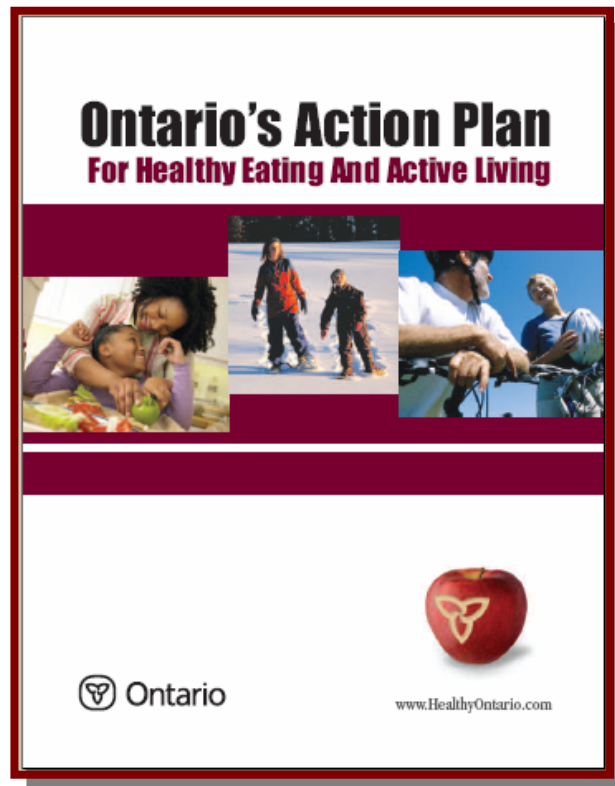


MINISTRY OF HEALTH PROMOTION  
SUBMISSION

# EVALUATION OF THE NORTHERN FRUIT AND VEGETABLE PILOT PROGRAM (NFVPP) FINAL REPORT



SUBMITTED BY THE PUBLIC HEALTH RESEARCH, EDUCATION & DEVELOPMENT (PHRED) PROGRAM

NOVEMBER 30 2007



Public Health  
Services  
City of Hamilton

Kingston, Frontenac and  
Lennox & Addington  
Public Health

Middlesex-London  
Health Unit

Ottawa Public Health

Sudbury and District  
Health Unit

Public Health Division,  
Ontario Ministry of Health  
And Long-Term Care

## PHRED\* INVESTIGATORS

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- Ms. Charlene Beynon, MScN, Director, Public Health Research, Education & Development (PHRED) Program, Middlesex-London Health Unit (MLHU) and Associate Professor, The University of Western Ontario
- Dr. Meizi He, PhD. Nutrition Researcher / Educator, PHRED Program, MLHU & Associate Professor, Brescia University College
- Ms Suzanne Lemieux, MA, Research Associate, PHRED Program, MLHU
- Ms. Elaine Murkin, RD, MSc, Supervisor, Public Health Nutritionist, Ottawa Public Health
- Ms. Michelle Sangster Bouck, MA, Research Associate, PHRED Program, MLHU
- Ms. Susan Stewart, MA, Research Associate, PHRED Program, Kingston, Frontenac and Lennox & Addington Public Health
- Ms. Renée St Onge, MA, Research and Development Specialist, PHRED Program, Sudbury & District Health Unit
- Ms. Linda Khoshaba, MSc, Research Associate, PHRED Program, MLHU

\* Public Health Research Education and Development Program

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### **FOR FURTHER INFORMATION CONTACT:**

---

Charlene Beynon, Project Co-Lead  
PHRED Director  
Public Health Research, Education and Development (PHRED) Program  
Middlesex-London Health Unit  
50 King Street  
London, ON  
N6A 5L7  
519-663-5317 ext. 2484  
cbeynon@uwo.ca

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Conducting a cluster-randomized controlled trial (RCT) with a qualitative component was an exciting opportunity for the Public Health Research Education and Development (PHRED) Evaluation Team- an opportunity seldom experienced by public health researchers. The evaluation would not have been possible without the active engagement and commitment of many players.

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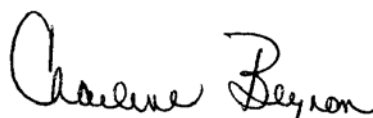
And finally we wish to thank the parents who allowed their children to participate and to the students who made this evaluation possible.

With appreciation and thanks,



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Meizi He, PhD  
Evaluation Co-Lead



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Charlene Beynon, MScN  
Evaluation Co-Lead



## EXECUTIVE SUMMARY

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### Key Facts

- A mixed method with a randomized controlled trial design, the first of its kind in Canada was used to evaluate the Northern Fruit and Vegetable Pilot Program (NFVPP), a large scale health promotion initiative.
- Overall, the NFVPP was viewed as a needed program and well received by the school community.
- Ministry of Health Promotion funding and participation of the school community and the local health unit were key facilitators.
- Significant challenges focused on product delivery, quality-especially vegetables, waste and variety-especially fruit.
- The NFVPP using free fruit and vegetables along with Enhanced Nutrition Education (ENE) strategy significantly increased the daily fruit and vegetable consumption by 0.5 serving at school and resulted in favourable preference changes for certain fruit and vegetables among grades five to eight students who participated in the evaluation.

### **Background**

As part of Ontario's Action Plan for Healthy Eating and Active Living, the Ministry of Health Promotion funded the Ontario Fruit and Vegetable Growers Association (OFVGA) and the Porcupine Health Unit for the 2006/07 fiscal year to plan the procurement and distribution of produce for a Northern Fruit and Vegetable Pilot Program (NFVPP) that targeted elementary schools. The primary mandate of the NFVPP was to increase the intake of fruit and vegetables of elementary school age children in a defined area of Northern Ontario. The underlying goal was to promote healthy eating and wellness while increasing children's awareness of the benefits of eating fruit and vegetables.

The NFVPP employed two strategies, i.e. 1) Free Fruit and Vegetable Snacks (FFVS) and 2) Enhanced Nutrition Education (ENE) using the "Paint Your Plate School Vegetable and Fruit Action Guide". The program provided free fruit and vegetable snacks three times a week to approximately 4729 Junior Kindergarten (JK) to grade eight students, with 3104 of them also being offered school-based ENE between December 2006 and June 2007.

**The objectives of the evaluation** were to **i)** measure the influence of the NFVPP on children's cognition, behaviours, as well as consumption patterns of fruit and vegetables and **ii)** to examine the logistics involved in program delivery.

### **Evaluation Methodology**

The NFVPP was evaluated using a mixed-method evaluation design with both process and impact evaluation components. The evaluation protocol was reviewed and approved by both Research Ethics Committees at Brescia University College and The University of Western Ontario.

**Process evaluation components** included produce waste tracking and the level of implementation of the Enhanced Nutrition Education program. In addition, in-depth qualitative interviews were conducted to identify program implementation facilitators and barriers.

**The impact evaluation** tested the impact of the program on students' fruit and vegetable consumption patterns and changes in their cognition and behaviours. A cluster-randomized controlled trial design was used with schools as the unit of measurement (clusters). The NFVPP consisted of three intervention arms: **i) Intervention I:** Free Fruit and Vegetable Snacks (FFVS) + Enhanced Nutrition Education (ENE); **ii) Intervention II:** Free Fruit and Vegetable Snacks (FFVS) and **iii) Control Group:** no intervention. Routine school-based nutrition education activities were carried out according to usual protocol in the Control Group and Intervention II. Students in grades five to eight in the participating schools including those in Control schools were invited to participate in the impact evaluation. Data were only collected from children with parental consent.

The primary outcome measure was the difference in levels of fruit and vegetable consumption of children, in the presence and absence of the intervention as measured by both a Fruit and Vegetable Frequency Questionnaire and a pre-coded 24-hour recall questionnaire. The secondary outcome measures included differences in children's awareness, knowledge, self-efficacy, preference, intention and willingness to increase fruit and vegetable consumption, with and without intervention using the Pro-Children Questionnaire.

Data were collected at baseline and at the end of the intervention from each of the three treatment arms. In total, **1277** students in grades five to eight completed both surveys at baseline and endpoint. Data were analyzed using SPSS Version 15. Following the "Intent-to-Treat" analysis principle, the GLM Univariate procedure was used to determine intervention effect on primary and secondary outcomes, controlling for clustering effect, baseline measures and relevant confounders.

## ***Findings***

The NFVPP was viewed by the northern school communities as a needed program with substantial benefits for students who had limited exposure to fruit and vegetables, especially those from economically disadvantaged families. The NFVPP provided students with the opportunity to eat fruit and vegetables and encouraged students to make healthier food choices. This is extremely important for the northern regions, where 62% of children aged 12-19 do not eat five or more servings of fruit and vegetables daily.<sup>(1)</sup>

The current comprehensive evaluation was designed to provide scientific evidence to answer the following key evaluation questions:

### ***i) How was the NFVPP implemented?***

The NFVPP was developed and implemented through partnership and cooperation by multiple stakeholders including the Ministry of Health Promotion, the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), the Porcupine Health Unit, OFVGA, four school boards and local schools. The schools were scattered in a remote region in Northern Ontario. Piloting a program of this nature is extremely challenging. Based on the produce waste tracking data, there was "no waste" or "little waste" over 55% of the time throughout the program, while 25% of the time schools reported fruit and vegetables were "most" or "all" wasted, due to over supply and challenges in delivering quality fresh vegetables to schools. The Enhanced Nutrition Education component was also not fully implemented. Due to challenges in getting the resource translated and printed, the "Paint Your Plate" resource was not distributed until March 2007 when many schools had already completed their nutrition module. Such delay in the delivery of the program materials with resulting incomplete implementation of ENE



might have compromised the intervention outcomes, and the ability of the evaluation results to determine the effect of the ENE.

