warming.

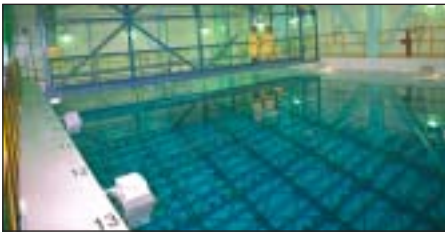
Using nuclear power to produce electricity in Canada, we avoid the emission of 85 million tonnes of greenhouse gases per year – about 12% of Canada's total greenhouse gas emissions. That's the same amount of greenhouse gases produced by the fossil fuels burned by 17 million cars and trucks. In addition, Canada's nuclear reactors emit virtually no sulfur dioxide or nitrous oxides, the gases that cause smog and acid rain. Using nuclear power to produce electricity in Canada, we avoid the emission of an additional 10% of these smog and acid rain producing gases of total national emissions.

## Safety

The Canadian nuclear industry features an exemplary safety record and a strict regulatory system. In June 2002, the Senate Committee on Energy, Environment and Natural Resources concluded, "After several years of study and input from many



In Qinshan, China the newest CANDU project was completed nearly four months ahead of schedule when the second reactor entered service in July, 2003



Used nuclear fuel is stored in water bays within each of Canada's nuclear power stations. Here the used fuel can be monitored and cooled.

sources, the Committee feels secure in the knowledge that Canada's domestic nuclear reactors are among the safest in operation anywhere in the world."

### Waste

The small amount of waste produced by Canadian nuclear power plants to generate huge amounts of electricity is controlled and stored in carefully managed facilities. Used fuel is initially stored in water-filled bays at the site of the nuclear power plants for 5-10 years and then placed in large concrete canisters safely stored on site. Designs have been developed for a large underground storage facility, but no decision has yet been made to construct one at this time. The total amount of used fuel from Canada's nuclear power plants could be stored in five hockey rinks up to the height of the boards.

In November 2002, the Nuclear Waste Management Organization (NWMO) was established by an act of Parliament and mandated to examine options for the long-term management of used nuclear fuel waste including long-term geological disposal. The NWMO will submit a report to the Federal Government in November 2005.

In our 43 years of using nuclear energy for electricity generation no member of the public has been harmed as a result of the operation of Canada's nuclear power plants.

### CANDU

CANDU is an acronym for Canada Deuterium Uranium and is the registered trademark of the class of nuclear power reactors developed and designed by Atomic Energy of Canada Limited. The CANDU is characterized by its use of natural uranium fuel and heavy water moderator (deuterium oxide).

The economic benefits to Canada from the development and sale of CANDU

reactors abroad have been and continue to be significant. In Canada, if two CANDU reactors, each of 720 MW capacity, were constructed, the economic impact on GDP would be approximately \$2.6 billion over the period of their construction adding 40,000 person years of employment.

In 1987, the centennial of engineering as a profession in Canada, CANDU was ranked one of the country's top 10 engineering achievements over the century. An Advanced CANDU Reactor (ACR™), currently under development by AECL, will be competitive with gas-fired electricity generation.

### Uranium

Canada has the world's richest uranium deposits in northern Saskatchewan. From the several mines in that area, Canada produces about one-third of the world's uranium. In addition, Cameco Corporation, the largest supplier of uranium in the world has a refinery and a conversion plant, both in Ontario. About 80 percent of the uranium mined in Canada is exported and produces about \$500 million in export revenue each year.

### Cancer treatment

Canada pioneered the use of cobalt-60 for the treatment of cancer. Cobalt-60 is a radioactive isotope created by irradiating ordinary cobalt with neutrons in a nuclear reactor. It emits two powerful gamma rays. In 1951, two cancer treatment machines using cobalt-60 were developed in Canada and began treating patients within a month of each other. One was



Restarting Bruce Unit 4 meant the first electricity production from the Bruce A station since 1998.

built by Dr. Harold Johns of Saskatoon who was one of the first persons in the world to propose using cobalt-60 in a beam therapy machine, that is, one where the cobalt-60 source was some distance away from the patient. The other was designed and built by a small team working at the crown company, Eldorado Mining and Refining, who subsequently became part of Atomic Energy of Canada Limited. Much later, the radioisotope business was taken over by MDS Nordion.

Today there are some 1200 cobalt-60 machines around the world. It is estimated that these machines deliver about 15 million cancer treatments every year.

### Nuclear medicine

An even more extensive use of nuclear technology in medicine is in diagnosis. Nuclear medicine procedures use a very small amount of radiation and are safe and painless. They give doctors important information that helps with the early diagnosis and treatment of disease, often preventing the need for surgery, and helping to lower medical costs. An estimated 15 to 20 million nuclear medicine imaging and therapeutic procedures are performed each year worldwide.



© MDS Nordion

Canada supplies two-thirds of the world's reactor-produced radioisotopes for nuclear medicine which are used in over 12 million diagnostic tests each year. Molybdenum-99, the most widely used radioisotope in nuclear medicine, is produced at AECL's Chalk River Laboratory and prepared at MDS Nordion's facility in Ottawa. The short half-life of molybdenum requires efficient transportation and logistics. Shipments are on airplanes within 24 hours of the material coming out of the reactor. Globally, an estimated 34,000 people a day benefit from diagnostic procedures that rely on molybdenum-99 and other Canadian isotopes.

### Food irradiation

Canada is a leader in the development of the technology used to treat fruits, vegetables, and meats with radiation, to prolong their shelf lives and prevent the risk of food-borne illness.

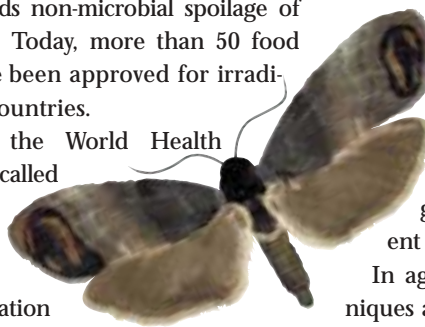


Irradiation kills bacteria, parasites, and insects in food, including listeria, salmonella, and potentially deadly E. coli bacteria and retards non-microbial spoilage of certain food. Today, more than 50 food products have been approved for irradiation in 40 countries.

In 1992, the World Health Organization called food irradiation a "perfectly sound food preservation technology." The head of the group's food safety unit said irradiation is "badly needed in a world when food-borne diseases are on the increase and where between one-quarter and one-third of the global food supply is lost post-harvest."

### Agriculture

To improve agricultural production, harmful insects can be eliminated by using radiation to sterilize the males of the species. Such an approach, used widely around the world, replaces the use of chemical pesticides. Canada played a leading role in developing this technique. A domestic appli-



cation was the control of the codling moth in British Columbia's apple orchards.

Significant improvements in agricultural production have also been realized by using irradiation to develop new strains of plants. This has been particularly useful in developing grains that are virus resistant and have better growth and yield patterns in different locations around the world.

In agricultural research, nuclear techniques are used to measure the efficiency of fertilizer used by crops and for keeping a watch on the moisture content. Radioisotopes are used to determine plant uptake of nutrients and water from the soil, enabling farmers to limit the use of fertilizers. This preserves water supplies, saves energy costs from pumping, and prevents run-off of potential contaminants into streams and rivers.

### Industry

Many industries use radioactive materials to take measurements without direct physical contact with the substance being measured, such as the thickness and density

## Some historical highlights



### 1898 - 1906

Ernest Rutherford, later Lord Rutherford, conducted a number of experiments at McGill University on the radioactive decay of uranium and thorium. He was awarded the Nobel Prize in Chemistry in 1908 for this work.

### 1940

George Laurence built a sub-critical "pile" at the National Research Council in Ottawa. Although the impurity of the carbon and uranium he used prevented achieving criticality, his work was a major factor in the decision to create the Montreal Laboratory.

### 1942

The United Kingdom and Canada created the Montreal Laboratory to conduct research into a heavy water moderated reactor for the production of plutonium. Major members were from the UK, Europe and Canada, with George Laurence being the senior Canadian. Starting from very basic knowledge (fission had been discovered only three years previous and the Second World War stopped most exchange of information) the group designed the NRX reactor.

### 1945

The very low power reactor ZEEP started up at the Chalk River Laboratories, the first reactor outside the USA.

### 1946

The Canadian government passed the Atomic Energy Control Act, one of the first such legislation in the world. It created the Atomic Energy Control Board as the overseeing and regulating agency with broad powers over all "atomic" activities.



### 1947

The Nuclear Reactor Experimental (NRX) research reactor at Chalk River started operation. It would become the most powerful research reactor in the world.

### 1951

The first cobalt-60 beam therapy machines in the world began treating patients in Ontario and Saskatchewan.

### 1952

Atomic Energy of Canada Limited was created and the Atomic Energy Control Act was modified to make the Atomic Energy Control Board strictly a regulatory agency.

### 1962

The first nuclear power plant in Canada, Nuclear Power Demonstration (NPD), began operation.

of paper on a paper making machine or the height of a fluid in a tank. Radiography using a radioactive source is used to inspect finished goods for weaknesses and flaws. Some applications are:

- studying groundwater origin, age, distribution, and quality; on-line determination of sulphur and nitrogen in coal;
- sterilization of medical supplies such as surgical dressings, bandages, and sutures;
- looking for defects in welds of oil and gas pipelines.

### Consumer products

Radiation or radioactive materials are used in manufacturing or operations of many consumer items:

- Cosmetics, hair products, and contact lens solutions are sterilized with radiation to remove irritants and allergens.
- Many smoke detectors rely on a tiny radioactive source to detect smoke from a fire.
- Photocopiers use small amounts of radioactive material to eliminate static and prevent paper from sticking together and jamming the machine.

### Resources

The following educational resources are designed for appropriate grade levels and meet curriculum outcomes in the Science area.

