

EDMONTON PUBLIC SCHOOLS

September 22, 2009

TO: Board of Trustees

FROM: E. Schmidt, Superintendent of Schools

SUBJECT: Health and Wellness: REAL Kids and APPLE Schools Update

ORIGINATOR: D. Barrett and J. Bidulock, Assistant Superintendents

RESOURCE
STAFF: Gloria Chalmers, Louise Osland, Marg Schwartz, Don Zabloski, Corrie Ziegler

INFORMATION

In support of the Board's policy on health and wellness and the Board approved plan to promote healthy food and beverage choices, this report provides an update on research being conducted on the health and well being of district students. The APPLE Schools and REAL Kids research conducted by Dr. Paul Veugelers, School of Public Health, University of Alberta, is long-term and provides the District with an exceptional opportunity to develop strategies within the District's context that will be relevant to all district schools. Evidence (Sallis, Veugelers, Shephard, Tremblay) supports the concept that children who are well nourished and physically active perform better academically. Therefore, the importance of developing and supporting research resulting in strategies to promote healthy, active students cannot be overstated.

The APPLE (*Alberta Project Promoting active Living & healthy Eating*) Schools initiative is a three and a half year intervention research project which began in January 2008 aimed at changing the school environment to improve nutrition and fitness and prevent childhood obesity. It involves 10 schools in the greater Edmonton area, four within Edmonton Public (Appendix I). Each participating school has been provided with a trained and supported, full-time, school health facilitator to assist school communities to develop healthy, active environments. The initiative is based on the successful Annapolis Valley Health Promoting Schools (AVHPS) *Make the Healthy Choice the Easy Choice* project and was adapted for the Alberta context.

REAL Kids (*Raising Healthy Eating Active Living Kids Alberta*) is a joint project of the School of Public Health, University of Alberta, and Alberta Health and Wellness (AHW). The intent of REAL Kids Alberta is to help evaluate the impact of the *Healthy Weights for Children and Youth* Initiative from AHW and provide some measureable behavioural and health outcomes for children in Alberta. Baseline data was collected in the spring of 2008 and a second evaluation will occur in the spring of 2010. A total of 3,935 Grade 5 students and 4,209 parents from 174 randomly selected schools from across Alberta were surveyed. The sample includes 15 Edmonton Public Schools (Appendix I).

Summary baseline data from REAL Kids indicates the following:

- Among Grade 5 students in Alberta, 29 per cent are overweight or obese. This is substantially higher than estimates from an earlier study in 2004 which indicated that 22 per cent of Alberta children and youth aged two to 17 were overweight or obese.
- The majority of students are not meeting Canada's Food Guide recommendations. Only 27 per cent of students are consuming enough vegetables and fruits (six servings per day is recommended).
- For all Grade 5 students in Alberta, 47 per cent spend three hours or more per day in front of a screen outside of school hours. This exceeds recommendations from the Canadian Pediatric Society of two hours or less per day of total time in front of a screen.
- The majority of Grade 5 students are not sufficiently physically active - only 26 per cent report being physically active.
- Parent responses indicated strong support for a school environment that promotes healthy eating (94 per cent) and Daily Physical Activity (98 per cent).

As a result of a year and a half experience with APPLE schools, the following has been achieved. These schools:

- Provided ongoing support to staff in other district schools and Edmonton Catholic Schools by presenting sessions at events such as the fall Wellness Symposium. The schools also provided mentorship to other Edmonton Public Schools involved in wellness initiatives; e.g., Balwin, McKernan.
- Developed 3 year strategic plans in collaboration with key stakeholders including parents, students, staff, administration and community partners to improve healthy eating and active living (HEAL) in their school communities.
- Coordinated monthly, themed HEAL campaigns which include bulletin board displays, newsletters for parents (translated into Punjabi for one school), student activities and daily announcements for all students.
- Developed resources now also used by other schools.
- Provided educational opportunities on nutrition and physical activity curricula for teachers including demonstration lessons, half-day in-services, staff meetings, bulletin boards in the staff rooms, and increased teacher resources.
- Coordinated parent information sessions on healthy lunches and snacks during events for parents at the school; e.g., meet the teacher, Celebrations of Learning.
- Distribute 40 to 80 pounds of apples in each school on a weekly basis. All APPLE schools in EPSB have a breakfast or snack program.

As well, the APPLE Schools and 4 other district schools participated in a pedometer study and these results will be reported along with the EPSB District results of REAL Kids evaluation (Appendix II) in the fall of 2009. APPLE School results from 2009 are reported in the June 2009 APPLE Schools Progress Report (Appendix III) and, a subsequent report will be provided after the 2010 evaluation is completed. As noted previously, a second REAL Kids evaluation will be conducted in March 2010 and those results will be disseminated to administrators and others next year. Additionally, opportunities will be provided for APPLE Schools and other district schools to meet and discuss health and wellness issues and strategies to improve practice.