***ii) What were the facilitators and barriers to the implementation of the NFVPP?***

Key implementation facilitators included sufficient funding, school food preparers and volunteer involvement, as well as teacher role modeling. Interviewees from the school community felt that program planners had put the necessary financial and human infrastructure in place to support the NFVPP, which was perceived as a key to success in the current context. Teacher role modeling, encouragement and a positive attitude towards fruit and vegetables were significant factors in increasing their students' willingness to try and eat fruit and vegetables. Key barriers and challenges included inconsistent delivery of produce, poor vegetable quality, as well as limited variety of fruits.

***iii) To what extent and in what ways did the NFVPP change students' cognition, behaviours and consumption of fruit and vegetables?***

Although there were no statistical differences in any cognitive or behavioural scores across three intervention arms, students in both Intervention I (FFVS + ENE) and Intervention II (FFVS alone) had favourable preference changes on certain fruit and vegetables, with a shift from 'never tried it' towards 'like it'.

Both Intervention I and II groups had higher total fruit and vegetable intake (home + school) than the Control Group (0.6 and 0.5 serving/day, respectively), the differences were not statistically significant. Intervention I students statistically consumed more fruit and vegetables at school than their Control counterparts by 0.49 serving/day ( $p < 0.05$ ). Similarly, Intervention II students also consumed more fruit and vegetables at school than Control students by 0.42 serving per day; this difference was not statistically significant. The size and manner of intervention effects from the current program are comparable to recent fruit and vegetable programs in the literature.

Although no statistical differences were detected between the two intervention arms, the combined strategy (Intervention I), but not the free fruit and vegetables alone strategy (Intervention II), resulted in significant increases in children's fruit and vegetable consumption at school, implying that the combined intervention strategy is more effective despite the fact that the ENE component was not fully implemented.

Avoiding unintended adverse outcomes is critical, especially for population-based interventions. There appears to be a tendency towards unfavourable changes in self-efficacy, intention and peer influence pertaining to vegetable consumption in the Intervention II students, but not Intervention I. Future research is needed to understand and minimize unintended adverse intervention outcomes.

## ***Implications for Practice***

### **Infrastructure**

1. Sufficient funding, including paid food preparers, partnerships involving funders, health units, school boards and schools, and produce providers and good coordination and communication across partners are essential for an effective school-based fruit and vegetable program.
2. A quality control system must be in place to ensure that quality fruit and vegetables with sufficient variety and quantity, based on need are provided. Waste must be monitored and minimized.
3. A consistent and proper delivery system, which supports the transport of quality produce and an effective communication plan with school staff are needed to ensure quality produce "from field to table". This is especially critical in northern remote communities where schools are scattered across large geographic distances.

### **Program Components**

4. School-based fruit and vegetable intervention programs targeting elementary school children should use a strategy that combines offering free fruit and vegetables and enhanced nutrition education at school.

### **Participation/Engagement**

5. Engaging school communities, especially classroom teachers in the implementation process is essential to the success of fruit and vegetable programs. Ensuring that necessary systems are in place to support teachers in delivering the program is a critical prerequisite.
6. To maximize the impact of fruit and vegetable programs on children, it is important to involve parents.

### **Community Access to Fresh Produce**

7. Community access to fresh fruit and vegetables at a reasonable cost is paramount if the full impact of a school-based fruit and vegetable program is to be realized. Access and cost are significant issues for northern communities.

### **Future Evaluation Needs**

8. Further evaluation and monitoring of subsequent programs are important for quality improvement and to demonstrate government accountability.
9. Subsequent evaluation is needed to :
  - assess the impact of the NFVPP on students in the primary grades;
  - assess and minimize potential undesirable intervention outcomes on children's cognition and behaviours pertaining to fruit and vegetables;
  - explore the experiences from both parents' and children's perspectives ; and
  - determine the long-term impact of the program on children's fruit and vegetable consumption.

### ***Recommendations for the Ministry of Health Promotion***

Based on the findings of this mixed method evaluation, it is recommended that the Ministry of Health Promotion:

1. Continue the Northern Fruit and Vegetable Program having addressed issues related to produce delivery, quality, quantity and variety.
2. Provide the same level of funding to schools to deliver the program i.e. paid food preparer, refrigerator and associated supplies.

3. Articulate criteria for expanding the program.
4. Allocate funds to examine the lasting impact on a population level of the program “over time” on children’s fruit and vegetable consumption.
5. Address evaluation gaps including the impact on the fruit and vegetable consumption of children in junior kindergarten to grade four, the perspectives of children and their parents and examine potential undesirable outcomes of a school-based program.
6. Explore the feasibility of conducting an economic analysis, once measures for program improvement have been fully implemented.
7. Liaise with other ministries and key stakeholders to enhance the accessibility of reasonably priced quality fruits and vegetables for communities/regions where significant barriers exist.

## SECTION ONE: INTRODUCTION

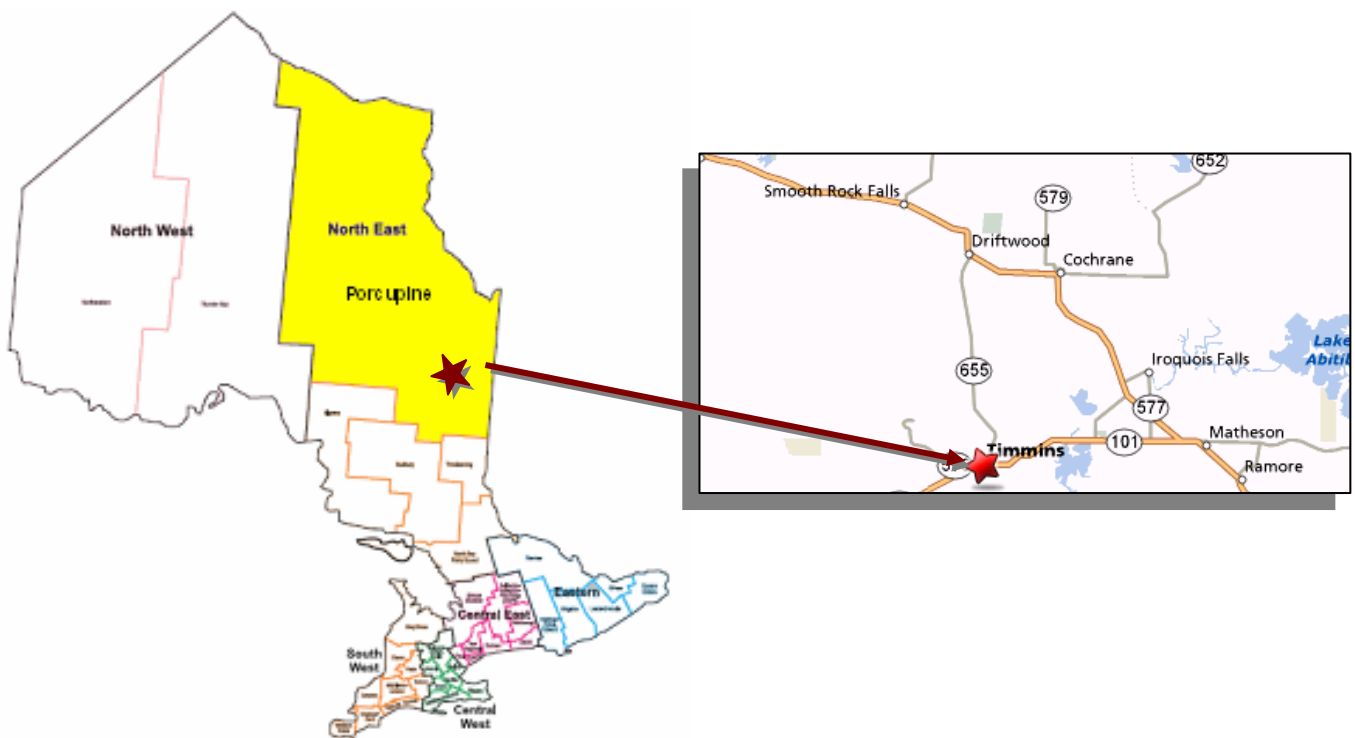
### 1.1 Background

As part of Ontario's Action Plan for Healthy Eating and Active Living, the Ministry of Health Promotion launched the Northern Fruit and Vegetable Pilot Program (NFVPP) which provided free fruit and vegetables at school to children in selected Northern Ontario elementary schools.

Northern Ontario was selected based on a number of factors. The lack of variety in children's diets combined with the high prevalence rate of overweight and obesity among children (i.e. over 28%) are sources of concern. Furthermore, 62% of children aged 12-19 do not eat five or more servings of fruit and vegetables daily.<sup>(1)</sup> In addition, Thunder Bay and Porcupine Health Unit regions have the highest costs for the Nutritious Food Basket.<sup>(1)</sup>

The Ministry of Health Promotion selected the Porcupine Health Unit region for this pilot project because school board boundaries align with the public health boundaries and there was also good representation of urban and rural centres. Specific communities were chosen within the Porcupine region to contain the area for the pilot. These communities are located in a geographic triangle and include Timmins, Schumacher, South Porcupine, Porcupine, Matheson, Iroquois Falls and Cochrane.

The Public Health Research Education and Development (PHRED) Program was commissioned by the Ministry of Health Promotion to evaluate the pilot.



## **1.2. Description of the Northern Fruit and Vegetables Pilot Program (NFVPP)**

This program was developed in partnership with the Ministry of Health Promotion, the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), the Porcupine Health Unit, Ontario Fruit and Vegetable Growers Association (OFVGA), four school boards and local schools.

The primary mandate of the NFVPP was to increase the intake of fruit and vegetables of elementary school age children in a defined area of Northern Ontario. The underlying goal was to promote healthy eating and wellness while increasing children's awareness of the benefits of eating fruit and vegetables. The specific objectives were to:

- increase awareness of the dietary role of fruit and vegetables
- favourably shift children's preference and willingness to try fruit and vegetables, and
- increase consumption of fruit and vegetables, both in and outside of schools.