- 1 Atomic Energy of Canada Limited (AECL) has resources on its Website that explain the basics of radiation and detail the workings of Canada's CANDU reactors—[www.aecl.ca](http://www.aecl.ca)
- 2 York University in Toronto has a team dedicated to the development of science resources designed specifically for use by teachers. The resources conform to the Pan-Canadian Science Curriculum Protocol, list curriculum links and are in a searchable database. On the Website are instructional materials from the AECL site for Grade 6 and there is a Grade 11/12 unit on Radiation called EVARM—[www.yesican.yorku.ca](http://www.yesican.yorku.ca)

### Other Resources

- 1 Bruce Power  
[www.brucepower.com](http://www.brucepower.com)
- 2 Canadian Nuclear Association  
[www.cna.ca](http://www.cna.ca)
- 3 Canadian Nuclear Safety Commission  
[www.cnsccsn.gc.ca](http://www.cnsccsn.gc.ca)
- 4 Canadian Nuclear Society  
[www.cns-snc.ca](http://www.cns-snc.ca)

- 5 Cameco Corporation  
[www.cameco.com](http://www.cameco.com)
- 6 International Atomic Energy Agency  
[www.iaea.org](http://www.iaea.org)
- 7 MDS Nordion  
[www.mds.nordion.com](http://www.mds.nordion.com)
- 8 Natural Resources Canada  
[www.nrcan.gc.ca](http://www.nrcan.gc.ca)
- 9 Nuclear Energy Institute (U.S.)  
[www.nei.org](http://www.nei.org)
- 10 Ontario Power Generation  
[www.opg.com](http://www.opg.com)
- 11 Society of Nuclear Medicine  
[www.snm.org](http://www.snm.org)
- 12 World Nuclear Association  
[www.world-nuclear.org](http://www.world-nuclear.org)
- 13 *Unlocking the Atom: The Canadian Book on Nuclear Technology*, Hans Tammemagi, David Jackson, McMaster University Press, 2002, Contact information: Ph: 905-641-2732, Fax: 905-641-1705, Email: [oakhill@vaxxine.com](mailto:oakhill@vaxxine.com), Web: [www.vaxxine.com/oakhill](http://www.vaxxine.com/oakhill)
- 14 Nuclear Energy Agency  
[www.oecd.org](http://www.oecd.org)

For more information, visit [www.cna.ca](http://www.cna.ca).

1966

Douglas Point, the first large nuclear power plant 200 Megawatt (electrical) (MWe) started operation.

1970

Canada signed the Non-Proliferation Treaty which prevents misuse of nuclear weapons.

1971

The first 500 MWe unit of the Pickering station started and was put into service.

1980s

A team of Canadian experts from Atomic Energy of Canada's Chalk River Laboratories applied their CANDU technology and experience to the redesign of the space shuttle SRB O-ring seals with excellent results.



1983

Three CANDU 6 nuclear power units began operation - Gentilly 2 and Point Lepreau in Canada and Wolsong 1 in Korea.

1994

Bertram Brockhouse was a co-winner of the Nobel Prize in Physics for his work on neutron diffraction conducted at Chalk River in the 1950s and 1960s.

2000

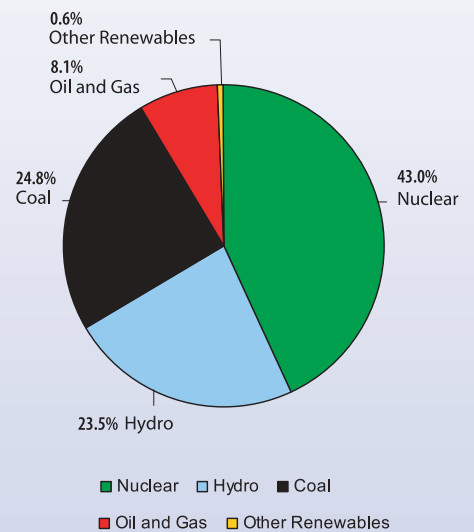
The Nuclear Safety and Control Act was passed, replacing the Atomic Energy Control Act and changing the Atomic Energy Control Board into the Canadian Nuclear Safety Commission.

2002

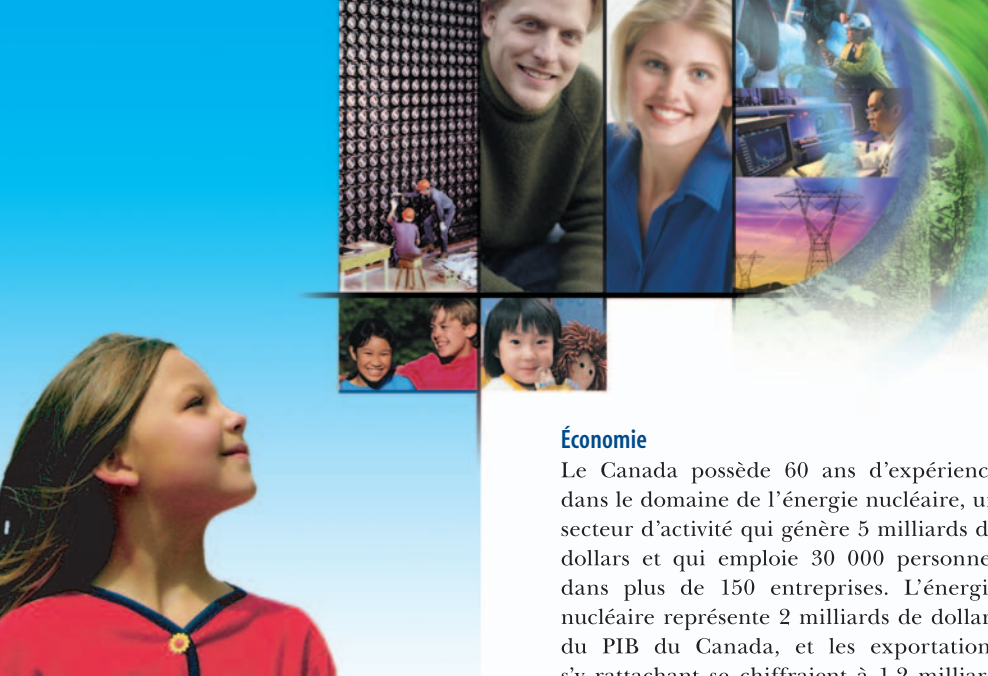
The Nuclear Fuel Waste Act was passed, which provides the policy direction for the permanent management and disposal of all of Canada's nuclear fuel waste. The Nuclear Waste Management Organization was established to report to the Federal Government in November 2005 on options for the long term management of used nuclear fuel.

2003

Electricity sources in Ontario



Source: Independent Electricity Market Operator (IMO), May 2004.



# LE SECRET LE MIEUX GARDÉ DU CANADA...

## Un air pur est important pour tous.

Le saviez-vous ?

- Les sciences et la technologie nucléaires ont changé et amélioré nos vies.
- Le Canada s'avère un chef de file en sciences nucléaires, notamment dans les domaines de la médecine, de la fabrication, de l'agriculture et de la production d'électricité.
- L'industrie nucléaire canadienne vise uniquement des objectifs pacifiques.
- Le Canada a signé le Traité de non-prolifération, qui interdit le commerce de la technologie nucléaire pour la fabrication d'armes nucléaires.
- Les réacteurs CANDU de conception canadienne produisent en toute sécurité de l'électricité propre, en quantité suffisante pour approvisionner 7,5 millions de foyers canadiens par an.
- Le Canada est le plus grand fournisseur mondial de radio-isotopes utilisés quotidiennement dans 45 000 procédures de diagnostic médical, partout dans le monde.
- La technologie nucléaire améliore la production alimentaire et la qualité de l'approvisionnement mondial en aliments.
- Les techniques nucléaires sont utilisées dans de nombreux domaines de la recherche, depuis l'aéronautique jusqu'aux produits cosmétiques, en passant par les détecteurs de fumée, les fournitures médicales et la stérilisation.



Association nucléaire canadienne

## Économie

Le Canada possède 60 ans d'expérience dans le domaine de l'énergie nucléaire, un secteur d'activité qui génère 5 milliards de dollars et qui emploie 30 000 personnes dans plus de 150 entreprises. L'énergie nucléaire représente 2 milliards de dollars du PIB du Canada, et les exportations s'y rattachant se chiffraient à 1,2 milliard en 2002. Énergie atomique du Canada limitée (AECL) est le principal exportateur de réacteurs nucléaires dans le monde. Depuis 1990, EACL a réussi à construire six réacteurs nucléaires en respectant le budget et les délais impartis : trois en Corée du Sud, deux en Chine et un en Roumanie, où un autre est en cours de construction (Cernavoda 2).

## Une électricité propre

En 2004, on comptait au Canada 17 réacteurs nucléaires CANDU en service situés en Ontario, au Nouveau-Brunswick et au Québec. Ces installations produisent environ 16 p. 100 de l'électricité du pays. L'Ontario compte 20 réacteurs, dont 15 sont opérationnels et fournissent plus de 45 p. 100 de l'approvisionnement en électricité, ce qui équivaut aux besoins en électricité de tous les foyers de la province. On étudie la possibilité de remettre à neuf cinq autres réacteurs CANDU en Ontario afin d'assurer que la province puisse satisfaire ses besoins en électricité actuels et futurs. Lorsque les 22 réacteurs nucléaires au Canada seront opérationnels, ils fourniront environ 20 p. 100 de l'électricité produite au pays et plus de 60 p. 100 de l'électricité produite en Ontario.



À Qinshan, en Chine, le dernier projet CANDU a été mené à bien avec près de quatre mois d'avance sur le calendrier lorsque le deuxième réacteur a été mis en service en juillet 2003.

## Énergie nucléaire, un synonyme d'air pur

Les experts sont de plus en plus nombreux à dire que la production d'énergie nucléaire constitue l'une des meilleures façons d'assurer à faible coût un approvisionnement fiable en électricité permettant d'assurer la charge de base — un impératif pour la croissance économique. Lorsqu'elle sert à produire de l'électricité, l'énergie nucléaire ne dégage pratiquement aucune des émissions qui contribuent au smog, aux pluies acides ou au réchauffement du globe.

En utilisant de l'énergie nucléaire pour produire de l'électricité au Canada, on réduit de 85 millions de tonnes par an les émissions de gaz à effet de serre, ce qui représente environ 12 p. 100 des émissions totales de gaz à effet de serre du pays. Il s'agit de la même quantité de gaz à effet de serre que celle attribuable à la combustion de combustibles fossiles par 17 millions de voitures et de camions. Par ailleurs, les réacteurs nucléaires du Canada ne rejettent pratiquement pas d'anhydride sulfureux ou d'oxydes nitreux, les gaz à l'origine du smog et des pluies acides. En utilisant l'énergie nucléaire pour produire de l'électricité, le Canada réduit encore de 10 p. 100 ses émissions totales de gaz responsables du smog et des pluies acides.