APPENDIX I - District Schools Participating in REAL Kids Project and APPLE Project

APPENDIX II - **Sample** REAL Kids Alberta Evaluation School Report

APPENDIX III- APPLE Schools 2009 Report

ES:gj

District Schools Participating in REAL Kids Evaluation and APPLE Project

APPLE Project:

Belmead School
Lee Ridge School
Sifton School
Tipaskin School

REAL Kids Evaluation:

Abbott School
Bannerman School
D S MacKenzie School
Eastwood School
George H. Luck
J A Fife School
John Barnett School
Lorelei School
Mayfield School
Montrose School
Windsor Park School



REAL

Kids Alberta



The REAL Kids Alberta Evaluation

How is Your School Doing?



SCHOOL OF
PUBLIC HEALTH
UNIVERSITY OF ALBERTA

YOUR SCHOOL'S REPORT



The REAL Kids Alberta Evaluation

The Raising healthy Eating Active Living Kids Alberta (REAL Kids Alberta) evaluation is a joint project of the School of Public Health, University of Alberta, and Alberta Health and Wellness (AHW). The intent of this evaluation is to assess the impact of Alberta Health and Wellness's Healthy Weights Initiative and to provide some measurable behavioural and health outcomes for children in Alberta. For information on the Healthy Weights Initiative, go to: www.ech.ab.ca/healthy_weights_initiative.htm.

The first phase of the REAL Kids Alberta evaluation took place in the spring of 2008 with the next phase of the evaluation to be completed in 2010. A total of 3935 Grade 5 students and 4209 parents were surveyed from 174 schools across Alberta.

The evaluation of Grade 5 students included:

- the Harvard Food Frequency Questionnaire for Children and Youth (a dietary assessment tool) to assess dietary habits and nutrient intake
- self-reported information on physical activity, screen-time and recognition of AHW programs
- measurement of heights and weights to determine overweight and obesity from calculation of Body Mass Index.

The parents of participating students were asked for consent and to complete a survey to determine their socioeconomic background, support for health-related policy in schools and recognition of AHW programs.

The principals of participating schools were asked to complete a survey on school environment, implementation of provincial programs and recognition of AHW programs.

Summary of Results

- Among Grade 5 students in Alberta, 29% are overweight or obese. This is substantially higher than estimates from an earlier study in 2004, which indicated that 22% of Alberta children and youth aged 2 to 17 were overweight or obese.

- The majority of Grade 5 students are not meeting Canada's Food Guide recommendations; only 27% of students are consuming enough vegetables and fruits (a minimum of six servings per day is recommended).
- For all Grade 5 students in Alberta, 47% spend three hours or more per day in front of a screen outside of school hours. This exceeds recommendations from the Canadian Paediatric Society of two hours or less per day of total screen time.
- The majority of Grade 5 students are not sufficiently physically active; only 26% report being sufficiently physically active.
- Parent responses indicate strong support for a school environment that promotes healthy eating (90%) and daily physical activity (95%).

School Reports

Each participating school will receive a school report with results from the 2008 evaluation. Results specific to each school are compared to the provincial average for such things as:

- students' eating behaviours
- parental support of healthy eating at school
- students' physical activity and parental encouragement of physical activity
- students' sedentary activities.



For further information on the REAL Kids evaluation, please contact:

Dr. Paul Veugelers
Principal Investigator
University of Alberta
780-492-9095
paul.veugelers@ualberta.ca

HEALTHY EATING

Did You Know?

Schools

- Schools exert strong influence over students' eating habits and have been described as "the ideal settings to establish and promote healthy eating practices in children and adolescents."¹
- Students who are well nourished have increased test scores, improved attendance, reduced tardiness and better academic, behavioural and emotional functioning.^{2,3,4}
- Schools with healthy eating programs may reduce childhood obesity and improve students' dietary intake.^{5,6,7,8}

Students

- The overweight/obesity rate of Canadian children has doubled over the past 25 years.⁹
- In 2004, 59% of Canadian children aged 2 to 17 ate less than five servings of vegetables and fruit per day.¹⁰
- Almost half of Alberta students report consuming high-fat, high-calorie foods on a daily basis.¹¹
- Eating breakfast improves academic performance^{12,13,14,15}, yet up to 49% of students say they don't eat breakfast.¹⁶

Parents

- The more often a family eats meals together, the more likely the children are to eat fruit, vegetables, grains and calcium-rich foods and beverages. They also are more likely to feel connected to their families.^{7,17,18,19}
- Eating home-cooked meals is associated with healthier eating.^{17,19}
- Children of parents who eat fruit and vegetables and drink milk are more likely to do so themselves.²⁰



Canada's Food Guide

A ten-year-old child requires at least this number of servings every day:

FOR MORE INFORMATION, GO TO:

www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php

Vegetables and Fruit	6
Grain Products	6
Milk and Alternatives	3-4
Meat and Alternatives	1-2

HEALTHY EATING

Results from REAL Kids Alberta for **your** school

Fruits and Vegetables

of your students consumed at least 6 servings of fruits and vegetables per day. Canada's Food Guide recommends a minimum of 6 servings per day for a ten-year-old child.