The fruit and vegetables offered in the program were either fresh, packaged or slightly processed without added sugar. Ontario grown products were utilized whenever possible. The OFVGA was contracted for the procurement and distribution of the fruit and vegetables. The Porcupine Health Unit was the lead agency for the implementation at the school level. A full time Health Promoter (local site co-ordinator) was hired by the health unit to oversee the pilot. The program provided dedicated funds to hire a food preparer as well as necessary supplies such as containers and utensils and a refrigerator for each school. The Porcupine Health Unit provided Food Safety training for the food preparers.

The NFVPP intervention targeted elementary school children in seven Northern Ontario communities and consisted of the following two components:

- **Free Fruit and Vegetable Snacks (FFVS):**

The Program offered either one fruit **or** one vegetable serving three times per week to each student in Junior Kindergarten to grade eight in all intervention schools. The FFVS menu was structured on a three week rotation, with a total of nine items being provided by the OFVGA. The first rotation consisted of carrot sticks, broccoli florets, and unsweetened apple sauce cups, while rotation two consisted of celery sticks, cauliflower florets, and whole pear fruit cups. The third rotation consisted of tri-coloured peppers, sliced apples, and peach cups. To facilitate distribution, the fruit and vegetables were organized by classroom and were distributed Tuesdays through Thursdays. With the exception of a break at Christmas and during the March break, the program ran for one week in December 2006 (for all schools except for the French Catholic school board, which started in January 2007) until May 31, 2007 for a total of 21 weeks.

- **Enhanced Nutrition Education (ENE) - 'Paint Your Plate School Vegetables and Fruit Action Guide':**

This Guide is a comprehensive curriculum based resource for teachers to incorporate into the classroom. Activities are to be used at the school and community level for promoting fruit and vegetables, and include such activities as 'Vegetables and Fruit paper craft virtual salad'; 'Classroom vegetables and fruit busy box' and 'Paint your plate! Challenge'. Schools were encouraged to use nutritional education materials in the resource kit for morning announcements and school newsletters. The local health unit provided support to facilitate the implementation of the Guide.

The methodology used for the evaluation required that some schools received the fruit and vegetable intervention, while others served as control schools. In addition, the intervention schools received either enhanced nutrition education – **'Paint Your Plate School Vegetables and Fruit Action Guide'** or the usual nutrition programming. The control schools received the usual programming and no snack program.

### **1.3. Scope of the Evaluation**

#### **Aims:**

The aims of the evaluation were to:

- Measure the influence of the NFVPP on children's awareness, knowledge and willingness to try fruit and vegetables, as well as their consumption patterns
- Examine the logistics involved in program delivery.

#### **Evaluation Questions:**

- How was the NFVPP implemented?
- What were the facilitators and barriers to the implementation of the NFVPP?
- To what extent and in what ways did the NFVPP impact students' cognition, behaviour and consumption of fruit and vegetables?

## **SECTION TWO: METHODOLOGY OF THE EVALUATION**

---

### ***2.1. Evaluation Design***

The NFVPP was evaluated using a mixed-method evaluation design with both process and impact evaluation components. Process evaluation components included produce waste and the level of implementation of the Enhanced Nutrition Education program. In addition, in-depth qualitative interviews were conducted to identify program implementation facilitators and barriers.

The impact evaluation tested the impact of the program on students' fruit and vegetable consumption patterns and changes in their cognition and behaviours. A cluster-randomized controlled trial design was used with schools as the unit of measurement (clusters). The NFVPP consisted of three intervention arms: **i) Intervention I:** Free Fruit and Vegetable Snacks (FFVS) + Enhanced Nutrition Education (ENE); **ii) Intervention II:** Free Fruit and Vegetable Snacks (FFVS) and **iii) Control Group:** no intervention. Routine school-based nutrition education activities were carried out according to the grade level curriculum in the Control Group and Intervention II.

The evaluation protocol was reviewed and approved by the Research Ethics Boards at both Brescia University College and The University of Western Ontario. While all students in the Intervention schools were exposed to the FFVS and either the ENE or usual nutrition programming, data were only collected from those with parental consent.

### ***2.2. Randomization and School Allocation***

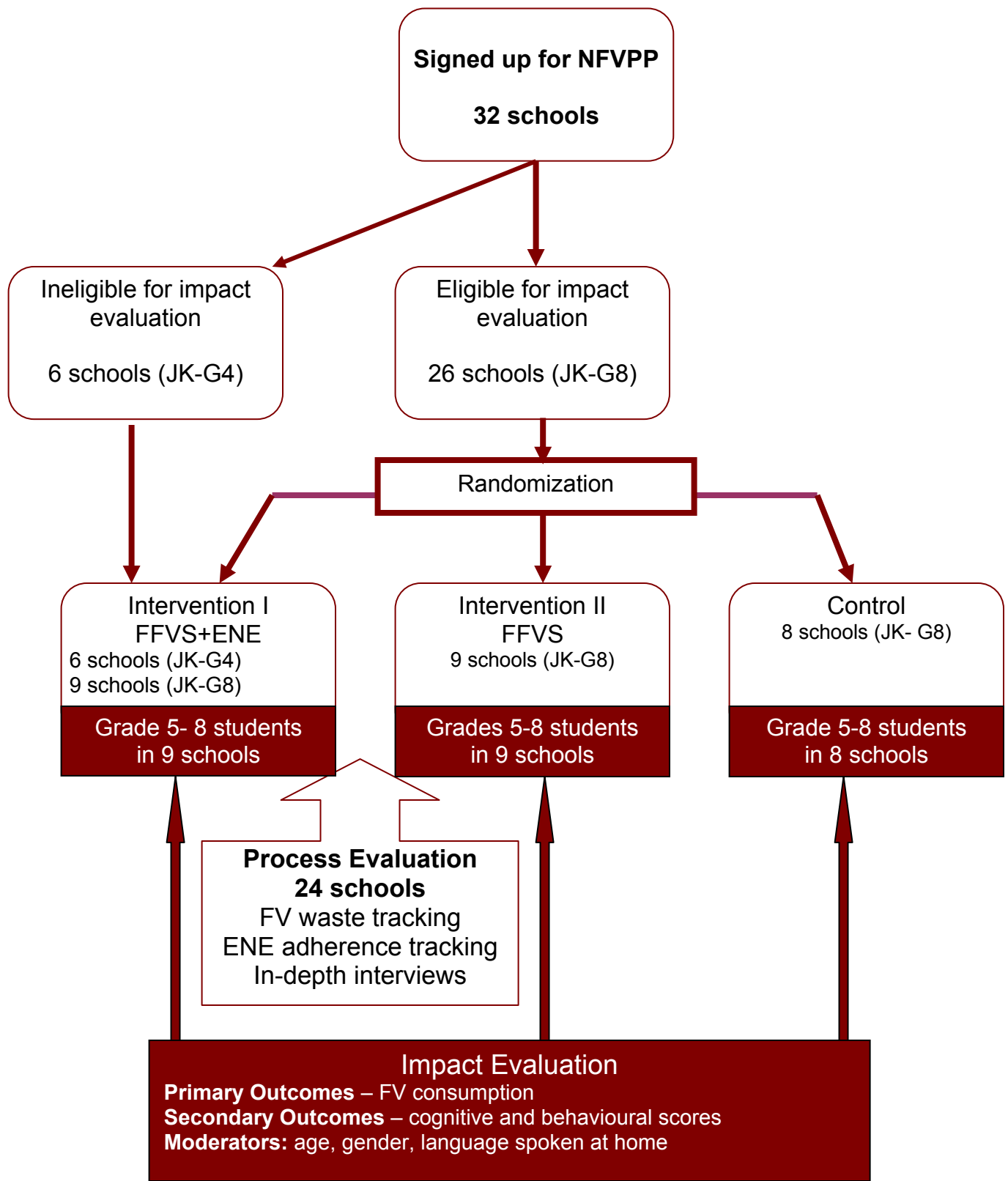
All rural and urban elementary schools (including both English and French, public and Catholic) in a designated geographic area within the Porcupine Health Unit region, were invited to participate in the NFVPP. The invitation letter outlined the objectives and procedure of the project, as well as the chance of being randomly selected into either an intervention or Control Group. All 32 elementary schools in the defined areas signed up for participation.

Of the 32 schools who agreed to participate in the NFVPP, six schools did not have students in grade five and above. These schools were eliminated from the impact evaluation as students in the primary grades did not have the necessary literacy skills to comprehend and respond to the surveys. These six schools automatically received the free fruit and vegetable snacks and ENE and participated in the process evaluation components.

The remaining 26 schools with grades five to eight were included in the impact evaluation component. Using SPSS v 15, the 26 eligible schools were randomly allocated into Intervention I (9 schools), Intervention II (9 schools), and the Control Group (8 schools). Data for the impact evaluation were collected from each of the three intervention arms at baseline and end point.

A total of 24 schools participated in the process evaluation components. These schools included the six schools with primary grades only and the schools in Intervention I (9 schools) and Intervention II (9 schools).

Figure 1. NFVP Program Evaluation Design





## 2.3. Process Evaluation Methods

### Program Implementation Tracking:

#### The Free Fruit and Vegetable Snack (FFVS) Component:

Since it was anticipated that not all fruit and vegetables distributed in school would be consumed by students, tracking waste provided a proxy measure of actual consumption. Food preparers in each intervention school were expected to complete a weekly waste tracking sheet throughout the intervention period (**Appendix I**). A five-point scale ranging from “no waste” to “all” was used to estimate the amount of waste. Data were entered and analyzed using SPSS v 15. Degree of waste was calculated and compared by the type / variety of fruit and vegetables.

#### The Enhanced Nutrition Education Component:

At the end of the program, a short questionnaire was distributed to each of the grades five to eight classroom teachers in Intervention I schools to determine to what extent the “**Paint Your Plate School Vegetables and Fruit Action Guide**’ was implemented (**Appendix II**). Data were entered into a SPSS database and frequencies of intervention activities were tabulated.

#### Program Implementation Facilitators and Barriers:

To understand facilitators and barriers to the implementation of the program, in-depth interviews were conducted at the end of the project.