## Sûreté

L'industrie nucléaire canadienne a un dossier irréprochable en matière de sécurité et est dotée d'un système de réglementation rigoureux. En juin 2002, les membres du Comité sénatorial permanent de l'énergie, de l'environnement et des ressources naturelles en sont arrivés à la conclusion, après plusieurs



Le combustible nucléaire irradié est entreposé dans des bassins d'eau au sein de chaque centrale nucléaire du pays, où il peut être refroidi et surveillé.

années d'études et de rétroaction menées par de nombreuses parties concernées, que les réacteurs nucléaires du Canada comptent à leur avis parmi les réacteurs en service les plus sûrs qui soient dans le monde.

### Déchets

La production d'énormes quantités d'électricité par les centrales nucléaires canadiennes donne lieu à une petite quantité de déchets contrôlée et stockée dans des installations gérées avec soin. Au départ, le combustible irradié est stocké à la centrale pendant cinq à dix ans dans des bassins remplis d'eau, puis placé dans de gros silos en béton entreposés en toute sécurité sur place. On a élaboré un concept d'installation d'entreposage souterraine de grande envergure mais, jusqu'à présent, on n'a pris aucune décision quant à sa construction. La quantité totale de combustible irradié provenant des centrales nucléaires pourrait être stockée dans cinq patinoires de hockey, jusqu'à la hauteur de la balustrade.

Créée en vertu d'une loi du Parlement en novembre 2002, la Société de gestion des déchets nucléaires (SGDN) est chargée d'examiner les options de gestion à long terme des déchets de combustible nucléaire irradié, entre autres le stockage à long terme en formation géologique. La Société présentera un rapport au gouvernement fédéral en novembre 2005.

Après 43 ans d'utilisation du nucléaire pour la production d'électricité, on ne rapporte au Canada aucune blessure se rattachant aux centrales nucléaires.

### CANDU

CANDU est l'acronyme de Canada Deuterium Uranium, marque déposée pour la catégorie de réacteurs nucléaires conçus et mis au point par Énergie atomique du Canada limitée. Les réacteurs CANDU utilisent de l'uranium naturel comme combustible et de l'eau lourde (oxyde de deutérium) comme modérateur.

Les avantages économiques que représentent pour le Canada la mise au point et la vente de réacteurs CANDU à l'étranger se sont révélés et restent encore d'importance. Au pays, si on décidait de

construire deux réacteurs CANDU d'une capacité de 720 MW chacun, on créerait 40 000 années-personnes d'emploi. En outre, l'incidence économique sur le PIB s'élèverait à quelque 2,6 milliards de dollars pendant la période de construction.

En 1987, année qui célébrait le centenaire du génie comme profession au Canada, le réacteur CANDU s'est retrouvé parmi l'une des 10 premières réalisations techniques du siècle au pays. Le réacteur CANDU avancé (ACR<sup>MD</sup>), actuellement mis au point par EACL, concurrencera les centrales électriques au gaz.

### Uranium

Le Canada compte les plus riches gisements d'uranium de la planète, dans la nord de la Saskatchewan. Grâce à l'exploitation de plusieurs mines de cette région, le pays produit environ un tiers de l'uranium du monde. Par ailleurs, la Cameco Corporation, le plus grand fournisseur d'uranium au monde, possède une raffinerie et une usine de conversion, toutes deux situées en Ontario. Environ 80 p. 100 de l'uranium est destiné à l'exportation, ce qui génère chaque année environ 500 millions de dollars.

### Traitement du cancer

Le Canada a été le premier pays à utiliser le cobalt-60 pour le traitement du cancer. Le cobalt-60 est un isotope radioactif fabriqué en irradiant le cobalt ordinaire avec des neutrons dans un réacteur nucléaire. Il émet deux puissants rayons gamma. En 1951, à un mois d'intervalle, on a mis au point au Canada deux appareils de traitement au cobalt et on a commencé à les utiliser pour traiter des patients. L'un des appareils a été construit par le Dr Harold Johns de Saskatoon, l'un des premiers médecins au monde à proposer l'utilisation du cobalt-60 dans un appareil de radiothérapie externe, dans lequel la



Avec le redémarrage de la tranche 4, la centrale de Bruce A produit de l'électricité pour la première fois depuis 1998.

source de cobalt-60 se situe à une certaine distance du patient. L'autre a été conçu et construit par une petite équipe travaillant à la société d'État Eldorado Mining and Refining, intégrée par la suite à EACL. Beaucoup plus tard, c'est MDS Nordion qui a repris le secteur des isotopes radioactifs.

À l'heure actuelle, on compte quelque 1 200 appareils de traitement au cobalt-60 dans le monde. On estime que ces appareils assurent environ 15 millions de traitements du cancer par an.

### Médecine nucléaire

Le diagnostic s'avère un emploi encore plus intéressant de la technologie nucléaire appliquée à la médecine. En médecine nucléaire, les interventions ne nécessitent qu'un très petit rayonnement, en plus d'être indolores et sans danger. Elles donnent aux médecins de précieux renseignements qui leur permettent d'établir un diagnostic précoce de la maladie et de traiter rapidement le patient, ce qui évite souvent une intervention chirurgicale et fait baisser les coûts médicaux. On estime que, chaque année dans le monde, la médecine nucléaire permet d'effectuer de 15 à 20 millions de procédures d'imagerie et d'interventions thérapeutiques.

Le Canada fournit annuellement deux tiers des radio-isotopes produits par des réacteurs pour la médecine nucléaire et utilisés ensuite pour plus de 12 millions



@MDS Nordion

de tests diagnostiques. Le molybdène-99, le radio-isotope le plus utilisé en médecine nucléaire, est produit aux laboratoires d'EACL de Chalk River et préparé chez MDS Nordion à Ottawa. La courte période radioactive du molybdène-99 exige un transport et une logistique efficaces. Les expéditions s'effectuent par avion dans les 24 heures suivant la sortie du réacteur. On estime que, dans le monde, 34 000 personnes bénéficient chaque jour de procédures diagnostiques reposant sur le molybdène-99 et autres isotopes canadiens.

### Irradiation des aliments

Le Canada est un chef de file dans la mise au point de la technologie employée pour stériliser les fruits, les légumes et les viandes par rayonnement, afin de prolonger leur durée de conservation et de prévenir le risque de transmission de maladies par les aliments. L'irradiation tue les bactéries, les parasites et les insectes dans les aliments,

y compris les bactéries *Listeria*, *Salmonella* et *E. coli* potentiellement mortelle, en plus de retarder l'altération non microbienne de certains aliments. Aujourd'hui,



l'irradiation de plus de 50 produits alimentaires a été approuvée dans une quarantaine de pays.

En 1992, l'Organisation mondiale de la santé a indiqué que l'irradiation des aliments constitue une « technologie de conservation parfaitement au point ». Selon le chef de l'unité de la sécurité alimentaire, l'irradiation se révèle nécessaire dans un monde où les intoxications alimentaires sont en hausse et où entre le quart et le tiers de l'approvisionnement alimentaire mondial se perd après la récolte.

### Agriculture

Pour améliorer la production agricole, on peut éliminer les insectes nuisibles à l'aide du rayonnement pour stériliser les mâles des espèces. Une telle méthode, largement utilisée dans le monde, remplace l'emploi de pesticides chimiques. Le Canada a joué un rôle de premier plan dans la mise au point de cette technique. Une application canadienne en a été le contrôle de la pyrale de la pomme dans les vergers de la Colombie-Britannique.

D'importantes améliorations dans la production agricole ont également été réalisées en utilisant l'irradiation pour



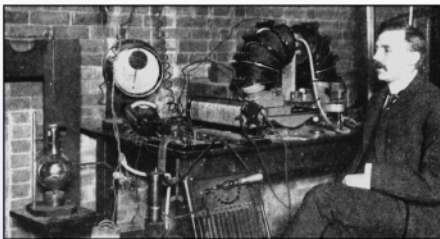
développer de nouvelles souches de plantes, ce qui s'est révélé particulièrement utile pour mettre au point des grains résistants aux virus et de meilleurs cycles de croissance et de récolte dans différentes régions du monde.

Dans le domaine de la recherche agricole, les techniques nucléaires permettent de mesurer l'efficacité des engrais employés pour les récoltes et de surveiller la teneur en eau. Grâce aux radio-isotopes, il est possible de déterminer l'absorption des éléments nutritifs du sol et de l'eau par les plantes, ce qui permet aux agriculteurs de limiter l'utilisation d'engrais. Cette mesure permet d'économiser l'eau, de réduire les coûts d'énergie entraînés par le pompage et de prévenir le ruissellement de contaminants potentiels dans les cours d'eau et les rivières.

### Industrie

Dans de nombreux secteurs d'activité, on a recours aux substances radioactives pour effectuer sans contact physique direct des mesures, telles que l'épaisseur et la densité du papier dans une machine à fabriquer le papier ou la hauteur d'un liquide dans un réservoir. On utilise la radiographie à l'aide d'une source radioactive pour inspecter les produits finis afin d'en détecter les défauts et les faiblesses.

## Quelques repères historiques



### 1898 - 1906

Ernest Rutherford, devenu Lord Rutherford, fait un certain nombre d'expériences à l'Université McGill sur la désintégration radioactive de l'uranium et du thorium. Son travail lui vaut le prix Nobel de chimie en 1908.

### 1940

George Laurence construit une « pile » sous-critique au Conseil national de recherches à Ottawa. Si l'impureté du carbone et de l'uranium qu'il utilise l'empêche de parvenir à la criticité, George Laurence contribue largement, grâce à son travail, à la décision de créer le Laboratoire de Montréal.

### 1942

Le Royaume-Uni et le Canada créent le Laboratoire de Montréal afin de mener des recherches sur le réacteur ralenti à l'eau lourde pour la production de plutonium. La majorité des membres de l'équipe proviennent du Royaume-Uni, de l'Europe ou du Canada, George Laurence étant le principal Canadien. Partant de connaissances très élémentaires (la fission n'avait été découverte que trois ans auparavant et la Seconde Guerre mondiale avait stoppé la plupart des échanges d'information), le groupe conçoit le réacteur national de recherche expérimental (NRX).