Milk and Alternatives

of your students consumed at least 3 servings of milk and alternatives per day. Canada's Food Guide recommends a minimum of 3-4 servings per day for a ten-year-old child.



Purchasing Milk and Juice at School

of your students reported buying milk and

buying juice at school 3 or more times per week.



Other Foods

of your students reported eating non-nutritious foods or drinks 2 or more times per day. This includes chocolate bars, chips, ice-cream, frozen yogurt, cookies, cake, pop, fruit-flavoured beverages, powdered/sweetened drinks, coffee, tea.



3

HEALTHY EATING

Parents' Opinions

of your student's parents agreed that schools should ban or limit the availability of unhealthy foods at school.

of your student's parents agreed that schools should discourage or not allow students to bring unhealthy foods to school.



4

Tips!

- Provide foods from the "serve most often" category of the *Alberta Nutrition Guidelines for Children and Youth* in vending machines, lunch programs, as snacks and at special events.
- Support school-wide campaigns to incorporate healthy eating in the school culture; e.g., fruit and veggie week challenges, Nutrition Month®.
- Provide nutrition education to students at all grade levels that is interactive and fun and focuses on building skills.
- Provide age-appropriate serving sizes of foods at all places food is served or sold in school.

In 2008, Alberta Health and Wellness released *Alberta Nutrition Guidelines for Children and Youth*. These guidelines provide schools with standards for food/beverage providers within schools. The guidelines apply to food and beverages provided or sold at school, including special events, lunch programs, vending machines, school stores and fundraisers. For a copy of the guidelines, go to: [www.healthyalberta.com/Documents/AB_Nutri_Guidelines_2008\(1\).pdf](http://www.healthyalberta.com/Documents/AB_Nutri_Guidelines_2008(1).pdf).

PHYSICAL ACTIVITY



Did You Know?

Schools

- Schools can instil an appreciation for healthy lifelong, physical activity behaviours and help children to acquire the skills and lifelong habits for physical activity.^{21, 22}
- Physical activity is associated with improved classroom behaviour, as well as increased enthusiasm toward school and school work.²³
- Regular physical activity helps children reduce stress and aids in developing self-esteem.^{24, 25}

Students

- 90% of children and youth aged 5 to 19 did not meet Canada's Physical Activity Guideline minimum of 90 minutes of physical activity a day.^{22, 26}

Parents

- Behaviours started in childhood and adolescence tend to carry over to adulthood; 56% of Canadian adults 20 years and older are considered physically inactive.²⁸
- Physical activity levels of children and youth correlate with family physical activity levels.^{28, 29, 30}
- The majority of Canadian children aged 10 to 16 spend 4 to 6 hours a day in front of a "screen"²¹ and 2 hours or less of screen time per day is recommended.^{31, 32, 33, 34}
- Physical activity can help achieve a healthy body weight and is associated with increased self-esteem and decreased depression and anxiety.²⁷

5

Canada's Physical Activity Guide for Children and Youth

Children aged 10 to 14 should participate in at least 90 minutes of physical activity per day and reduce their non-active time spent watching TV and playing video and computer games. For a copy of Canada's Physical Activity Guide for Children and Youth, go to: www.paguide.com.

PHYSICAL ACTIVITY

Results from REAL Kids Alberta for **your** school

of your students report being physically active.

of your students report being physically active during school recess times.

Aspects of physical education classes that students enjoy.

of your students report typically spending 3 hours or more per day doing screen type activities outside of school hours. This includes watching TV, surfing the Internet and gaming.

of your students' parents agreed that students should adhere to the provincially mandated Daily Physical Activity (DPA) initiative.

of your students' parents encourage their children to be active quite a bit or very much.

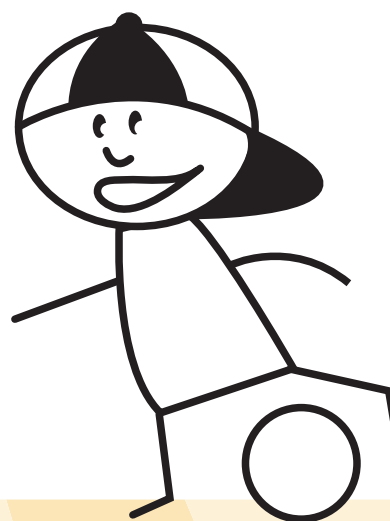
6

PHYSICAL ACTIVITY

Tips!