#### Participant recruitment:

A letter of invitation was sent to all school principals, classroom teachers and school food preparers in all intervention schools (**Appendix III**). A purposeful sample of 26 participants was selected from the 42 participants who expressed an interest in the evaluation. Participants were selected to ensure representation from a variety of perspectives including the various roles (teacher, food preparer, principal), school boards, and size of school and community (rural / urban). Recruitment of new participants was stopped when it was felt that saturation had been achieved and that no new information was being collected. The local site coordinator and a representative from the OFVGA were interviewed.

In total, 28 individuals (Table 1) participated in the in-depth interviews. As a token of appreciation, all participants were sent a cheque for \$20.00 following the interview.

**Table 1: Participant profiles**

Role		School Board		Region		School Size	
Principal	8	English Public	8	Urban <sup>1</sup>	19	< 200	14
Teacher	10	English Catholic	7	Rural <sup>2</sup>	7	> 200	12
Food Preparers	8						
Local Site Coordinator	1	French Public	2				
OFVGA Representative	1	French Catholic	9				
	28		26		26		26

Definition for the purpose of this study:

<sup>1</sup> Urban – Timmins, Porcupine, Schumacher

<sup>2</sup> Rural – Val-Gagne, Iroquois Falls, Cochrane

- **Data collection:**

Upon informed consent (**Appendix IV**) in-depth semi-structured telephone interviews, which lasted between 20 and 40 minutes, were conducted in the spring of 2007 by an experienced interviewer. The interviews were conducted in both English and French, depending on the choice of the participants, and participant comments are documented in this report in the language of choice. Participants were asked their opinions about what worked well, what could be improved, and what their overall reaction was to the pilot project. The interview guides were tailored to the role of specific participants (**Appendix V**). Because of the emerging nature of qualitative research, some additional questions were added to the interview guide after the first three interviews. The local site coordinator was interviewed on two separate occasions: the first interview followed the original interview guide (**Appendix V**), while the second interview explored issues in more depth. The interview with the representative from the OFVGA focused on issues related to product delivery and variety. All interviews were audio-recorded and transcribed verbatim by a professional transcriber.

- **Data analysis:**

Strategies such as peer debriefing and team analysis were employed to ensure data trustworthiness. A summary of each interview was written immediately following the interview. These summaries were shared with members of the project team as they were prepared. This allowed the team to remain informed of themes as they emerged from the interviews and also allowed the project team to modify the interview guide.

Three researchers read through all interview summaries to identify key themes and develop a coding template. The researchers then performed inductive content analysis of two interview transcripts, in order to establish consistent categories. The analyses were compared for similarities and differences, adjustments were made, and consensus was reached. Once the themes and sub-themes were established, each interview was coded by one team member using NVivo software, based on the coding template that was established by the team. In order to interpret the findings, a summary of the analysis was prepared and discussed by the researchers, thus ensuring the findings were rooted in the data.

## **2.4. Impact Evaluation Methods**

### **Study Subjects and the Consent Process:**

All students in intervention schools were exposed to the FFVS and either the ENE or usual nutrition programming. Students in grades five to eight in the participating schools including those in Control schools were invited to participate in the impact evaluation. Data were only collected from children with parental consent.

In an effort to secure the required sample size of 437 subjects per intervention arm, (**Appendix VI**), a passive consent process was proposed by the Evaluation Team. However, two of the four local school boards had a research policy in place that required an active consent process. Therefore, both active and passive consent processes were simultaneously employed in the current impact evaluation.

- **Active consent:**

For all students from the two school boards that required an active consent process, an information letter (**Appendix VII**) was sent home to parents with the children along with a reminder card which followed three days later. The parental consent form was then returned to classroom teachers within a week by the students. Instructions and checklists were provided to the teachers (**Appendix VIII**).

- **Passive consent process:**

For students from school boards that used a passive consent process, an information letter (**Appendix VII**) was sent home with the children. Parents were encouraged to review the survey instruments available in the principal's office or online and to notify the school if they did not want their child to participate. Instructions and checklists were provided to the teachers (**Appendix VIII**).

An Information Evaluation Line was established to respond to parent and school inquiries.

**Outcome Measures:**

The primary outcome measure was the difference in levels of fruit and vegetable consumption of children, in the presence and absence of the intervention.

The secondary outcome measures included difference in children's awareness, knowledge, preference, willingness and self-efficacy to increase fruit and vegetable consumption, with and without intervention.

**Survey Instruments:**

- **The primary outcome measure, i.e., fruit and vegetable consumption**, was measured using both the Fruit and Vegetables Frequency (FVF) questionnaire and the pre-coded 24-hour fruit and vegetables recall questionnaire. <sup>(2)</sup> The instruments were teacher-assisted, and validated for use among children aged 10 to 13 with acceptable validity and reliability (**Appendix IX**).<sup>(2)</sup>
  - **The FVF questionnaire** consisted of six questions about the usual frequency of intake for fresh fruit, salad, other raw vegetables, cooked vegetables fruit juice and potatoes with eight response categories. <sup>(2)</sup>
  - **The pre-coded 24-hour fruit and vegetables recall questionnaire** <sup>(2)</sup> asked about fruit and vegetable intake in five time intervals: morning before school, at school, afternoon after school, at dinner and evening after dinner. Each interval started with a general question such as ' Did you eat or drink anything yesterday morning?' (yes/no). 'What was it? (just write keywords as e.g. bread, milk, cornflakes, etc.)'. These questions were structured to make the child think of actual intake on that specific day. After the general introductory question, the 24-hour recall section continued with questions on fruit and vegetable intake during each time interval. For each time interval, participants were asked to record their intake of juice, fruit and raw vegetables, while salad, cooked vegetables and vegetable soup were only asked for lunch and the evening meal. Amounts were indicated in terms of the number of *pieces*, *slices* or *glasses consumed*, and standards were defined for these units. Fruit and vegetable items and units in the questionnaire were modified to reflect Northern Ontario custom and terminology.
- **Secondary outcome measures:** Children's cognition and behaviours pertaining to fruit and vegetable consumption were measured using an instrument adopted and modified from the Pro Children Questionnaire<sup>(3)</sup> (**Appendix IX**).

### **Data Collection:**

Data were collected at baseline and at the end of the intervention from each of the three treatment arms. In order to obtain weekday 24-hour dietary recall data, and coincide with FFVS distribution days in schools (i.e. Tuesday, Wednesday and Thursday), surveys were administered either on Wednesday, Thursday or Friday during the data collection period.

Surveys were packaged by classroom and couriered to schools, along with detailed yet succinct instructions for classroom teachers for questionnaire administration (**Appendix X**). The surveys were administered to students in their classroom with assistance from classroom teachers.<sup>(2)</sup> The questionnaire was completed in by the children themselves after the teacher had given a short instruction. Upon completion, teachers collected and returned surveys to the Evaluation Team by courier.

### **Data Process and Analysis:**

All quantitative data were entered into the computer and analyzed using SPSS version 15.0 for Windows-comprehensive statistical software (SPSS Inc., Chicago). Missing values were excluded listwise. The level of significance for all statistical tests was set at 0.05.

### **Primary outcome – fruit and vegetable intake:**

Fruit and vegetable intake from the FVF Questionnaire were converted from frequency and household measures to number of servings per day.<sup>(2)</sup> The 24 hour recall data were manually coded.<sup>(2)</sup> A coding protocol which categorized fruit, vegetables and 100% fruit juice by food group and/or mixed food item based on the 2004 Dole 5 A Day Fruit & Vegetable Nutrition Facts Chart (**Appendix XI**) was developed. Means and standard deviations were calculated to describe children's fruit and vegetable consumption levels (servings/day). Students with fruit and vegetable intake above 12 serving per day were considered outliers and excluded from the analyses related to intervention effects on fruit and vegetable intake.

### **Secondary outcome cognitive and behavioural scales:**

Scales on children's knowledge, attitude, liking, self-efficacy, intention, willingness, habit, preferences and peer influences towards fruit and vegetables were created based on the Pro-Children Questionnaire with Cronbach Alpha being calculated.<sup>(3)</sup> Potential individual cognitive and behavioural changes beyond these set scales were also explored, with students' responses to each of the cognitive and behavioural questions at baseline and endpoint compared by group. Due to the fact that SPSS does not include the Stuart-Maxwell test, which is used for paired categorical data that have more than two categories, Chi-Square test was used as an alternative method which may be not as sensitive as the Stuart-Maxwell test in detecting differences.

### **Intervention effects:**

The "Intent-to-Treat" analysis principle was followed for testing intervention effects. GLM Univariate procedure was used to determine intervention effect. As the current study design consists of schools as the clusters and students as the unit of measurement, cluster effect should be accounted for in the analyses. The models all included the random effect of school-within-condition to account for the cluster sampling of the schools where outcome measures were the dependent variables with intervention as the fixed factor and individual level factors, i.e., the corresponding outcome measures at baseline, gender and age were covariates. School level factors, i.e. school location (urban versus rural) and

presence of existing fruit and vegetable programs were included in the models as random factors. Children who had both baseline and endpoint values were included in the analysis for that variable. The effect size of the intervention and standard errors were reported as the differences in outcome measures at endpoint with and without intervention controlled for baseline values and other confounders. In other words, this procedure compares the differences of an outcome measure at endpoint among Intervention I, II and the Control Group, while setting every subject “on the same ground” in terms of gender, age, presence of fruit and vegetable programs, location and that specific outcome measure at baseline.

## SECTION 3: PROCESS EVALUATION RESULTS

### 3.1. Implementation Adherence to the Free Fruit and Vegetable Snack (FFVS) Component

- **Overall waste:**

A total of 334 out of 497 waste tracking sheets which were completed throughout the implementation process (67% response rate) by school food preparers were received from the 24 intervention schools. These weekly waste-tracking sheets consisted of 621 data points by date and by variety of fruit and vegetables. There was no waste or a little waste over 55% of the time. On the other hand, approximately 25% of the time schools reported wasting 'most' or 'all' of the fruit and vegetables during the course of the intervention (**Table 2**).