### 1945

La pile expérimentale d'énergie zéro démarre aux laboratoires de Chalk River, soit le premier réacteur en dehors des États-Unis.

### 1946

Le gouvernement canadien adopte la *Loi sur le contrôle de l'énergie atomique*, l'une des premières lois de ce type dans le monde, qui crée la Commission de contrôle de l'énergie atomique devant faire fonction d'organisme de réglementation et dotée de vastes pouvoirs sur toutes les activités « atomiques ».



### 1947

Le réacteur de recherche NRX de Chalk River devient opérationnel. Il va se révéler le réacteur de recherche le plus puissant du monde.

### 1951

Les premiers appareils de traitement au cobalt-60 du monde commencent à traiter des patients en Ontario et en Saskatchewan.

### 1952

L'organisme Énergie atomique du Canada limitée est créé et la *Loi sur le contrôle de l'énergie atomique* est modifiée de façon que la Commission de contrôle de l'énergie atomique devienne strictement un organisme de réglementation.

En voici certaines applications :

- étude de l'origine, de l'âge, de la distribution et de la qualité des eaux souterraines; détermination en ligne du soufre et de l'azote dans le charbon;
- stérilisation des fournitures médicales, telles que les pansements de chirurgie, les bandages et les sutures;
- recherche de défauts dans les soudures des pipelines et des gazoducs.

### Biens de consommation

Le rayonnement ou les substances radioactives servent à la fabrication ou à l'exploitation de nombreux articles de consommation, par exemple :

- les produits cosmétiques et capillaires ainsi que les solutions pour les verres de contact sont stérilisés par rayonnement pour les débarrasser de leurs éléments irritants et allergènes;
- de nombreux détecteurs de fumée disposent d'une petite source radioactive pour détecter la fumée;
- les photocopieuses contiennent de petites quantités de substances radioactives pour éliminer l'électricité statique et empêcher les feuilles de papier de se coller et de bloquer la machine.

### Ressources

Les ouvrages pédagogiques suivants sont conçus pour les niveaux scolaires appropriés et sont conformes aux programmes d'études dans le domaine scientifique :

1. Énergie atomique du Canada limitée (EACL) affiche dans son site Web des documents dans lesquels on explique les principes des rayonnements et le fonctionnement des réacteurs canadiens CANDU — [www.aecl.ca](http://www.aecl.ca)
2. L'Université York de Toronto compte une équipe qui prépare des documents scientifiques à l'intention des enseignants. Les documents sont conformes au protocole de programmes pancanadiens en sciences, comprennent une liste de liens pertinents et sont stockés dans une base de données consultable. Le site Web comprend des documents didactiques tirés du site d'EACL pour la 6<sup>e</sup> année, et il existe une unité sur le rayonnement — appelée EVARM — pour les 11<sup>e</sup> et les 12<sup>e</sup> années — [www.yesican.yorku.ca](http://www.yesican.yorku.ca)

### Autres ressources

- 1 Bruce Power  
[www.brucepower.com](http://www.brucepower.com)
- 2 Association nucléaire canadienne  
[www.cna.ca](http://www.cna.ca)
- 3 Commission canadienne de sûreté nucléaire  
[www.cnsccsn.gc.ca](http://www.cnsccsn.gc.ca)

- 4 Société Nucléaire Canadienne  
[www.cns-snc.ca](http://www.cns-snc.ca)
- 5 Cameco Corporation  
[www.cameco.com](http://www.cameco.com)
- 6 Agence internationale de l'énergie atomique  
[www.iaea.org](http://www.iaea.org)
- 7 MDS Nordion  
[www.mds.nordion.com](http://www.mds.nordion.com)
- 8 Ressources naturelles Canada  
[www.rncan.gc.ca](http://www.rncan.gc.ca)
- 9 Nuclear Energy Institute (États-Unis)  
[www.nei.org](http://www.nei.org)
- 10 Ontario Power Generation  
[www.opg.com](http://www.opg.com)
- 11 Society of Nuclear Medicine  
[www.snm.org](http://www.snm.org)
- 12 World Nuclear Association  
[www.world-nuclear.org](http://www.world-nuclear.org)
- 13 *Unlocking the Atom: The Canadian Book on Nuclear Technology*, Hans Tammemagi, David Jackson, McMaster University Press, 2002.  
Pour toute demande d'information :  
Téléphone : (905) 641-2732  
Télécopieur : (905) 641-1705  
Courriel : [oakhill@vaxxine.com](mailto:oakhill@vaxxine.com)  
Site Web : [www.vaxxine.com/oakhill](http://www.vaxxine.com/oakhill)
- 14 Agence de l'OCDE pour l'énergie nucléaire  
[www.ocde.org](http://www.ocde.org)

Pour obtenir de plus amples renseignements, visitez le site [www.cna.ca](http://www.cna.ca).

### 1962

La première centrale nucléaire du Canada, la centrale NPD, devient opérationnelle.

### 1966

Douglas Point, première grande centrale nucléaire de 200 mégawatts (électriques) (MWe), devient opérationnelle.

### 1970

Signature du Traité de non-prolifération qui prévient la mauvaise utilisation des armes nucléaires.

### 1971

La première tranche de 500 MWe de la centrale de Pickering est mise en service.



### Années 1980

Une équipe de spécialistes canadiens des laboratoires de Chalk River d'EACL applique leur technologie CANDU et leur expérience à la nouvelle conception des joints toriques du propulseur auxiliaire à poudre de la navette spatiale avec d'excellents résultats.

### 1983

Trois réacteurs nucléaires CANDU 6 deviennent opérationnels — Gentilly 2 et Point Lepreau au Canada et Wolsong 1 en Corée.

### 1994

Bertram Brockhouse reçoit en collaboration le prix Nobel de physique pour son travail sur la diffraction des neutrons mené à Chalk River dans les années 1950 et 1960.

### 2000

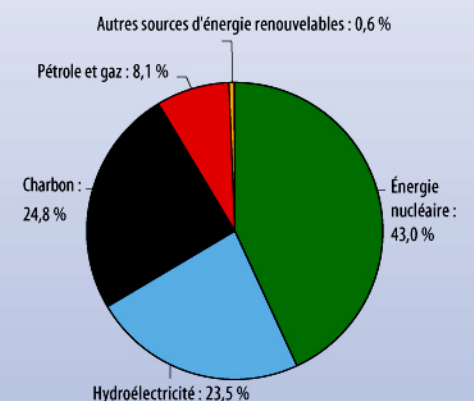
La *Loi sur la sûreté et la réglementation nucléaires*, qui remplace la *Loi sur le contrôle de l'énergie atomique*, est adoptée. La Commission de contrôle de l'énergie atomique devient la Commission canadienne de sûreté nucléaire.

### 2002

La *Loi sur les déchets de combustible nucléaire* est adoptée. Elle fournit une orientation stratégique pour la gestion et le stockage permanents de tous les déchets de combustible nucléaire du Canada. La Société de gestion des déchets nucléaires est créée et doit rendre compte en novembre 2005 au gouvernement fédéral des options pour la gestion à long terme du combustible nucléaire irradié.

### 2003

#### Sources d'électricité en Ontario



Source : Société indépendante de gestion du marché de l'électricité, mai 2004



# Curricula

Reproducible Insert

## A Smoking Prevention/Media Literacy Resource Targeted to youth aged 12-15 (Grades 7-10)

The following lessons and activities have been prepared for youth in Grades 7-10. These activities are student-centred and designed to help young people understand the risks associated with smoking, how smoking is portrayed in the media and the benefits of living smoke-free. The activities are appropriate for school-based settings and community groups working directly with youth. For educators, the approach links directly to mandated curricula across the country.

Due to space limitations, part of this resource will be posted on the Internet. To complete the activities, you will need a number of fact sheets as well as a useful list of resources. The Web address is: [www.teachmag.com/curricula.asp](http://www.teachmag.com/curricula.asp).

## THE SMOKE-FREE PROJECT



### PURPOSE

This resource kit examines the relationship existing between the issue of smoking and peer groups, advertising and popular movies. It consists of a series of interactive, comprehensive lesson plans to engage students and provide them with tools to help make informed decisions about smoking.

### OBJECTIVES

By completing the activities in this unit, youth will be able to:

- Distinguish fact from fiction relating to current information in the area of smoking.
- Describe how advertising for tobacco can influence choices and decisions.
- Identify how cigarettes and smoking are used in and by popular movies.
- Recognize social and peer conflicts concerning smoking and apply techniques to defuse them.

### ACTIVE LEARNING STRATEGIES

Youth will work in a variety of situations (individual, small group, pairs, triads, jigsaws, etc.) to gather and share information as they explore the issue of smoking and the influences playing a role in important life decisions.

Specific skills developed will include:

- Brainstorming
- Researching
- Summarizing
- Presenting
- Consensus building
- Media literacy
- Connecting information
- Discussing
- Empowering others
- Assessing and evaluating
- Debating

*\*This lesson plan was originally developed for Health Canada's anti-tobacco program.*

## LESSON ONE: Smoking Facts

### Lesson Summary

The purpose of this lesson is to establish what the perception and knowledge students have about smoking is, and to introduce the various subtopics addressed in the unit.

### Activity Sheets *(posted on Web site)*

Smoking Quiz (Appendix 1)

Smoking Quiz Facilitator Copy (Appendix 2)

Give each student a copy of the smoking quiz and allow 5-10 minutes for them to complete it. Once the students are finished, go over the correct answers, referring to the facilitator's key.

### Discuss

How well did students do on the quiz? Did they learn anything new? Were there any answers that surprised them?

Now, divide the class into groups of four or five. Give each group a large sheet of chart paper and a marker and ask them to write the word SMOKING in the centre of the page. They have five minutes to brainstorm and record everything they can think of related to smoking. Remind them of the basic rules of brainstorming – there should be no blocking of ideas, all ideas should be recorded and all group members should have equal time to contribute ideas.

Ask each group to select one member to come to the front and help sort the generated ideas into themes. The papers can be taped to the wall and each group rep can circle related ideas with a marker as the class identifies them.

Keep a master list of the common themes as a reference for topics to be addressed in the unit. If all of the major themes (listed below) do not come up through the brainstorming session, they should be identified and added to the master list.