- Increase student participation in physical education classes by dividing the students into small groups to decrease wait times.
- Develop outside activity circuits and an indoor walking circuit. Encourage staff, students and parents/guardians to use the circuits before school, during lunch time and after school.
- Encourage active transportation by providing a safe bike lock-up area for students and provide secure areas where students can leave equipment; e.g., inline skates, skateboards and helmets.
- Organize walking school buses for your school.
- Expand on current intramural programs by offering clubs that are fun and accessible for many students, such as running clubs, skipping clubs or dance clubs.
- Integrate physical activities throughout the day in a variety of subject areas.

For further ideas on how to increase your students' physical activity, see the Daily Physical Activity resource at: <http://education.alberta.ca/media/318479/dpa7.pdf>





YOUR NEXT STEPS



8

- For further information related to this evaluation, go to www.realkidsalberta.ca.
- Information from this report may be used to identify areas of strength within your school community or areas of concern that can be addressed by health promotion activities.
- Share the results with students, school staff, parents and community stakeholders, such as your Regional Health Promotion Coordinators from Alberta Health Services.
- Use the results of this evaluation to identify areas for collective action within your school authority.
- Go to www.everactive.org, the Ever Active Schools Web site, where you will find information about:
 - education of students, parents and staff
 - creating supportive physical and social environments in school communities
 - community partnership
 - assessment: Healthy Assessment Tools for Schools (HATS)
 - planning and policy development
 - assistance with promoting physical activity and healthy eating.
- Support parent or teacher requests to submit proposals to fund Healthy School Initiatives, such as the Healthy School Community Wellness Funds (www.achsc.org/wellness_fund.htm).
- Use government approved guidelines and resources such as the Alberta Nutrition Guidelines for Children and Youth (www.healthyalberta.com).
- Go to the following Web sites for further information:
 - www.achsc.org
 - www.healthyalberta.com/HealthyPlaces/201.htm
 - www.appleschools.ca/
 - www.healthyeatingatschool.ca
 - www.actionschoolsbc.ca/content/home.asp
 - www.dashbc.org

For more information
on this report, please contact:

Dr. Paul Veugelers
Principal Investigator
University of Alberta
780-492-9095
paul.veugelers@ualberta.ca

References

1. J. Taylor, S. Evers and M. McKenna, "Determinants of Healthy Eating in Children and Youth," in *Canadian Journal of Public Health* Supplement 3 (July-August 2005), p. 96.
2. R.E. Kleinman, S. Hall, H. Green, D. Korzec-Ramirez, K. Patton, M.E. Pagano and J.M. Murphy, "Diet, breakfast and academic performance in children," in *Annals of Nutrition and Metabolism* Supp 1, 46 (2002), pp. 24-30.
3. M.D. Florence, M. Asbridge and P.J. Veugelers, "Diet Quality and Academic Performance," in *Journal of School Health* 78, 4 (2008), pp. 209-211.
4. H. Taras and W. Potts-Datema, "Nutrition and student performance at school," in *The Journal of School Health* 75, 6 (2005), pp. 199-213.
5. P.J. Veugelers and A. Fitzgerald, "Effectiveness of School Programs in Preventing Childhood Obesity: A Multilevel Comparison," in *American Journal of Public Health* 95, 3 (2005), pp. 432-435.
6. K. Campbell, E. Waters, S. O'Meara and C. Summerbell, "Interventions for preventing obesity in childhood: a systematic review," in *Obesity Reviews* 2, 3 (2001), pp. 149-157.
7. P.J. Veugelers and A. Fitzgerald, "Prevalence of and risk factors for Childhood Overweight and Obesity," in *Canadian Medical Association Journal* 173, 6 (2005), pp. 607-613.
8. P.J. Veugelers, A. Fitzgerald and E. Johnston, "Dietary Intake and Risk Factors for Poor Diet Quality Among Children in Nova Scotia," in *Canadian Journal of Public Health* 96, 3 (2005), pp. 212-216.
9. M. Shields, "Overweight Canadian Children and Adolescents," *Nutrition: Findings from the Canadian Community Health Survey* Issue No. 1, www.statcan.ca/english/research/82-620-MIE/2005001/articles/child/cobesity.htm (Accessed September 2008).
10. D. Garriguet, "Nutrition: Findings from the Canadian Community Health Survey - Overview of Canadians' Eating Habits," 2006, Catalogue no. 82-620-MIE – No. 2, www.statcan.ca/english/research/82-620-MIE/82-620-MIE2006002.pdf (Accessed September 2008).
11. L. McCargar, "Nutrition and Physical Activity Behaviours of Alberta Youth," *The Shift Winter* 7, 1 (2005), pp. 1-3, www.chps.ualberta.ca/pdfs/Winter_2005-Vol7_Iss1.pdf (Accessed September 2008).
12. G.C. Rampersaud, M.A. Pereira, B.L. Girard, et al, "Breakfast habits, nutritional status, body weight, and academic performance in children and adolescents," in *Journal of American Dietetic Association* 105 (2005), pp. 743-760.
13. K.A. Wesnes, C. Pincock, D. Richardson, G. Helm and S. Hails, "Breakfast reduces declines in attention and memory over the morning in schoolchildren," in *Appetite* 41, 3 (Dec 2003), pp. 329-31.
14. P. Pollitt and R. Matthews, "Breakfast and cognition: an integrative summary," in *The American Journal of Clinical Nutrition* 67, suppl 1 (1998), pp. 804-813.
15. S. Cueto, "Breakfast and performance," in *Public Health Nutrition* 4, 6A (Dec 2001), pp. 1429-31.
16. L.M. Minaker, L. McCargar, I. Lambraki, L. Jessup, P. Driezen, K. Calengor and R. M. Hanning, "School region socio-economic status and geographic locale is associated with food behaviour of Ontario and Alberta adolescents," in *Canadian Journal of Public Health* 97, 5 (2006), pp. 357-361.
17. D. Neumark-Sztainer, P.J. Hannan, M. Story, J. Croll and C. Perry, "Family meal patterns: Associations with Sociodemographic characteristics with improved dietary intake among adolescents," in *Journal of the American Dietetic Association* 103, 3 (March 2003), pp. 317-22.