**Table 2. Overall Degree of fruit and vegetable waste**

Degree of Fruit and Vegetable Wasting	JK- Grade 4 classes		Grades 5-8 classes	
	N	%	N	%
No waste	132	21.3	144	23.2
A little bit	219	35.3	199	32.0
A half	113	18.2	114	18.4
Most	121	19.5	108	17.4
All	36	5.8	56	9.0
Total	621	100.0	621	100.0

- **Waste as a result of poor fruit and vegetable quality:**

Without prompt, 14 out of 24 school food preparers spontaneously reported receiving rotten or frozen fruit and vegetables on 26 occasions (4.2%) among primary grades and on 23 occasions (3.7%) among senior grades. Such poor quality resulted in 85% and 91% of 'mostly or 'all' wasting (**Table 3**).

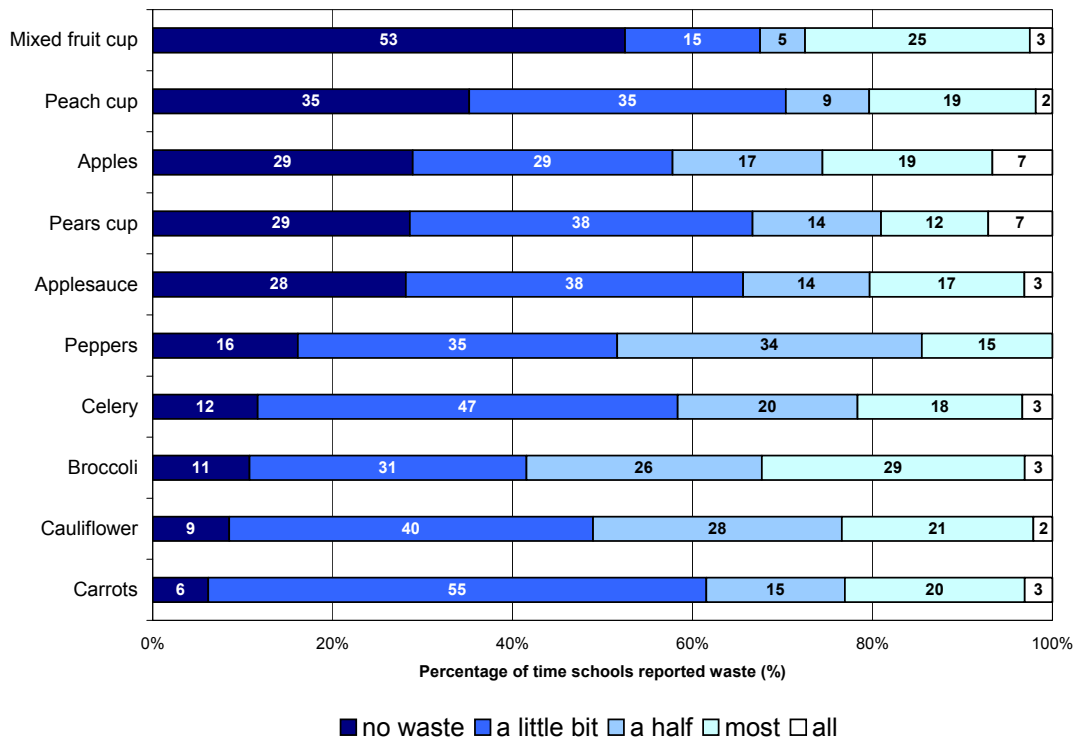
**Table 3. Degree of waste as a result of poor fruit and vegetable quality at delivery**

Degree of Fruit and Vegetable Wasting	JK- Grade 4 classes (n=23)		Grades 5-8 classes (n=26)	
	N	%	N	%
A little bit	2	7.7	1	4.3
A half	2	7.7	1	4.3
Most	6	23.1	4	17.4
All	16	61.5	17	73.9
Total	26	100.0	23	100.0

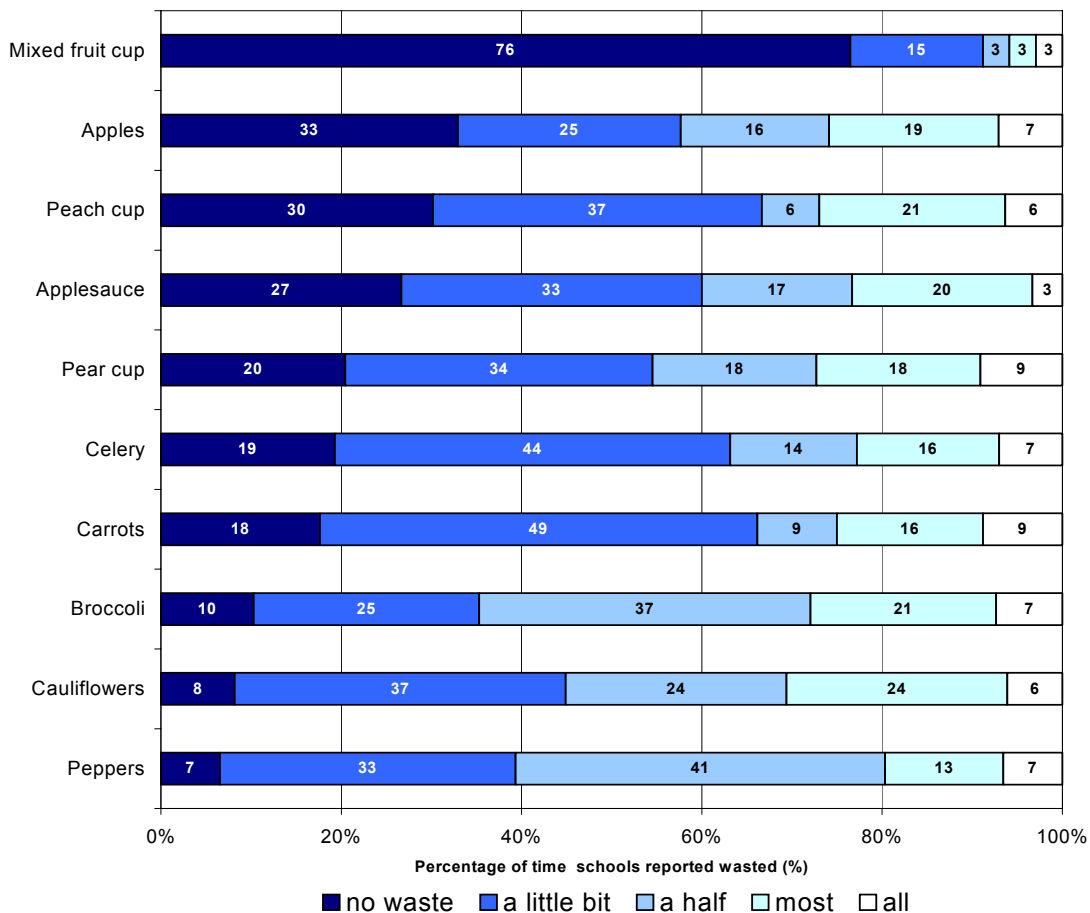
- **Waste by types/ variety of fruit and vegetables:**

Excluding waste that was caused by poor quality, the degree of waste by types/variety of fruit and vegetables offered was examined. Figure 2 shows that for primary grades, the three lowest waste fruit and vegetables were mixed fruit cup, peach cup and apple, however, only less than 11% of the time, broccoli, cauliflower and carrots were “no waste”. Senior grades followed a similar trend, except that for only 10% or less of the time broccoli, carrots and papers were “no waste”. **(Figure 3).**

**Figure 2. Waste by fruit and vegetables among JK-grade 4 (n=598)**



**Figure 3. Waste by fruit and vegetables among grades 5-8 (n=595)**





### 3.2. Implementation Adherence to the Enhanced Nutrition Education (ENE) Component

Although 42 grades five to eight classroom teachers were asked to complete a survey to assess their implementation of the ENE component (**Appendix II**), only 10 returned the questionnaire (23.8% response rate). This finding suggests that the components/activities in the ‘Paint Your Plate’ Guide were not fully implemented (**Table 4**). In addition, one of the teachers commented that he/she “received the information late in the year and has not yet had time to read through the entire package but has used the information to supplement the Family Studies unit on Nutrition and Stress”. Another teacher said that “If the program continues next September, I will add it to the science course”.

**Table 4. Implementation of the ‘Paint Your Plate School Vegetables and Fruit Action Guide’ in nine Intervention I schools**

<b>Paint Your Plate Activities</b>	<b>Implementation(n=10)</b>
<b>Curriculum-matched lessons/activities</b>	
Grade 5: Looking Through the Label Lens	2
Grade 6: Vegetables and Fruit! Read all About ‘Em	1
Grade 7: You Are What You Eat	2
Grade 8: Taking the VITALITY Approach!	3
<b>Additional nutrition educational activities</b>	
Vegetables and Fruit paper craft virtual salad	1
Classroom vegetables and fruit busy box	2
Paint your plate! Challenge	2
<b>Using “Paint Your Plate” for morning announcement</b>	
Never	5
1-3 times	5
4-6 times	0
7-10 times	0
>11 times	0
<b>Using “Paint Your Plate” for newsletter / report card inserts</b>	
Never	5
1-3 times	4
4-6 times	1
7-10 times	0
>11 times	0
<b>Numbers of recipes from the “Paint Your Plate” were sent home to parents</b>	
0	6
1-3	2
4-6	2
7-10	0
>11	0
<b>Health promotion activities suggested by the “Paint Your Plate” Guide</b>	
Fundraising	2
Vending machine	2
Tuck shop	2
Classroom celebrations	3
School events	2
School cafeterias	1
Nutrition program	9
School gardens	1
Tasty Tuesday & Fruity Friday	0

### 3.3. In-Depth Interviews

#### Valuable Program:

Overall, participants felt this was a valuable program and would participate in a program like this again. Participants felt the program helped students make healthier food choices at school and at home. Many also felt that some students in this region had limited exposure to fruit and vegetables, making this region especially suitable for the program. A few observed a difference in student behaviour, such as greater attention in class.