### Smoking themes:

- Health concerns, such as lung cancer, emphysema asthma and other respiratory illnesses; exacerbation of other health concerns (e.g., stress, gum disease, etc.), addictiveness, secondhand smoke
- Cost of buying cigarettes and health care

- Legislation concerning sales to minors, advertising, health warnings
- Advertising and the media, including advertising techniques, smoking in movies, tobacco industry's interests

*NOTE:* If it has not already been mentioned, make it clear that selling cigarettes to minors is illegal (until age 18 in most provinces and 19 in some).

### Discuss

What common themes were identified? What new information did students learn about smoking? Were there any unexpected ideas or ideas that didn't fit into the major themes?

Consider setting up a school Web site to help others learn the real facts about smoking. Put the smoking quiz "online" and challenge other kids to test their knowledge. Have family members test their knowledge, too.



**LESSON TWO: Puzzling Over Smoking****Lesson Summary**

This lesson engages youth in a “jigsaw,” where they work in small groups to identify and share relevant, current information about tobacco and smoking.

**Fact Sheets** (*posted on Web site*)

Canadian smoking statistics  
 Why young women smoke  
 Why young men smoke  
 Body image, self-esteem and smoking  
 Saying No  
 Secondhand smoke

**Activity Sheets** (*posted on Web site*)

Jigsaw Summary Sheet (Appendix 3)

Divide students into “home” groups of five. Assign each group member one of the five fact sheets listed above. Explain each group member will be responsible for teaching the rest of their group the material in the fact sheet they have been assigned. Distribute a Jigsaw Summary Sheet to each student.

Have students move to “expert” groups where everyone in the group has the same topic. Explain students should work with their “expert” groups to read about and/or research their common topic, prepare a short presentation and decide how each individual member of the “expert” groups will teach the topic to their original “home” groups when they resemble. The purpose of the exercise is to share the key points, so point-form notes are fine. If they want to get more creative or have more time, each expert could prepare a mini-poster with key points, observations and illustrations.

Have students return to their “home” groups and take turns teaching their team members the material. Each student should complete a Jigsaw Summary Sheet with key points on each topic.

Once the groups are finished, engage in a discussion with the whole class on the key points they learned for each of the five issues.

**Discuss**

What were the most important factors students learned about smoking? Why do they think this method of research is valuable when talking about an issue such as smoking?

**LESSON THREE: Analyzing Advertising****Lesson Summary**

Students will examine tobacco advertising to identify the advertising techniques employed to convince young people to smoke.

**Fact Sheets** (*posted on Web site*)

Advertising tricks of the trade  
 How tobacco companies market to youth  
 Cigarettes and advertising  
 Marketing restrictions in Canada

**Activity Sheets** (*posted on Web site*)

Ad Analysis Worksheet (Appendix 4)

**Additional Resources**

Non-Canadian teen and youth magazines are available in most convenience stores (smoking ads are banned in Canadian publications comprised of a readership of less than 80 per cent adults).

In preparation for this activity, you may want to ask students to track their exposure to tobacco advertising over the week or few days preceding class. Ask them to log any tobacco ads they come across. They could also note any scenes in music videos, television shows or films they watch where the characters smoke.

Divide the class into groups of three. Ask students to review the fact sheets above and then select a cigarette advertisement from the magazines provided. Ask each group to discuss their ad, with attention to the advertising techniques described in the fact sheets. Each group should write a brief analysis of their ad using the Ad Analysis activity sheet as a guide.

Each group should mount their ad and accompanying report to create a poster to display in the classroom.

**Discuss**

This activity may result in some strong opinions about the influence of the advertising on youth smoking and the rights of companies to advertise their products. How do students feel about the techniques used by tobacco companies to attract young smokers? Do the techniques work? Tobacco companies argue it is their right to advertise their products. Should that right be limited?

For additional activities and information on media literacy, visit the Concerned Children’s Advertiser’s Web site at [www.cca-kids.ca](http://www.cca-kids.ca) and the Media Awareness Web site at [www.media-awareness.ca](http://www.media-awareness.ca).

**LESSON FOUR: Telling the Truth****Lesson Summary**

Students will prepare a print, audio, video or Internet advertisement providing a realistic portrayal of smoking and its costs and benefits.

**Activity Sheets** *(posted on Web site)*

Constructing an Ad (Appendix 5)

A number of consumer and advocacy organizations specialize in creating ads that “tell the whole truth” about controversial issues such as smoking. Show students some of the spoof advertisements developed by Adbusters (<http://adbusters.org/spoofads>) or the electronic billboards displayed at the Cannes Film Festival by Smoke Free Movies ([www.smokefreemovies.ucsf.edu/ourads/ad\\_cannes\\_index.html](http://www.smokefreemovies.ucsf.edu/ourads/ad_cannes_index.html)).

Allow students to work alone or in small groups to design an advertisement giving youth an accurate picture of smoking and its effects. The ad can be a spin-off of real cigarette ads or an anti-smoking public service announcement. It can be designed for print media, (newspaper, magazine or “environmental” advertising like billboards or bus shelters), radio, television (if video equipment is available and time allows) or the Internet. It should be geared to youth age 12 – 19, but may address specific target markets within that age group.

Each group should complete the Constructing an Ad activity sheet to guide them through the basic components of advertising.

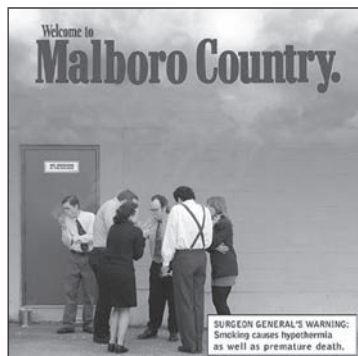
Post, play or display the completed ads for the entire class or school.

**Discuss**

Were the ads effective? Have students seen effective anti-smoking advertisements outside the classroom? If not, why might that be?



**Spoof Ads**  
from Adbusters.com

**LESSON FIVE: The Smoke Screen****Lesson Summary**

Students will examine the issue of how and how much smoking is portrayed in popular movies and research and debate the surrounding issues.

**Fact Sheets** *(posted on Web site)*

Smoking in the movies

Other fact sheets as needed

Ask students to keep a record of movies, television programs or music videos they watch, in which smoking is portrayed. Ask them to note what characters smoke and in what situations. Allow one or two weeks for them to gather some observations, then discuss what they have seen.

Divide the class into two groups in preparation for a debate on the issue of smoking in the movies. One side will research and prepare an argument opposing the portrayal of smoking in movies geared to children and youth, using materials from advocacy groups such as Smoke Free Movies and government and health organizations. The other side will research and prepare an argument in favour of free speech and the right to promote products, using materials from the tobacco industry and free speech and smokers' rights organizations. The fact sheets from this unit can be used as a source of information. Each side may want to add auxiliary arguments, such as the views of tobacco farmers or children's rights advocates.

The groups should delegate research tasks and decide who will represent their position. Allow at least two class periods for research and development of the arguments.

Stage a short debate, formal or informal, on the question of whether the portrayal of smoking should be allowed in movies geared to children and youth. Give each team an equal amount of time to present their arguments and rebut the other side's position. Ensure the basic rules of debating are understood: no interrupting, no personal attacks or rudeness and respect the decisions of the moderator. A timekeeper and moderator for the debate should be appointed.

**Discuss**

After the debate, discuss with the class who they think had the best arguments. How do the students feel about the issue personally?

**LESSON SIX: Smokin' Role Plays****Lesson Summary**

Students will confront awkward social situations involving pressure to smoke through role-play scenarios.

**Fact Sheets** (*posted on Web site*)

Saying No

**Youth Activity Sheets** (*posted on Web site*)

Role-Play Scenarios (Appendix 6)

Copy each scenario in Appendix 6 on an index card (or make up your own situations). Divide the class into five mixed-gender groups and have each group review the Saying No fact sheet, allowing about 5 minutes for discussion.

Now, have each group select one of the scenario cards without looking at what is written on it. Once they have read their scenario, each group should decide on who plays what role and how the situation will unfold. Non-smoking characters in the role-plays should try to remain non-smokers. Give the groups 5 – 10 minutes to develop their role-play.

Ask each group to perform their role-play for the rest of the class. If desired, the groups could use a "Stop Action" technique to halt the role-play partway through and explain what each character is thinking or feeling.

**Discuss**

How did the students feel in the role plays? Were they able to say "no" to smoking gracefully and successfully? Did any of the techniques in the fact sheet help? Why or why not?

**LESSON SEVEN: Evaluation****Lesson Summary**

Students will complete a series of exercises using assessment and evaluation tools to determine whether they have achieved the objectives outlined at the beginning of this unit.

**Activity Sheets** (*posted on Web site*)

Smoking Quiz (Appendix 1)

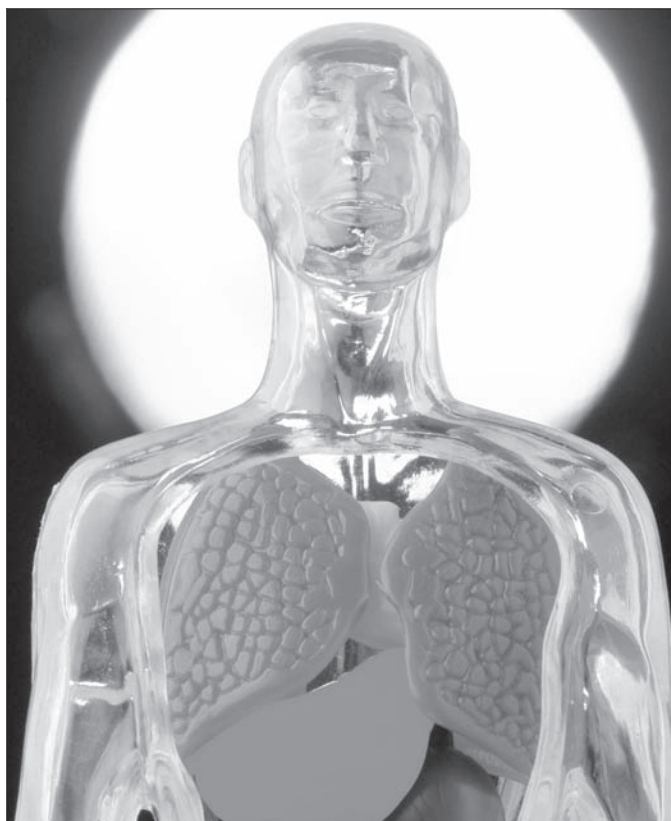
Student Evaluation Form (Appendix 9)

Re-administer the Smoking Quiz from Lesson One to the class. Did the students do better?