References

18. T.M. Videon and C.K. Manning, "Influences on adolescent eating patterns: the importance of family meals," *Journal of Adolescent Health* 32 (2003), pp. 365-373.
19. M.W. Gillman, S.I. Rifas-Shiman, A.L. Frazier, H.R. Rockett, C.A. Carmango Jr., A.E. Field, C.D. Berkley and G.A. Colditz, "Family dinner and diet quality among older children and adolescents," in *Archives of Family Medicine* 9, 3 (2000), pp. 235-40.
20. J. O. Fisher, D.C. Mitchell, H. Smiciklas-Wright and L.L. Birch, "Parental influences on young girls' fruit and vegetable, micronutrient and fat intakes," in *Journal of the American Dietetic Association* 102, 1 (2002), pp. 58-64.
21. Active Healthy Kids Canada, "It's Time to Unplug our Kids," *Canada's Report Card on Physical Activity for Children and Youth Report Card*, www.bced.gov.bc.ca/dpa/pdfs/ahkc_long_form_en.pdf (Accessed 2008).
22. Canadian Fitness and Lifestyle Research Institute, "Physical activity and sport: Encouraging children to be active," *Physical Activity Monitor*, 2005, www.cflri.ca/eng/statistics/surveys/pam2005.php (Accessed October 2008).
23. J.L. Pollatschek and F.J. O'Hagan, "An investigation of the psycho-social influence of a quality daily physical education programme," in *Health Education Research* 4 (1989), pp. 341-350.
24. Centers for Disease Control and Prevention, "Guidelines for School and Community Programs to Promote Lifelong Physical Activity Among Young People," in *MMWR* 46, RR-6 (1997).
25. F. Wang and P.J. Veugeler, "Self-esteem and cognitive development in the era of the childhood obesity epidemic," *Obesity Reviews*, 9, 6 (November 2008), pp. 615-623.
26. Health Canada, *Canada's Physical Activity Guides for Children and Youth*, 2002, www.phac-aspc.gc.ca/pau-uap/paguide/child_youth/index.html (Accessed October 2008).
27. Canadian Fitness and Lifestyle Research Institute, "Physical Activity of Canadian Youth — an analysis of 2002 Health Behaviour in School-aged Children Data," 2006, www.cflri.ca/eng/statistics/surveys/2006HBSC.php (Accessed October 2008).
28. R.M. Malina, "Tracking of physical activity and physical fitness across the lifespan," in *Research Quarterly for Exercise & Sport* 67, Supp 3 (1996), pp. S48-S57.
29. P. Thavendiranathan, E. Jones, R. Han, G. Cullen-Dean, E. Helden, W. Conner, et al, "Association between physical activity, adiposity, and lipid abnormalities in children with familial hyperlipidemia," in *European Journal of Cardiovascular Prevention & Rehabilitation* 14 (2007), pp. 59-64.
30. Health Canada, "Trends in the Health of Canadian Youth-Health Behaviours in School Age Children," www.phac-aspc.gc.ca/dca-dea/pdfa-zenglish-eng.php#t22.
31. P. Nieman, "Impact of media on children and youth," in *Paediatrics & Child Health, Canadian Paediatric Society Statement* 8, 5 (May/June 2003), pp. 301-306.
32. Canadian Paediatric Society, "Position Statement: Healthy active living for children and youth," in *HAL* 2002-01 7, 5 (2002), pp. 339-345.
33. Committee on Public Education, "Media violence," in *American Academy of Paediatrics*, 108 (2001), pp. 1222-1226.
34. Committee on Public Education, "Children, Adolescents, and Television," in *American Academy of Pediatrics* 107 (2001), pp. 423-426.