*The impact is positive and I think the kids are starting to understand healthy eating. (principal)*

*It's a great program and we really enjoyed it and thought it was very beneficial to our students. (principal)*

*Parents would see me and tell me, 'My child tries new vegetables at home now'. (food preparer).*

*C'est parce que les deux écoles, nous sommes isolées, des petites régions isolées, il y a pas de centre d'achat ou les parents peuvent aller, il y a juste des petits dépanneur. (teacher)*

*The thing is, our two schools are isolated; they're in small, remote areas, so there's no shopping centre where parents can buy things, there are only small convenience stores.*

*Like my sevens and eights were, if they got food in them, it made a difference. They listened more, they . . . concentrated, they were focused. (teacher)*

#### Key Facilitators:

Participants in the interviews were asked to identify facilitators for the NFVPP. Two main facilitators emerged: Ministry of Health Promotion funding and participation by the school community.

#### Funding:

A key facilitator was the Ministry of Health Promotion funding to each school for supplies such as containers and utensils, refrigerators and paid food preparers. This funding was critical to the delivery of the NFVPP. The importance of the food preparer position became even more apparent as schools without food preparers described the project as time-consuming. Two schools indicated their food preparer had to go on sick leave and a third school appeared not to have a hired food preparer, although the reason for this is not clear.

*Mais le réfrigérateur là qu'on a eu avec le programme, c'était fantastique. Je veux dire, sans ça, on n'aurait pas pu avoir les légumes entreposés dans l'école. Si on n'avait pas eu de réfrigérateur pour les entreposer, ces fruits et légumes, probablement on n'aurait pas été capables de l'avoir en premier, de faire partie du projet. (teacher)*

*But the refrigerator that we got with the program was fantastic. I mean, without that, we couldn't have stored the vegetables at the school. If we had no fridge to store the fruits and vegetables in, we probably wouldn't have been able to have it in the first place, to take part in the project .*

*Surtout le fait qu'ils on engagé quelqu'un pour nous aider, ça nous a beaucoup aidé, parce qu'on ne peut pas partir, les profs, et commencer à laver des légumes et tout ça, donc ça nous a beaucoup aidé. (teacher)*

*Especially the fact that they hired someone to assist us, that was a big help, because the teachers can't go off and start washing vegetables and everything, so that really helped*

*I think with the funding and being able to hire someone to do all this, made it run very smoothly. If we were to do it on a volunteer basis, not have that funding it would have been a lot more difficult. (principal)*

*Just for me, under the circumstances that the woman who was in charge of doing it went off on sick leave and I didn't have anyone else to do it. That would be the only thing for me as the principal trying to coordinate it with timing. You know you have a crisis that is coming up, so sometimes I would have to move the snack from the morning to the afternoon. (principal)*

### **Participation of the School Community:**

In addition to funding, the participation of many people in the school community made the project possible. food preparers and volunteers were key to successful distribution of the produce. Teachers appeared to be important role models for the students.

*What made it? It's everyone's participation. The teachers were very eager and the children were always happy to see what was coming into the classrooms. (food preparer)*

*I know teachers have encouraged their kids, 'cause those are the bins coming [back] nearly empty. Not all weeks, but there is one grade one teacher, these first grade kids, I'm telling you, when I would get their bins ready, I would know to give them more, more than the grade sixes, because they would eat. She was so encouraging to them. They tried it, kids tried things they didn't before and now they love them. So yes, I could tell which teachers were encouraging and which ones weren't. (food preparer)*

### **Key Challenges/Barriers:**

Interviewees were asked to identify the major challenges in implementing the NFVPP. The main themes that emerged from the analysis included product delivery; quality, quantity and waste of produce; and the variety of produce served.

#### **Product delivery:**

The main challenge reported during this pilot project was the delivery of the fruit and vegetables. Challenges included inconsistent delivery times, use of inappropriate delivery trucks and lack of communication between delivery and school personnel. Inconsistent delivery times appeared to be caused by poor weather and being low priority on the delivery company's schedule. Participants identified the need for consistent delivery in order to plan for proper storage of the produce and day-to-day program delivery. The use of inappropriate delivery trucks meant that some produce was frozen upon arrival, therefore affecting the quality of the produce served to students. Lack of communication between delivery and school personnel meant that sometimes produce was delivered without school staff being informed.

*We had a lot of problems with the delivery and it being delivered without the school's knowledge. Like someone would let them in a door and they would drop off the veggies but not tell the school's secretary and therefore the veggies sat out all night. That happened a couple of times. I've had two weeks in a row where we had to throw out all the veggies. (food preparer)*

*We were essentially late in being added to their delivery schedule . . . . So because we were not the priority, the vegetables were coming up in milk trucks – something like that. Sometimes they got frozen. (local site coordinator)*

### **Quality, quantity and waste:**

Overall, there were mixed reviews about the quality of the produce. Generally, participants felt the quality of the vegetables was inconsistent. All but one school-level participant identified receiving poor quality vegetables during the pilot project. While participants generally felt that the broccoli, carrots, non-perishable fruit and apples were good quality, there were frequent complaints about poor quality celery and tri-coloured peppers. Many participants mentioned that the broccoli and cauliflower smelled bad after being prepared for classroom distribution. When poor quality produce was received, food preparers had to rinse and re-cut the produce. This was deemed to be very time consuming. In addition, poor quality vegetables resulted in wasted produce.

In addition to the quality of produce affecting waste, some schools commented that the large quantities of produce they received resulted in excess waste. Some schools tried to find solutions to the waste issue. When there were leftovers, students, teachers and/or parents took some of the fruit and vegetables home. When possible, a number of schools donated the produce and non-perishable foods to a local food bank or non-profit organization. When the produce was still good, it was sometimes served on another day or again in the afternoon.

*The apples, they were so good. The Empire apples, even the parents are looking around to get the same apples in the grocery stores. (food preparer)*

*They sent us too much, way too much. I was telling them that but they didn't adjust, they kept on sending the same amount. The kids, they'll eat, I mean, some, but they won't eat as much as I guess they wanted them to eat. We used about half of what they were sending us. (food preparer)*

*Some carrots are really crisp and sharp and taste really good, and then others were soft and mushy . . . . This is within a bin, like there wasn't the consistency. (principal)*

*Most of the time I had to cut off much of them [the poor quality vegetables], so that's where my hour and half came from. I was just trying to make these very old vegetables servable". (food preparer)*

### **Variety:**

In general, participants would like to see a larger variety of produce, especially a greater variety of fruit. This was because the fruit served was mainly canned fruit. Regardless of the comments about variety, a number of participants stated that some students, especially those in older grades, simply did not like certain items and would not eat them. Participants also suggested including dip to encourage students to eat more vegetables.

*Every third week the kids were going, 'Oh no, broccoli again!' . . . . So I think variety would have been more important to add to this program. (food preparer)*

*It was just with the fruit. I was a little bit disappointed in the variety and the fact that it was canned. (principal)*

### **Steps to Address Challenges:**

The interview with the OFVGA representative indicated that a number of these challenges would be addressed in the second year of the program. Actions taken include the hiring of a new distribution company and increased variety of produce.

*I see huge improvements for delivery this coming school year because we are set up ahead of time now. (OFVGA representative)*

*Apples were the only fresh fruit That's the problem when you start in December... We are really pleased with our menu selection this year. We were able to be a lot more creative .... We are serving fresh pears, apples, strawberries, kiwis, pineapple, asparagus, mini-cucumbers, cherry tomatoes, clementines, carrot sticks, broccoli, and cauliflower. We have a variety of apple sauces and then a couple of servings of dried cranberries. A big improvement from last year. (OFVGA representative)*

In summary, the NFVPP was consistently recognized as a valuable program. The key program facilitators were funding and the participation of the school community. The main challenges identified were product delivery; the quality, quantity and waste of produce; and the lack of variety. Strategies are underway to address these challenges.

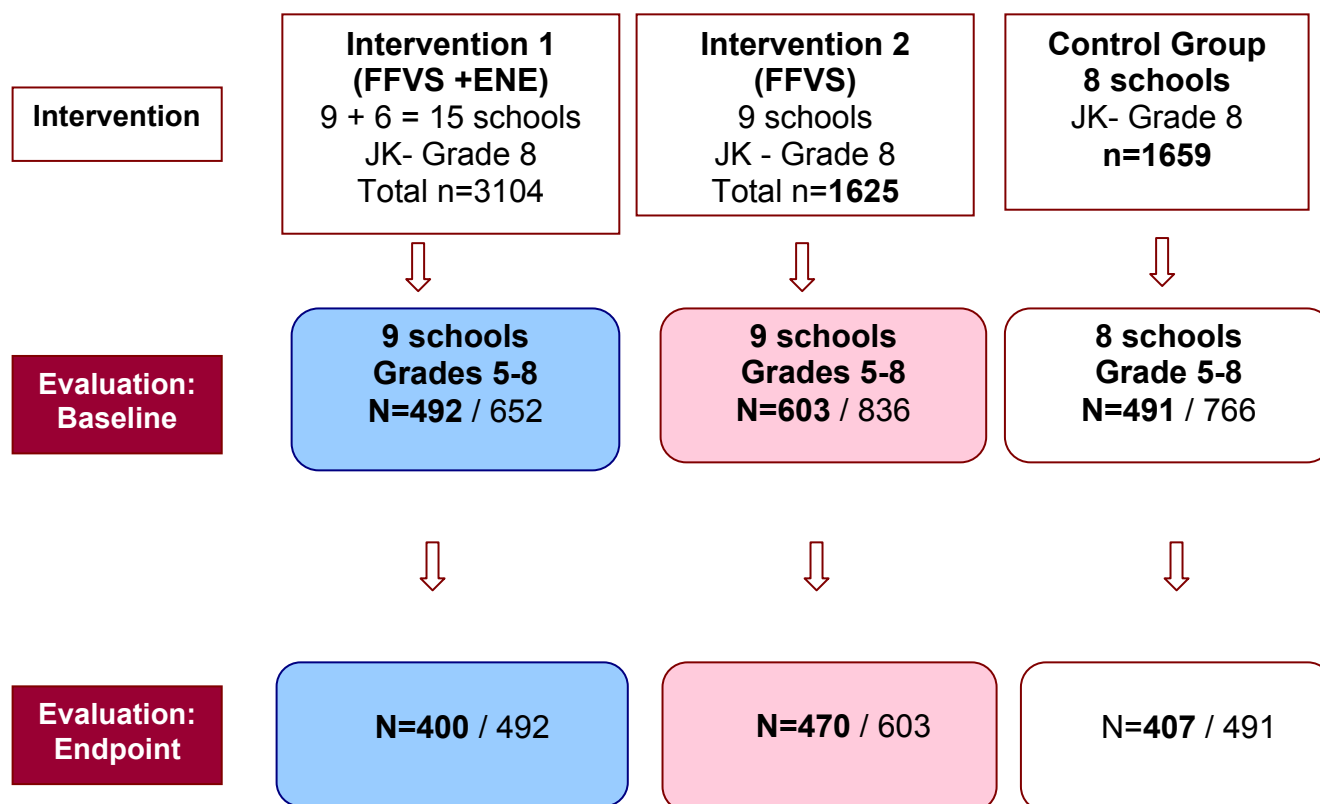
## SECTION 4 RESULTS OF THE IMPACT EVALUATION