Distribute a Student Evaluation Sheet to each student. Allow 10 – 15 minutes for completion. Emphasize while you will be asking students to share their answers, they do not have to talk about anything they are not comfortable sharing with the rest of the class. Some answers may be for the teacher's eyes only.

**Discuss**

Give students the opportunity to share their answers to the evaluation questions with the class.



# Butterflies Soar To Unbelievable Heights



*Six Canadian teens travel to Africa as winners of CIDA's overwhelmingly successful butterfly 208 contest.*

It's said if a butterfly flaps its wings in one part of the world, it can eventually cause enough force to trigger a storm across the globe. It's a simple theory, but one that carries much weight with today's globally conscious youth.

For, if just one butterfly can instigate such change, imagine the power and impact our own thoughts and actions can have on the world. Individuals can do their part to make this world a better place for both those living in Canada and in developing countries. That's the principle behind *butterfly 208*, an innovative program designed to teach Canadian youth about global issues through an art, multimedia and writing contest. The program is sponsored by the Canadian International Development Agency (CIDA) in partnership with several Canadian organizations.

*Butterfly 208* envisions a world where every person is healthy, well-nourished, educated and safe from exploitation, abuse and discrimination. Education is the key to making this vision a reality, and education starts in the classroom.

This year, students aged 14 to 18 were encouraged to send in entries on one of five international development themes (basic education, child protection, environment, health and nutrition and HIV/AIDS) and could participate individually or in groups in English or French. By accessing special lesson plans from the *butterfly 208* Web site, teachers were able to bring the contest principles into the classroom and motivate their students to enter. Students and teachers were also made aware of the contest through an in-school promotional campaign provided by What Promotions, as well as an editorial in What Magazine.

The results were astounding. This year, CIDA received an incredible 2,055 *butterfly 208* entries, many of them passionate, thoughtful and insightful. Carol Della Penta, CIDA's Manager of Youth and Public Awareness Programs, says the popularity of this year's contest and the breadth of the entries were proof positive Canada's youth is embracing the concept of what it means to be globally conscious.

"Canadian kids responded in amazingly creative ways to *butterfly 208* this year," Della Penta says, citing essays, creative writing pieces, rap songs and paintings as examples of entries received. "Not only did we receive a lot more entries than we thought, but the quality of the entries was unbelievable."

In August 2004, the six grand prize winning students travelled to Tanzania, Africa, where they experienced life in a developing country and the unique challenges and rich culture of its people, and visited CIDA projects as special youth ambassadors. The six students were 18-year-old Keeley Haftner of Saskatoon (First Place in the Visual Art category); 18-year-old Pier-Luc Dupont

of Quebec City; 16-year-old Katie Engelhart of Toronto (tied for First in Individual Writing); and a trio of 15-year-old Montreal students, Tania Pacheco, Vanessa Barkley and Christina D'ettore (First Place in Group Visual Art and Multimedia).

A trip to Tanzania was also awarded to the teacher who encouraged the most students to enter *butterfly 208*. Maryam Moayeri, an English teacher at JN Burnett Secondary School in Richmond, B.C., got 182 students at her school to participate.

Moayeri says *butterfly 208* is one of her favourite student contests because of its humanitarian spirit and creative freedom. "Some of the best work I've ever received has been for this contest," she says. "Most students enjoy partaking in it as it offers them much choice. They can work individually or as a group. They can choose their strongest form of communication to relay their message. Also, it gives them an audience other than just the teacher. They like that other people will see their work. It gives their project a larger purpose."

Della Penta agrees. "Youth in Canada are showing us they really do care about global issues and about the challenges of life in the developing world. But, also, they are telling us they have a lot of energy and enthusiasm they want to channel into productive ways of making a difference in the world."

Fuji Photo Film Canada was the major sponsor of this year's contest, providing Nexia Q1 Zoom, Fujifilm Instax Mini 7 and QuickSnap cameras for the various prizing levels. A gallery of all *butterfly 208* winning entries is available online at [www.bp208.ca](http://www.bp208.ca). The 2004-05 edition of *butterfly 208* will be launched this fall, with a contest deadline of April 25, 2005. For more information, visit [www.bp208.ca](http://www.bp208.ca).



*Keeley Haftner's winning entry in the Individual Visual Art category.*



# Beauty is Media Deep:

*How advertisers influence  
body image*

By Krista Glen

“There is just no escaping media intrusions into our lives,” says Dr. Marie Hoskins, associate professor at the University of Victoria’s School of Child and Youth Care. Whether you flip through a magazine or turn your gaze toward a billboard or city bus, you can welcome yourself to the pervasive world of media information – and pressure.

Advertisers often target adolescents — whose identities are in a constant state of change and adjustment — knowing young people are more likely to be influenced by negative and stereotypical body size ideals as they try to fit in with their peers. According to Hoskins, adolescence is a significant and critical stage of development when girls (and boys) experiment with who they are and who they want to be. “There is such a narrow range of possibilities with serious consequences if one rejects these norms,” says Hoskins. “It isn’t surprising girls pursue these kinds of goals for themselves.”

The media's influence reaches younger children, too. "I have seen this starting in kindergarten, in clothing worn at assemblies for special events," says Kerry Chick, a Grade 3 teacher at Ottawa's W.E. Gowling Public School, in reference to the scant and sexy clothing more and more young girls wear to school.

The media's portrayal of the ideal body is now 10 pounds (or 4.5 kilograms) lighter than in the "Twiggy" period (in the 1960s, 5'6", 90-pound fashion model Lesley Hornby – "Twiggy" – popularized the gaunt, waif look), an unattainable and unhealthy weight for most young girls. These images of "ideal" bodies are intentionally placed just beyond the average person's reach, creating a strong determination to fulfill unreachable goals and resulting in increased spending on products claiming to facilitate the realization of those goals.

Images only fitting within a narrow definition of "beauty" or "popularity" can be confusing and even harmful to developing youngsters. Considered a multicultural inner-city school, many of W.E. Gowling's approximately 500 K-6 students come from impoverished, low-socioeconomic families. Chick and fellow Grade 3 teacher, Barbara Stein, say many children attending the school are subject to environmental circumstances and cannot see past their current situations to understand their current actions will affect their futures.

Volunteer teacher Jennifer Klein says because of the high level of multicultural differences within the school, many of the children come from families with beliefs, customs and cultures intolerant of bodily exposure (especially of females). Klein says her students receive conflicting messages from family and media. Hoskins worries these children are also subject to pressure from influential parties outside the media: "Peers, family, church, schools and the media are all resources adolescents rely on to create an identity for themselves," she explains.

While many Canadian schools attempt to keep checks on how students look and dress (often by regulating or enforcing a specific uniform), Gowling does not require a mandatory school uniform (since many students abide by the



**Top:** In 1967, "Twiggy" influenced young North Americans to emulate her low weight of 91 pounds. **Right:** Scantily-clad Paris and Nicki Hilton at the 2003 MTV Music Awards



religious requirements of their families). Recently, however, Gowling's administrative body implemented a stricter dress code, banning students from wearing strappy tank tops, bandanas and offensive T-shirts to school. Shirts must be long enough to be tucked into pants, midriffs cannot be exposed and skirts have to be long enough to reach fingertips when held up at arm's length. Although students customarily followed a loose dress code, these new, more specific rules ensure both parents and students know what the school considers "appropriate" attire.

Still, some children continue to sport unsuitable clothing to school. According to Klein, Gowling takes several measures to ensure delinquent students follow the rules: bandanas are confiscated, children are sent home to change (if possible) during school hours, parents are contacted if necessary and the school supplies long T-shirts to cover exposed midriffs.

Gowling's dress code was put into practice to curb gang behaviour, affect modesty, help students focus on their studies (rather than the latest trends) and teach self-respect. Stein says parents and teachers must work together to concede what constitutes "appropriate" school attire: "Schools can't enforce a dress code if they aren't supported by parents at

home." She suggests other schools wishing to implement similar regulations send an informative letter home to parents indicating a new policy on dress and welcoming feedback. In fact, says Stein, Gowling's new dress code came about because "the parent council wanted to initiate it."

Teachers can and should work with parents to support children in making the right choices. According to Chick, there is often very little at-home screening when it comes to what children are wearing when they go to school each morning. She worries children are allowed to wear what they want, without parental interference.

Hoskins, however, is not entirely sold on the idea of dress codes. She doesn't think they make any difference in tackling positive body image and parental attitudes toward the way their children dress. "If I were a school administrator, I'd want to know what the underlying issues and concerns really

***Images only fitting within a narrow definition of "beauty" or "popularity" can be confusing and even harmful to developing youngsters.***



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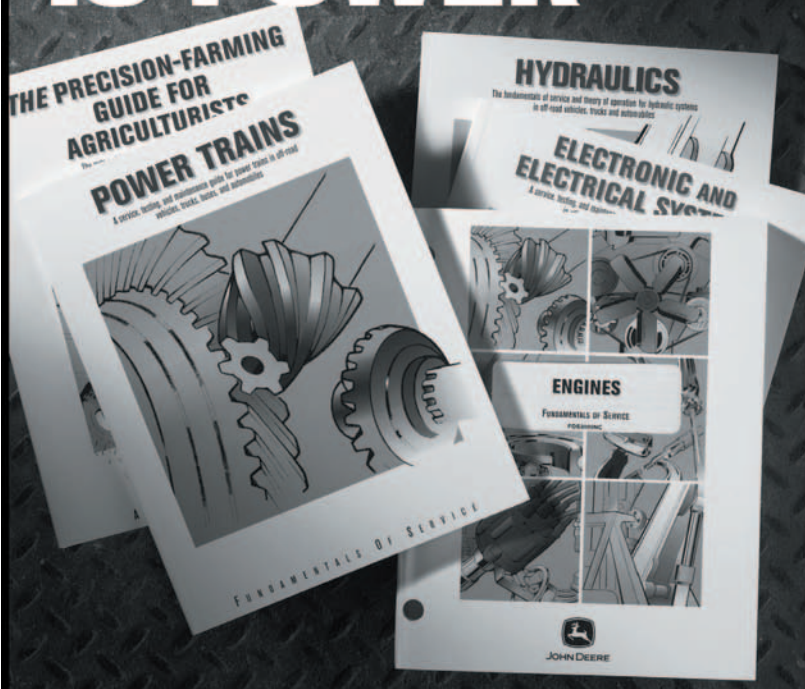
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are around the move to push for dress codes,” she says. “Is it a learning issue or a morality issue, and how would dressing differently address either of these areas of concern?”