The REAL Kids Alberta Evaluation



SCHOOL OF
PUBLIC HEALTH
UNIVERSITY OF ALBERTA



JUNE 2009 PROGRESS REPORT



Alberta Project Promoting
active Living & healthy Eating





APPLE Schools, June 2009 Report

A year of promotion of healthy eating and active living

The APPLE School project has had an outstanding year. This report provides an overview of the exceptional work done in each of our 10 APPLE Schools. As well, the report includes early research results showing promising changes towards healthy eating and active living over the durations of the first full year of the intervention.

APPLE Schools, as a project, has quickly matured and is already being seen as a model project for the promotion of healthy eating and active living in schools. It is receiving national and international interest for the approach to change school environments in such a way that the healthy choice becomes the easy choice. For example, the interest has led to invitations to present at conferences such as the School Health network of Europe (SHE) being held in Latvia, and the International Society for Behaviour, Nutrition, and Physical Activity being held in Portugal. Also, inquiries and requests related to program details have arrived from Wales to Australia and from all across Canada. The demands of delivering the APPLE Schools program make it challenging to accept all these invitations and requests to travel and speak. As the project advances we will seek ways to accommodate this.

More Measurements

Objective measures of physical activity in children have shown to have higher validity in accurately quantifying physical activity levels compared to self-reported activities that are currently used. Pedometers have become increasingly popular as an objective measurement tool for children's physical activity levels. Pedometers are relatively inexpensive, re-usable, small, light-weight motion sensors that measure ambulatory activities. Pedometers record raw output of steps taken. Step counts have intuitive utility and allow for direct comparison with the recommendation by the Canadian Fitness and Lifestyle Research Institute that children need 16,500 steps per day. We have expanded our measurements with the use of time-stamped pedometers which contain software functions enabling the recording of steps per hour. These devices are more costly though do provide the opportunity to discriminate between physical activities during school hours and physical activities outside of school hours. Another advantage is that the steps are electronically stored which avoids error-prone manual recording. We have begun recording physical activity in all of the APPLE Schools and some compatible control schools. We have also developed a Pedometer Log to record activities when the pedometer cannot be used, such as swimming and hockey. A computer readout of the students' activity levels has been provided to every student after they have worn the pedometer for one week. The processing of pedometer information is computational and requires some mathematical modeling. We hope to report some early findings in the next report.



APPLE Schools Logic Model

The following logic model has been provided to assist others to understand the project. A logic model provides an overview of the process evaluation which can enhance health promotion interventions by improving the quality of their delivery. A process evaluation gives a clear picture of how well a program is implemented as well as a view of the context in which it is being delivered. In addition, the information provided in the logic model allows for distinctions to be made between a program that is ineffective, or a program that was only ineffective due to poor delivery. A process evaluation can determine if a program is feasible, acceptable and sustainable, and thus the evaluation can be designed around the following four constructs:

- **Fidelity** - the quality of the program delivery and the extent to which the program was delivered as planned
- **Dose delivered** - the number of interventions received by the target
- **Dose received** - to what extent is the target audience actively engaged in the intervention activities
- **Reach** - how much does the target audience participate in the intervention and are there any larger environmental factors that may influence the intervention

The model is built upon those factors that input the direction the project is taking, the visible activities and indicators of change, the immediate outcomes of the activities/indicators and the ultimate impact the project will achieve. The project is built upon the following goals:

- 60% of students in 5 out of 10 APPLE schools will meet the requirements of Canada's Food Guide to Healthy Eating.
- 60% of students in 5 out of 10 APPLE schools will be physically active in accordance with Canada's Physical Activity Guides for Children and Youth (April 2002)
- School Health Facilitators demonstrate the knowledge, skills and attitudes necessary to plan, implement and execute a three year intervention
- Schools are able to implement a health promoting school model.

Inputs	Outputs		Outcome Indicators	Impact
	Activities to support goals	Process Indicators (Yearly)		
<p>APPLE CORE Committee comprised of:</p> <ul style="list-style-type: none"> • Teachers • Community • Student • Staff • Parents • Facilitator <p>Facilitator – 1 in each school</p> <p>Context:</p> <ul style="list-style-type: none"> • Administrative support • Funding • Offices • School board activities/policies • Existing school programs; e.g., IB <p>School administration:</p> <p>Principal</p> <p>Vice principal</p> <p>Goals of Project</p>	<ul style="list-style-type: none"> • Equitable opportunities • Community Engagement • Create shared vision • Curriculum implementation • Adult Learning: teachers/parents • Healthy social environments • Healthy Physical Environments • Policies • Healthy School plan for action • Assessment • Research 	<p>Grade 5 students: % of students completing surveys: Harvard Food Frequency, Health Literacy Assessment; heights and weights, pedometer study.</p> <p>Parents: % of Parents completing the survey of perceived child health attitudes and behaviours</p> <p>Teachers: Focus group themes</p> <p># of teachers who attend PD provided by project</p> <p>Administrators: % of principals completing the survey</p> <p>% of meetings administrators attend</p> <p>Core Committee:</p> <ul style="list-style-type: none"> • Comprehensive representation of school community • # of meetings • Three-year APPLE School plan is created and reviewed • Activities in plan address goals of project • Plan is reviewed regularly • Goals of project are integrated in the overall school three-year plans in each school. • KSA of a School Health Facilitator defined and measured 	<p>Immediate indicators:</p> <ul style="list-style-type: none"> • ↑ in healthy eating behaviours of Grade 5 students in each school • ↑ in physical activity levels of Grade 5 students in each school • # of community partnerships created • ↑ in HATS scores for CSH implementation • ↑ in Facilitator knowledge, skills and attitudes • ↑ request for presentations to enhance knowledge exchange 	<p>Improve positive health behaviours</p> <p>Reduced rates of overweight and obesity in children.</p> <p>School boards value and hire school health facilitators.</p> <p>Government develops policy and support for CSH in schools.</p> <p>Strengthened capacity for CSH model to be utilized in schools.</p> <p>International demand for knowledge exchange from project.</p>