### 4.1. Sample Scheme

Figure 4 presents the sample scheme of the overall NFVPP and the impact evaluation of the program. The NFVPP provided free fruit and vegetable snacks (FFVS) three times a week to approximately 4729 JK to grade eight students, with 3104 of them also being offered school-based enhanced nutrition education (ENE) between December 2006 and June 2007.

Of the 2254 grades five to eight students in the intervention and the control schools invited to participate in the evaluation 1586 participated (70.4% response rate) at baseline, and **1277** completed the survey at the end of the evaluation (20% dropout rate). Thus the final sample size of the impact evaluation is **1277**.

Figure 4. Intervention and Evaluation Sample Scheme



### 4.2. Description of the Sample

Table 5 presents the profile of schools by intervention arms. School propensity in terms of locations, languages, school boards and consent process were in general similar across the three intervention arms, except that there were more existing Fruit and Vegetable Programs in Intervention I schools, thus this was considered a confounder and controlled for in all analyses to determine intervention effect. Subject profiles were in general similar across the three intervention arms (Table 6).

**Table 5: School profile by intervention arm (n)**

	Intervention I (n=9)	Intervention II (n=9)	Control Group (n=8)
School location (urban/rural)	5/4	6/3	5/3
School language (English/French)	5/4	5/4	4/4
School Boards (Public/Catholic)	4/5	4/5	3/5
Presence of existing FV Program (Yes/No)	3/6	1/8	0/8
Consent process (active / passive)	6/3	6/3	5/3

**Table 6. Subject profile by intervention arm (n)**

	Intervention I (final n=400)	Intervention II (final n=470)	Control Group (final n=407)	Total (final n=1277)
<b>Age (years) (mean ± SD)</b>	11.5 ±1.2	11.8±1.3	11.6±1.2	11.6±1.2
<b>Gender (n (%))</b>				
Boys	172 (43%)	224 (47.7%)	180 (44.2%)	576 (45.1%)
Girl	228 (57%)	246 (52.3%)	227 (55.8%)	701(54.9%)
<b>Grade level (n (%))</b>				
5	111 (27.3%)	129 (27.4%)	112 (27.5%)	276 (27.5%)
6	137 (34.3%)	131 (27.9%)	140 (34.4%)	408 (31.9%)
7	62 (15.5%)	107 (22.8%)	72(17.7%)	241 (18.9%)
8	90 (22.5%)	103 (21.9%)	83 (20.4%)	276 (21.6%)
<b>Language spoken at home (n (%))</b>				
English	212 (53.0%)	282 (60%)	200 (49.1%)	694(54.3%)
French	56(14.0%)	42 (8.9%)	54 (13.3%)	152 (11.9%)
Both English and French	129 (32.2%)	142 (30.2%)	148 (35.4%)	419 (32.8%)
Others	3 (0.8%)	4 (0.9%)	5 (1.2%)	12 (0.9%)

No statistical significant difference was detected by Chi-Square test between baseline and endpoint.

### **4.3. Students' Opinion on Receiving Free Fruit and Vegetables**

**Table 7** shows that at baseline over 80% of students liked the idea of receiving free fruit at school across the three groups. Student responses stayed almost the same at endpoint. Approximately 60% to 70% of students liked the idea of receiving vegetables at baseline and the figures stayed stable at endpoint.



**Table 7. Students' opinion on receiving free fruit and vegetables (%)**

	Intervention I (n=400)		Intervention II (n=470)		Control Group (n=407)	
	Baseline	Endpoint	Baseline	Endpoint	Baseline	Endpoint
<b>Fruit</b>						
Like	88%	84%	86%	84%	83%	84%
Neutral	11%	13%	12%	13%	15%	12%
Dislike	2%	3%	3%	2%	3%	4%
<b>Vegetables</b>						
Like	74%	74%	69%	68%	62%	64%
Neutral	22%	18%	24%	23%	27%	23%
Dislike	5%	9%	8%	9%	11%	13%

No statistical significant difference was detected by Chi-Square test between baseline and endpoint.

#### 4.4. Intervention Effect

- **Primary outcome:** Table 8 shows intervention effects on the primary outcome measure - fruit and vegetable intake (servings/day) - as measured by FVF Questionnaire and the pre-coded 24-hour recall questionnaire. There were no significant differences between the intervention groups and the Control Group in total fruit and vegetable intake by FVF Questionnaire.

Results from the 24-hour Recall show that both Intervention I and II groups had higher total fruit and vegetables than the Control Group (0.6 and 0.5 serving/day, respectively), although the differences were not statistically significant. Students in Intervention I consumed more fruit and vegetables at school (0.49 serving/day,  $p < 0.05$ ) than those in the Control Group (Figure 5). This difference was statistically significant. Similarly, Intervention II students also consumed 0.42 servings per day ( $p > 0.05$ ) more at school than Control students; the difference was not statistically significant. Only a very slight difference existed between Intervention I and II (Figure 5).

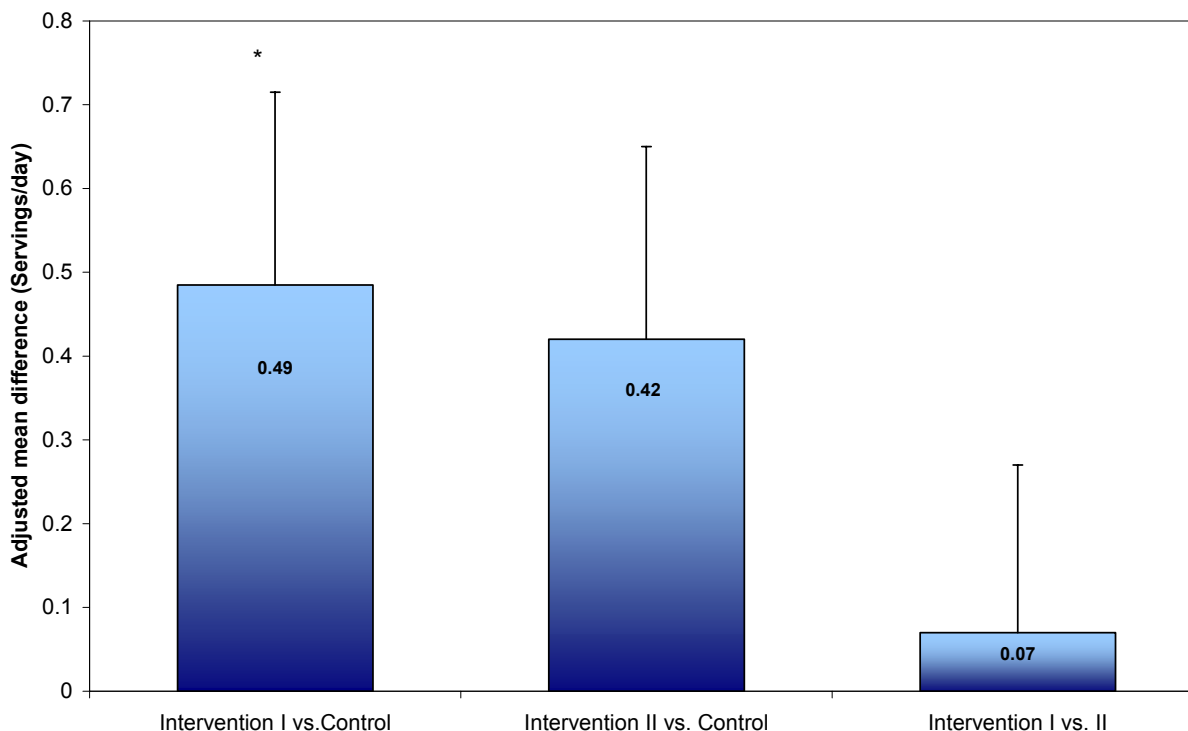
**Table 8. Intervention effect on fruit and vegetables intake (mean  $\pm$  s.e.)**

Fruit and Vegetables intake servings/day	Intervention I	Intervention II	Control Group	<i>P</i>
<b>Measured by FVF Questionnaire</b>	N=400	N=466	N=405	
Total fruit and vegetables	4.7 $\pm$ 0.2	5.0 $\pm$ 0.1	4.8 $\pm$ 0.2	>0.05
<b>Measured by 24 –hour Recall Questionnaire</b>	N=213	N=228	N=254	
<b>Fruit and vegetables at school</b>	<b>1.9<math>\pm</math>0.1<sup>a</sup></b>	<b>1.8<math>\pm</math>0.2<sup>ab</sup></b>	<b>1.4<math>\pm</math>0.2<sup>b</sup></b>	<b>&lt;0.05</b>
Fruit and vegetables at home	2.5 $\pm$ 0.2	2.5 $\pm$ 0.2	2.4 $\pm$ 0.3	>0.05
Total fruit and vegetables (home + school)	4.4 $\pm$ 0.2	4.3 $\pm$ 0.3	3.8 $\pm$ 0.4	>0.05

Means are adjusted for baseline measures, age and gender as covariates, and school clustering effect, school location (urban vs. rural), and presence of existing fruit and vegetable programs as random factors. Means with different superscript letters are significantly different by Post Hoc multiple comparison using the least significant difference (LSD) pairwise multiple comparison.