Whether dress codes are seen as beneficial or not, schools, teachers and staff can effect change by setting positive body image standards for their young female pupils. Teachers are role models when it comes to dressing and behaving appropriately and, says Chick, schools can actively seek to employ strong female staff members who will teach young girls what they do is more important than how they look. This, says Chick, can be an integral part of girls’ academic performance: “The ones who are concerned with looks are not doing as well in school.”

Hoskins says the role schools, teachers and parents play in ensuring adolescents develop positive body image is profound. In families where appearance has been over-emphasized, it is far more likely girls will develop body image problems or concerns. Parental attitude can be passed on, as can a positive outlook on nutrition and exercise.

Hoskins believes what needs to be addressed in school and at home is how the media can manipulate one’s perceptions, values and emotions. Schools are starting to see this as, perhaps, the most critical form of knowledge, and many now offer media literacy courses, which develop critical thinking skills in children so they may better question, analyze, evaluate and respond to information they gain through media sources. Nicole Cohen, co-editor and co-publisher of *Shameless Magazine* ([www.shamelessmag.com](http://www.shamelessmag.com)) agrees: “It’s so important for girls to be equipped with media literacy skills, to be able to decode [media] messages and see past the images being packaged and sold to them.”

By understanding media literacy, students can achieve a better understanding of the world around them and, consequently, of themselves. According to [www.media-awareness.ca](http://www.media-awareness.ca) (a bilingual Web site), by the time Canadian kids reach high school, they will have spent between 10,000 to 15,000 hours watching television – that’s more time spent in front of the tube than playing



***Properly decoding the messages children see on TV helps them think critically about the world around them. But, most kids don’t do this automatically, making the integration of these skills into the classroom essential.***

sports or talking to mom and dad. Properly decoding the messages they see on TV helps them think critically about the world around them. But, most kids don’t do this automatically, making the integration of these skills into the classroom essential.

One way to incorporate media literacy into the curriculum is with the programming available through Cable in the Classroom ([www.cableeducation.ca](http://www.cableeducation.ca)), a non-profit service bringing commercial-free, copyright-cleared bilingual programming to all grades in Canadian schools. Hundreds of hours of programming focus on science, technology, geography, music, history, art, phys-ed, health and social studies. Lesson plans are also available, many produced exclusively as media literacy education materials.

In addition, Cable in the Classroom programs and lesson plans provided by MuchMusic (MuchMedia Lit) and designed for high school students aim to encourage critical thinking and analysis of the media and social issues as related to music, entertainment and popular culture. Students watch the special programming and are then encouraged to use higher-level thinking skills to analyze media content for purpose, validity, value and perspective. For example, after watching an episode, students may be asked to produce their own media messages by creating a poster, essay or Web page.

Teaching media literacy skills and implementing school dress codes may, however, only scratch the surface in encouraging positive body image in youth. In many cases, it may be beneficial to go straight to the source, focusing specifically on how students perceive their own bodies. There are several Canadian programs and organizations helping teachers foster positive body images in their students.

Vibrant “Faces” (Fun, Active, Confident, Energetic Self-Images) aims to address self-esteem, body image and motivation in Grade 7 and 8 girls by promoting a healthy, active lifestyle. Vibrant Faces conforms to the Active Participation strand of the Ontario Health and Physical Education

Curriculum Policy. Using creative and fun resources, the program allows adolescent women to interact with each other and discover their own potential for success by becoming more physically active. Participants are encouraged to improve themselves in three important areas: physical activity, body image and self-image.

Vibrant Faces is a free bilingual program including a user-friendly



Summer 2004 issue of *Shameless Magazine*

teacher/leader event guide and a student guide for each pupil. It also comes with product samples from sponsors Always, Alldays and Tampax. For more information, and to fax in an order for the free resource materials, please visit [www.ophea.net](http://www.ophea.net) (under “Ophea’s Programs,” “Vibrant Faces”).

A similar program, developed by the Body Image Coalition of Peel ([www.bodyimagecoalition.org/everybody1.html](http://www.bodyimagecoalition.org/everybody1.html)) also promotes healthy body image, positive self-esteem and a non-dieting approach to eating. A survey conducted by Dr. Gail McVey, Health Systems Research Scientist with the Community Health Systems Resource Group, Toronto, showed 60 per cent of girls in Grades 7 and 8 in the Peel, Ont. region were dieting to lose weight; in response, a manual with background information and activities was created to change body image attitudes and reduce the risk of eating disorders.

The manual addresses topics relating to media, family and friends, self-esteem, body image, dieting, healthy eating, active lifestyles, stress management and relationship skills.

Teachers’ sections include background information on each topic and activities and worksheets for classroom use. The manual’s effectiveness was evaluated after distribution to female students at Region of Peel middle schools; in classrooms and nurse-led settings self-esteem, body image and eating attitudes and patterns improved.

Children are constantly bombarded with images, positive and negative, of what it means to be a healthy and successful individual. Schools today are attempting to go beyond their traditional role of teaching just the basics, by playing a vital part in generating street and consumer smarts in addition to book smarts, and encouraging their students to cultivate healthy body images as independent thinkers autonomous of the media. By regulating and setting examples for dress, being strong role models, teaching media literacy skills and promoting healthy body image in today’s youngsters, they just might succeed.

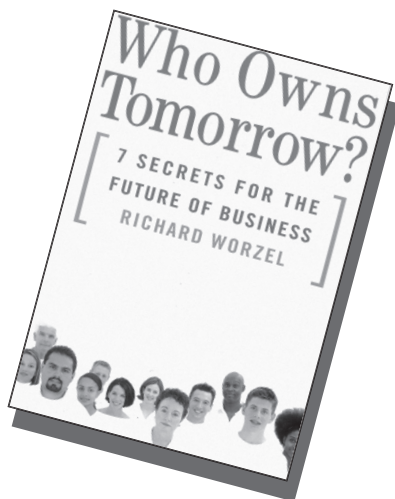
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## La beauté ancrée dans les médias, ou comment les annonceurs influencent l'image du corps.

Krista Glen

« Il n'y a tout simplement aucun moyen d'échapper à l'intrusion des médias dans notre vie », d'affirmer Mme Marie Hoskins, professeure agrégée à la *School of Child and Youth Care* de l'Université de Victoria, repensant à un énorme écran de télévision à l'aéroport alors qu'elle attendait l'arrivée de ses bagages sur le carrousel. De même, pas moyen d'échapper aux messages, bons ou mauvais, qu'un téléviseur projette. Que vous feuilletiez une revue, sortiez quelques minutes et regardiez un panneau publicitaire ou un autobus, vous êtes entraînée dans le monde envahissant de l'information par les médias — et par la pression qui en découle.

Les annonceurs visent souvent les adolescentes — dont l'identité est en constant changement pour s'adapter — sachant que les jeunes risquent davantage d'être influencées par des idéaux négatifs et stéréotypés relativement à la taille du corps pour être comme les copines. Selon Mme Hoskins, l'adolescence est un stade important et critique de développement lorsque les filles (et les garçons) recherchent qui elles (ils) sont

et ce qu'elles (ils) veulent être. « Si l'on rejette ces normes, les choix sont peu nombreux et ont de graves conséquences, dit-elle. Il n'est donc pas surprenant que les filles poursuivent ces objectifs pour eux-mêmes. »

L'influence des médias touche aussi les plus jeunes. « J'ai vu que ça peut commencer au jardin d'enfants, d'après les vêtements portés lors d'activités », dit Kerry Chick, enseignante de troisième année à l'école publique W.E. Gowling d'Ottawa, en référence aux vêtements minuscules et sexy que de plus en plus de filles portent à l'école.

Le portrait que font les médias du corps idéal est maintenant de 4,5 kilos de moins que pendant la « période Twiggy » (dans les années 60, le mannequin Lesley Hornby — dite Twiggy pour ses 168 cm et ses 41 kilos —, avait popularisé ce look décharné évoquant une enfance malheureuse). Or, ce poids est néfaste et impossible à atteindre pour la majorité des jeunes filles. Ces images du corps « idéal » sont intentionnellement placées juste au-dessus de la portée de la personne normale, créant ainsi une forte détermination à atteindre des objectifs irréalistes et poussant à de plus grandes dépenses pour des produits prétendant en faciliter la réalisation.

Les images qui ne correspondent qu'à une définition tronquée de la « beauté » ou de la « popularité » peuvent dérouter et même être dangereuses pour les jeunes dont le corps se développe. L'école W.E. Gowling est située dans un quartier dit multiculturel et déshérité où beaucoup d'élèves, parmi les quelque 500 du jardin d'enfants à la sixième année, viennent

de familles pauvres et d'un milieu socio-économique bas. Mme Chick et sa collègue de troisième année Barbara Stein disent que beaucoup d'enfants fréquentant l'école se trouvent dans des circonstances influencées par leur milieu, qui les empêchent de voir au-delà de leur situation du moment pour comprendre que leurs actions présentes auront des conséquences sur leur avenir.

Selon Jennifer Klein, enseignante bénévole, le fait qu'il y ait de fortes différences culturelles au sein de l'école, beaucoup d'enfants viennent de familles où, selon les croyances, les traditions et la culture, on ne tolère pas que le corps (notamment celui des personnes du sexe féminin) soit mis à nu. Elle affirme qu'entre leur famille et les médias, les élèves reçoivent des messages conflictuels. Mme Hoskins s'inquiète aussi du fait que ces enfants subissent des pressions de parties influentes en dehors des médias. « Les camarades, la famille, l'église, l'école [...] sont des réalités sur lesquelles les adolescentes peuvent se reposer pour se créer leur propre identité », explique-t-elle.