The following assumptions are embedded in the APPLE schools logic model:

- Three and a half years is an adequate time frame for the anticipated outcomes to be observed and measured.
- A CSH Model will effectively support achievement of the goals of the APPLE Schools Project.
- Each APPLE School Facilitator can and will affect the intended changes in their school.
- An APPLE School Facilitator can be trained with the appropriate skills attitudes and behaviours to perform their role.
- School administration and teachers will accept and implement activities proposed by the APPLE Core Team.
- The successful results observed in the Annapolis Valley, Nova Scotia may be replicated in other schools with different contexts.
- Healthy food and activity will have a positive effect on overweight and obese children and youth.
- Education, changes to environment and awareness will translate to behaviour change.





Overview of Activities for the 2008 – 2009 School Year

APPLE Schools are implementing a comprehensive school health (CSH) model in each school and this report provides an overview of the activities in the schools organized by the pillars of the CSH model. Because all APPLE schools will become Ever Active Schools for sustainability purposes, we will organize the activities using the EAS definitions for the pillars of CSH.

Education: The following bullets represent a sampling of educational opportunities for students, teachers, administrators and parents to increase their knowledge of healthy eating and active living to support a culture of learning.



- Coordinate monthly themed healthy eating and active living (HEAL) campaigns which include bulletin board displays, newsletters for parents (translated into Punjabi for one school), student activities and daily announcements for all students.
- Create visual displays in all schools to identify the school as an APPLE School including information tables at the entrance to the school to address HEAL.
- Provide education to students in the lunch rooms and classrooms on nutritious food choices including lessons on portion sizes, sugar intake, healthy snacks and healthy lunches.
- Increase support for physical activity by creating fourteen Daily Physical Activity (DPA) bins that are circulated throughout the school.
- Provide educational opportunities on nutrition and physical activity curricula for teachers in a variety of ways including demonstration lessons, half-day in-services, sharing at staff meetings, school-based PD days, bulletin boards in the staff rooms, and resources being displayed.
- Assist teachers in the delivery of activities and programs such as gymnastics, dance, Power to Play, Power 4 Bones, snow shoeing, fitness events,

- Complete physical fitness assessments (Active Body Challenge) for grade 4, 5 and 6 students to increase understanding of fitness.
- Provide education for Facilitators on comprehensive school health, nutrition, gymnastics, large group activities, physical activity, obesity, and working with people/teambuilding. They also participate in mentoring one another, as well as other keen schools in the Edmonton-area.
- Present sessions at the Physical and Health Education of Canada National Conference, Edmonton Public/Edmonton Catholic Schools Wellness Symposium, Ever Active School Symposium, Elk Island School Board PD Day, Elk Island Catholic Schools Health and Wellness Committee.
- Accept invite to speak at the Canadian Population Health Initiative as part of the Canadian Institute for Health Information panel on "Population health intervention research: What works and under what circumstances?" and the National Obesity Summit in Kananaskis, Alberta.
- Work with the City of Edmonton to successfully pilot Incredible Edibles, an after-school cooking program for students.
- Coordinate parent information sessions on healthy lunches and snacks during various events for parents at the school; e.g., meet the teacher, parent/teacher interview evenings.





- Supervise a dietetic intern by one of our dieticians.
- Create a Jeopardy-type game to teach healthy eating and active living concepts to grade 5 students as part of the pedometer study.

Everyone: The following bullets include examples of collaboration in a meaningful way with the people involved in the everyday life of the school to provide equal and inclusive opportunities for everyone in the school community to make healthy choices.