Si de nombreuses écoles canadiennes essaient de régler la façon dont les élèves se présentent et s'habillent — souvent en imposant un uniforme —, l'école Gowling n'en exige aucun (étant donné que beaucoup d'élèves se soumettent aux exigences religieuses de leur famille). Récemment, pourtant, l'administration de l'établissement a mis en place un règlement interdisant le port, à l'école, de débardeurs à bretelles fines, de bandanas et de tee-shirts de mauvais goût.

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La chemise doit être suffisamment longue pour pouvoir être rentrée dans le pantalon, la taille ne doit pas être mise à nu et la jupe doit arriver à l'extrémité des doigts lorsqu'on se tient debout les bras le long du corps. Si les élèves avaient l'habitude d'observer plus ou moins certaines règles en matière vestimentaire, ces nouvelles consignes, plus spécifiques, font savoir aux parents et aux élèves ce que l'école considère « approprié ».



Il reste que certains enfants arrivent encore à l'école avec des vêtements inadaptés à la situation. Selon Jennifer Klein, l'école prend plusieurs mesures pour assurer que les élèves fautifs respectent les règles : les bandanas sont confisqués, les enfants sont renvoyés à la maison pour se changer (si possible) pendant les heures de classe, les parents sont avertis si c'est nécessaire et l'école fournit des tee-shirts longs pour couvrir les tailles à nu.

Le règlement vestimentaire a été mis en place à Gowling pour réfréner le comportement des bandes, susciter la modestie, aider les élèves à se concentrer sur leurs études (plutôt que sur les dernières modes) et enseigner le respect de soi. Barbara Stein estime qu'il doit y avoir collaboration entre les parents et les enseignantes pour envisager ce qui constitue une tenue vestimentaire « appropriée » pour l'école. « Les écoles ne peuvent appliquer un règlement vestimentaire que si elles sont soutenues par les parents à la maison. » Elle propose que les écoles souhaitant mettre un tel règlement en place envoient aux parents une lettre explicative en demandant leur avis. En fait, à Gowling, le nouveau règlement vestimentaire a été décidé parce que « le conseil des parents a voulu essayer ».

Les enseignantes pourraient et devraient collaborer avec les parents afin d'aider les enfants à faire les bons choix. Selon Mme Chick, on vérifie souvent très peu ce que portent ces derniers le matin avant de partir. Elle s'inquiète du fait que les enfants peuvent porter ce qu'ils veulent pour aller à l'école, sans que les parents n'aient rien à dire.

Mme Hoskins n'est pourtant pas totalement acquise à l'idée d'un règlement vestimentaire. « Je ne pense pas qu'un règlement vestimentaire change vraiment les choses pour régler le problème [de l'image positive du corps et de l'attitude des parents vis-à-vis de la façon dont leurs enfants s'habillent].



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Si j'étais administratrice scolaire, je voudrais connaître les véritables raisons qui poussent à préconiser un tel règlement. S'agit-il d'une question d'apprentissage ou de moralité ? En quoi le port de vêtements différents apporterait-il une réponse à ces questions ?

Qu'un règlement vestimentaire soit considéré comme bien fondé ou non, les écoles, les enseignantes et le personnel peuvent susciter un changement en établissant des normes quant à une image positive du corps pour leurs jeunes élèves du sexe féminin. Sur ce point, les enseignantes doivent montrer l'exemple et, selon Mme Chick, les écoles peuvent en fait chercher à employer un personnel féminin lucide capable d'enseigner aux jeunes filles que ce qu'elles *font* est plus important que ce à quoi elles *ressemblent*. Ceci peut faire partie intégrante du travail scolaire : « Les élèves qui se soucient de leur apparence n'ont généralement pas de bons résultats », ajoute-t-elle.

Mme Hoskins estime que le rôle joué par les écoles, les enseignantes et les parents est capital si l'on veut que les adolescentes acquièrent une image positive de leur corps. Dans les familles où on a beaucoup insisté sur l'apparence, il est fort probable que les filles auront des problèmes à cet égard. L'attitude des parents peut se transmettre, tout comme une conception positive de la nutrition et de l'exercice physique.

Pour Mme Hoskins, la question qu'il faut régler à l'école et à la maison, c'est la façon dont les médias manipulent les perceptions, les valeurs et les émotions. En fait, les écoles commencent à voir qu'il y a là, peut-être, une forme essentielle de connaissances, et de nombreux établissements proposent maintenant une initiation aux médias, qui permet aux enfants d'acquérir un esprit critique, de sorte qu'ils sont davantage en mesure de remettre en question, d'analyser, d'évaluer les informations reçues et d'y réagir. Nicole Cohen, co-rédactrice en chef et co-éditrice de Shameless Magazine en convient : « Il est extrêmement important que les filles connaissent bien le fonctionnement des médias pour pouvoir décoder leurs messages et voir plus loin que les images qu'on conditionne pour elles et qu'on leur vend. »

En approfondissant le fonctionnement des médias, les élèves peuvent mieux comprendre le monde qui les entoure et, par voie de conséquence, eux-mêmes ou elles-mêmes. Selon [www.media-awareness.ca](http://www.media-awareness.ca) (site Internet bilingue), les enfants arrivant au secondaire auront passé entre 10 000 et 15 000 heures devant le petit écran — soit plus de temps qu'à faire du sport ou à dialoguer avec papa et maman. Si on leur apprend à décoder correctement les messages qu'ils voient à la télévision, ils pourront avoir un esprit critique sur le monde qui

les entoure. Cela n'étant pas automatique chez les enfants, il faut intégrer cette initiation aux médias dans le programme scolaire.

*Cable in the Classroom* ([www.cableeducation.ca](http://www.cableeducation.ca)) service sans but lucratif suggérant aux écoles canadiennes (pour toutes les années) une programmation sans publicité et affranchie des droits d'auteur, offre un moyen de le faire. Il propose des centaines d'heures de programmes en sciences, en technologie, en géographie, en musique, en histoire, en art, en éducation physique, en études sur la santé et en études sociales. Il propose aussi des plans de cours, dont beaucoup sont produits exclusivement comme matériel d'initiation au fonctionnement des médias.

De plus, les programmes et les plans de cours de *Cable in the Classroom* fournis par MuchMusic (MuchMedia Lit) à l'intention des élèves du secondaire visent à développer la pensée critique et l'analyse des questions médiatiques et sociales ayant un lien avec la musique, les spectacles et la culture populaire. Les élèves regardent des programmes spéciaux au cours desquels on les encourage à réfléchir sur le contenu de ce que proposent les médias quant au but, à la validité, à la valeur et à la perspective. Ainsi, après un programme, on pourra leur demander de réaliser leur propre message médiatique en créant une affiche, un essai ou une page web. Les programmes existent en français et en anglais. Pour en savoir plus, il suffit de visiter le site bilingue.

L'enseignement d'une initiation aux médias et la mise en place d'un règlement vestimentaire dans les écoles peuvent ne rester que très superficiels si l'on veut vraiment essayer d'encourager une image positive du corps chez les jeunes. Dans de nombreux cas, il peut être bénéfique d'aller directement à la source, insistant précisément sur la façon dont les élèves perçoivent leur propre corps. Il existe plusieurs programmes et organismes canadiens qui aident les enseignantes à cultiver des images positives du corps chez leurs élèves.

Le programme Les MINES radieuses vise à promouvoir l'estime de soi, l'image que l'on a de son corps et la motivation chez les filles de septième et de huitième années, en préconisant un mode de vie sain et actif. Ce programme est conforme au domaine Participation active du programme ontarien de Santé et éducation physique. Par des moyens originaux et humoristiques, il donne aux jeunes filles un moyen d'interagir les unes avec les autres et de découvrir leur potentiel de réussite en devenant physiquement plus active. On encourage les participantes à s'améliorer dans trois principaux domaines : l'activité physique, l'image du corps et l'image de soi.

Les MINES radieuses est un programme gratuit ; il existe en français et en anglais et comporte un guide convivial de l'enseignante et un guide individuel de l'élève. Il s'accompagne également d'échantillons gratuits distribués par les commanditaires (Always, Alldays, Tampax). Pour en savoir plus ou pour envoyer par télécopie une commande de ce programme gratuit, visiter le site [www.ophea.net](http://www.ophea.net) (cliquer sur "Programs").

Un programme semblable, préparé par la *Body Image Coalition of Peel* ([www.bodyimagecoalition.org/everybody1.html](http://www.bodyimagecoalition.org/everybody1.html)) encourage également une image saine du corps, une estime positive de soi et une conception de l'alimentation excluant le régime. Une enquête menée par un médecin, Gail McVey, faisant de la recherche sur les systèmes de santé dans le cadre du Groupe communautaire de recherche sur les systèmes de santé de Toronto, révèle que 60 p. 100 des filles de septième et de huitième année, dans la région de Peel (Ontario) sui-

vaient un régime pour perdre du poids. Suite à cela, un manuel a été publié contenant des informations et proposant des activités en vue de changer les attitudes vis-à-vis de l'image que ces personnes ont de leur corps et de réduire le risque de troubles de l'alimentation.

Le manuel traite de questions sur les médias, la famille, les amis, l'estime de soi, l'image du corps, le régime, une alimentation saine, des modes de vie actifs, la gestion du stress et les relations. Les parties à l'intention des enseignantes comportent des informations élémentaires sur chaque sujet ainsi que des activités et des feuilles de travail à utiliser en classe. L'efficacité du manuel a été évaluée après une distribution à des élèves du sexe féminin dans des écoles intermédiaires de la région de Peel ; dans les classes ou les environnements encadrés par une infirmière, l'estime de soi, l'image du corps ainsi que l'attitude vis-à-vis de l'alimentation se sont améliorées.

Les enfants sont constamment bombardés d'images, positives et négatives, de ce que cela veut dire d'être une personne saine et qui réussit. De nos jours, les écoles tentent de dépasser leur rôle traditionnel d'enseignement des bases pour jouer une part importante en vue de former des personnes averties des dangers de la rue et de la consommation — et non plus seulement des petites futées du bouquin —, et encouragent leurs élèves à cultiver une image saine de leur corps en penseuses indépendantes libres de l'influence des médias. En instituant un règlement vestimentaire et en donnant l'exemple, en proposant de solides modèles de comportement, en initiant au fonctionnement des médias et en encourageant une image saine du corps chez les jeunes filles d'aujourd'hui, elles pourront peut-être y parvenir.

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