- Collaborate with local community leagues, junior highs and high schools, local recreation centres and organizations to participate in school events and provide leadership to students and staff.
- Work with Community Leagues to increase use of community facility; e.g., opening skating rinks after school, Girl Power.
- Work with School Health Nurses and Regional Health Promotion Coordinators to develop partnerships and projects; School Health Fair, Sugar Shocker displays.
- Work with staff to choose end-of-the-year field trips that would include physical activities and healthy food.
- Increased parent involvement in school events and activities focusing on health and physical activities; e.g., SOS – Save our Snack initiative to have parents help prepare the daily snack program.
- Collaborate and share with APPLE Schools Facilitators and administrators at monthly staff meetings and mentorship opportunities.
- Participate as an integral part of parent councils, staff meetings and other school-related committees.
- Implement contests and competitions to increase vegetable intake, physical activity and staff



wellness; e.g., Caught being active, or Caught being healthy awards, Globetrotting Challenge, students raced staff around the world with after-school activity and fruit and vegetable consumption during lunch hour, Little Big Run, pedometer challenges.

- Demonstrate and model healthy living; e.g., provide healthy snacks and meals at all APPLE events, including a healthy cake alternative for celebrations.
- Coordinate and educate a student leadership group (e.g., Health Busters, Healthy Hoppers) to support student activities related to healthy eating and active living; e.g., taste testing, recess activities, assembly presentation, intramurals.
- Coordinate and implement opportunities for physical activity for all students and staff; clubs for running, skipping, floor hockey and girls-only, Fitness Fridays, snowshoeing, etc.
- Coordinate weekend events to bring families together to participate in physical activities and eat healthy food; e.g., snow shoeing, skating, relays.
- Work with *Lids for Kids* to provide all students at one school with bike/multi-purpose helmets to increase participation in cycling, skiing, etc.



Environment: The following bullets provide examples of how APPLE Schools foster safe social and physical environments in the home, school and community and cultivate a school community where everyone knows they belong.



- Supply DPA bins in all schools as well as recess bins to increase daily physical activity in each classroom or during physical education.
- Distribute forty to eighty pounds of apples in each school on a weekly basis
- Implement nutrition policy to address the Alberta Nutrition Guidelines.
- Lead Energizers at assemblies; teacher inservices, during school wide events.
- Provided opportunities to taste test a variety of vegetables and fruits and send messages home to the parents regarding results.
- Repaint tarmac surfaces to include playground games.
- Sell healthy snacks during recess and lunch; e.g., Healthy Snack Shack
- Coordinate Whole school events: Winter Walk Day, 12 days of Fitness & Fun in the Sun Active Living Challenge Day, Jump Rope for Heart, Walk at School (recess walking program).
- Create a 1km track around a school yard and challenge classes to run either 23 times (1/2 marathon for ECS- Gr. 4) or 46 times (full marathon for Gr. 5-9) in honour of the community in Africa that the school supports.
- Influence existing program to be more nutritious; e.g., pancake day now serves whole wheat pancakes and fresh fruit with yogurt, no candy at penny carnivals and Valentine's day events; St. Patrick Day had healthy green snacks of vegetables and fruits; fresh vegetables and fruits now available during breakfast programs, family bbq's and hot lunches.

- Apply for research grants and opportunities for funding to ensure sustainability of programs in schools.
- Grow vegetables all year in several classrooms. Collaboration with the United Nation's *Growing Connections* project , Alberta Agriculture, and the University have now been finalized. Alberta Agriculture has provided funding for 25 Earth boxes to be grown on the roof of Holy Cross School.
- Provide small recognition for students with phone calls home about great lunches in September and October, 2008



Evidence: The following bullets identify goals, planning for action and gathering data to indicate the effectiveness of actions and policies to support healthy active lifestyles throughout the school community.

- Organize and operate an APPLE Core Committee dedicated to creating and sustaining a healthy school community environment.
- The Committee creates an action plan for the school community by assessing the health of the school and facilitated discussion to create a vision.
- Coordinate the research done each year in APPLE Schools including the pedometer study.



- Evaluate teachers' use of DPA bins, need for healthy eating and active living PD, and how the facilitators can help them.
- Gather student voices in a variety of ways to help measure impact of program on these stakeholders.
- Conduct qualitative research with focus groups in each school to determine what is changing and how in each school. (Results available fall 2009).
- Conduct focus groups with teachers to demonstrate change in classrooms and school communities



Summary

The APPLE School project members are about to complete their first full school year of promoting healthy eating and healthy lifestyles in the APPLE Schools. They are all thrilled with the changes that have occurred and are occurring in the school environment. They are further excited that the accomplished changes in the school environment are reflected in promising behavioural changes towards healthy eating and active living. More students now meet the recommendations for vegetable and fruit consumption and for physical activity. With these motivational figures in mind, the School Health Facilitators will reconvene for the summer to plan the next school year.

The next year will be a new challenge as School Health Facilitators will intensify their activities, backed by more experience and increased support. They are all proud to make a difference and to work on a world-class project. The team continues to provide leadership, education and direction to many projects and schools across Alberta, Canada and internationally.

MAKING THE HEALTHY
CHOICE THE EASY CHOICE



Alberta Project Promoting
active Living & healthy Eating