**Figure 5. Intervention effects on fruit and vegetables intake at school**



Adjusted mean differences and s.e. of fruit and vegetable intake at school (serving/day) between groups, controlling for baseline fruit and vegetable intake, age and gender as covariates, and school clustering effect, school location (urban vs. rural), and presence of existing fruit and vegetable programs as random factors.

\* $p < 0.05$  by Post Hoc multiple comparison using the Least Significant Difference (LSD) pairwise comparison.

### Intervention effects on secondary outcomes:

Students cognitive and behavioral scores at endpoint are presented in **Table 9**. The mean scores on the Knowledge, Attitude, Liking, Intention, Willingness, Peer-influence scales were close to the maximum values, implying that students across the three groups had high knowledge level, and positive attitudes about fruit and vegetables, and enjoyed, intended to consume and were willing to try fruit and vegetables. In addition, there was a positive peer influence around fruit and vegetable consumption. Students from all three groups had moderate levels of self-efficacy and habits to consume fruit and vegetables. The preference scores on 20 fruit and 23 vegetables listed were relatively low. There were no statistical significant differences among the three groups for all scores, except that Intervention I and II seemed to have slightly higher preference scores than the Control Group.

Comparing change of students' responses to each of the cognitive and behavioural questions at baseline and endpoint, it was noted that students' preference for certain types of fruit and vegetables were shifted from 'never tried it' towards 'like it' (**Figure 6**). In Intervention I, the proportion of students who had "never tried" cauliflower decreased from 17% at baseline to 7% at endpoint, while the proportion of students who "liked" cauliflower increased from 54% at baseline and 63% at endpoint ( $X^2=24, p<0.05$ ). Students in Intervention II had statistical significant shifts of their preference for applesauce, peach cup, cauliflower, leeks and rutabaga from 'never tried it' towards 'like it'. Although the students in the Control Group also showed statistically significant changes of their preference for peach cup and cauliflower, the shifts of "never tried" were bidirectional, i.e. some became "like it" and some "do not like it".

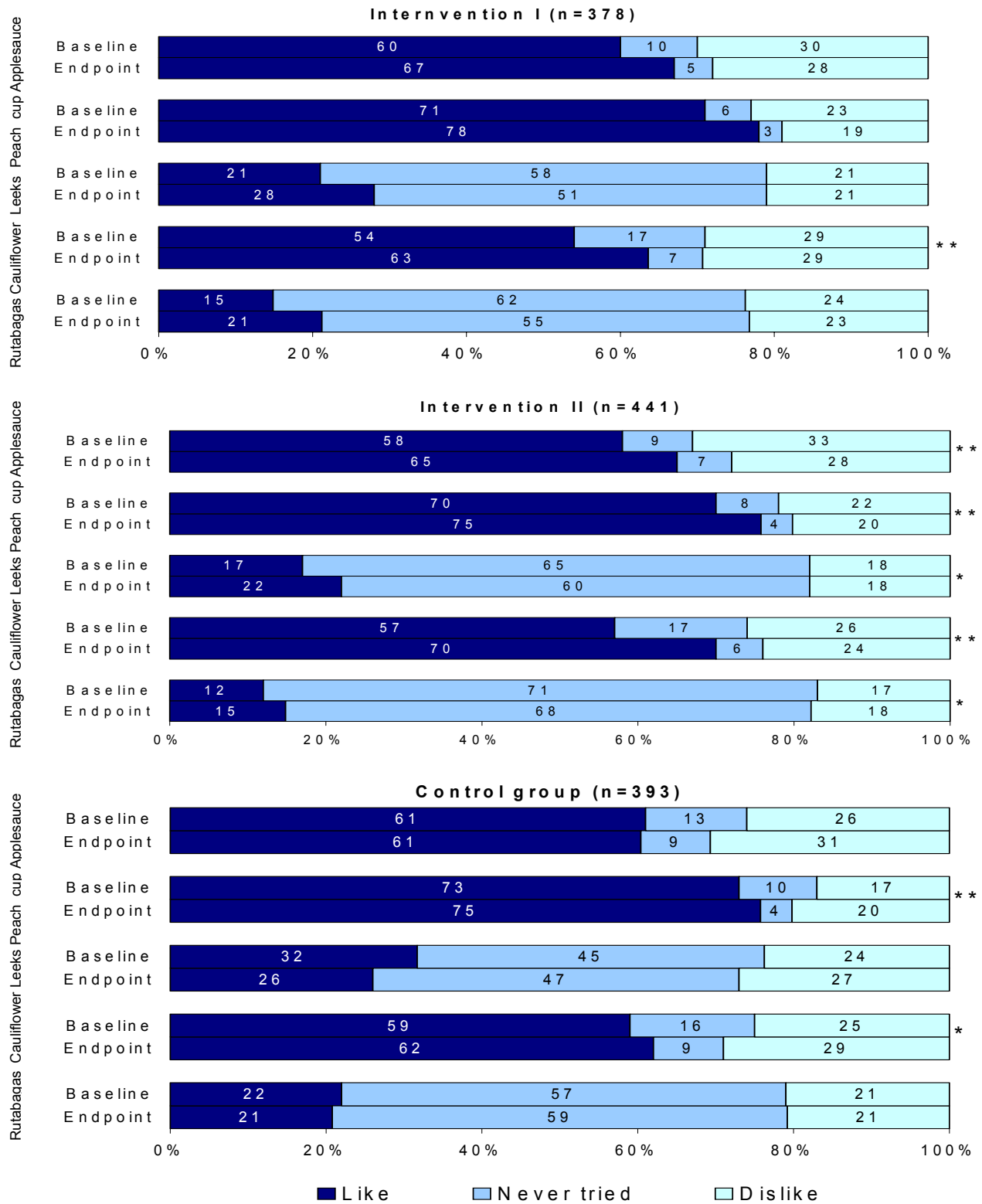
In contrast, there was a tendency of unfavorable changes in self-efficacy, intention, and peer influence related to vegetable consumption in Intervention II students at endpoint. **(Figure 7)**. The proportion of students in Intervention II who “agreed” to the ‘intention’ statement, “I want to eat vegetables” decreased from 74% at baseline to 70% at end point ( $X^2=8.3$ ,  $p<0.05$ ). In the same way, 83% of students felt that “If I decided to eat vegetables”, a self-efficacy measure, decreased from 83% at baseline to 76% at endpoint, ( $X^2=9.7$ ,  $p<0.05$ ). In addition, the proportion of students who perceived that, “my best friend (s) eat vegetables”, a measure for “peer-influence” decreased from 55% at baseline to 46% at endpoint ( $X^2=9.5$ ,  $p<0.05$ ).

**Table 9 Intervention effect on cognitive and behavioural outcomes**

Variables	Items	Cronbach $\alpha$	Possible range	Intervention I	Mean $\pm$ s.e. Intervention II	Control Group	$p$
<b>Knowledge</b> How many servings of fruit and vegetables do you think you should eat everyday to stay healthy?	1	N/A	N/A	5.1 $\pm$ 0.2	5.0 $\pm$ 0.2	4.8 $\pm$ 0.2	>0.05
<b>Attitude</b> (fully disagree -> fully agree) Eating fruit/vegetables every day makes me feel good Eating fruit / vegetables every day gives me more energy Eating fruit and vegetables could help prevent heart disease.	5	0.76	5-25	21.6 $\pm$ 0.3	21.4 $\pm$ 0.2	21.5 $\pm$ 0.3	>0.05
<b>Liking</b> (fully disagree -> fully agree) I like to eat fruit/vegetables every day Fruit/vegetables tastes good	4	0.79	4-20	16.8 $\pm$ 0.2	17.0 $\pm$ 0.2	16.8 $\pm$ 0.2	>0.05
<b>Self-efficacy</b> It is difficult for me to eat fruit/vegetables every day. ((fully agree -> fully disagree) If I decide to eat fruit/vegetables every day, I can do it. (fully disagree -> fully agree)	4	0.64	4-20	16.0 $\pm$ 0.3	16.0 $\pm$ 0.2	15.8 $\pm$ 0.3	>0.05
<b>Intention</b> (fully disagree -> fully agree) I want to eat fruit / vegetables every day.	2	0.66	2-10	8.4 $\pm$ 0.1	8.3 $\pm$ 0.1	8.3 $\pm$ 0.1	>0.05
<b>Willingness</b> How willing are you to try a fruit/vegetables that you've never tried before?(not willing -> very willing)	2	0.74	2-8	6.3 $\pm$ 0.1	6.4 $\pm$ 0.1	6.4 $\pm$ 0.1	>0.05
<b>Habits</b> Eating fruit every day is a habit for me I usually ask my parents to buy fruit and vegetables I usually bring fruit / vegetables to school	6	0.82	6-30	21.7 $\pm$ 0.4	22.2 $\pm$ 0.3	21.8 $\pm$ 0.3	>0.05
<b>Preferences</b> Which of the following fruit do you like or dislike (20 fruit and 23 vegetables) (dislike->like)	43	0.94	43-215	118.0 $\pm$ 0.15	118.1 $\pm$ 0.11	116.3 $\pm$ 0.1 4	>0.05
<b>Peer influences</b> My best friends eat fruit / vegetables (disagree->fully agree)	2	0.78	2-10	7.2 $\pm$ 0.2	7.3 $\pm$ 0.1	7.3 $\pm$ 0.1	>0.05

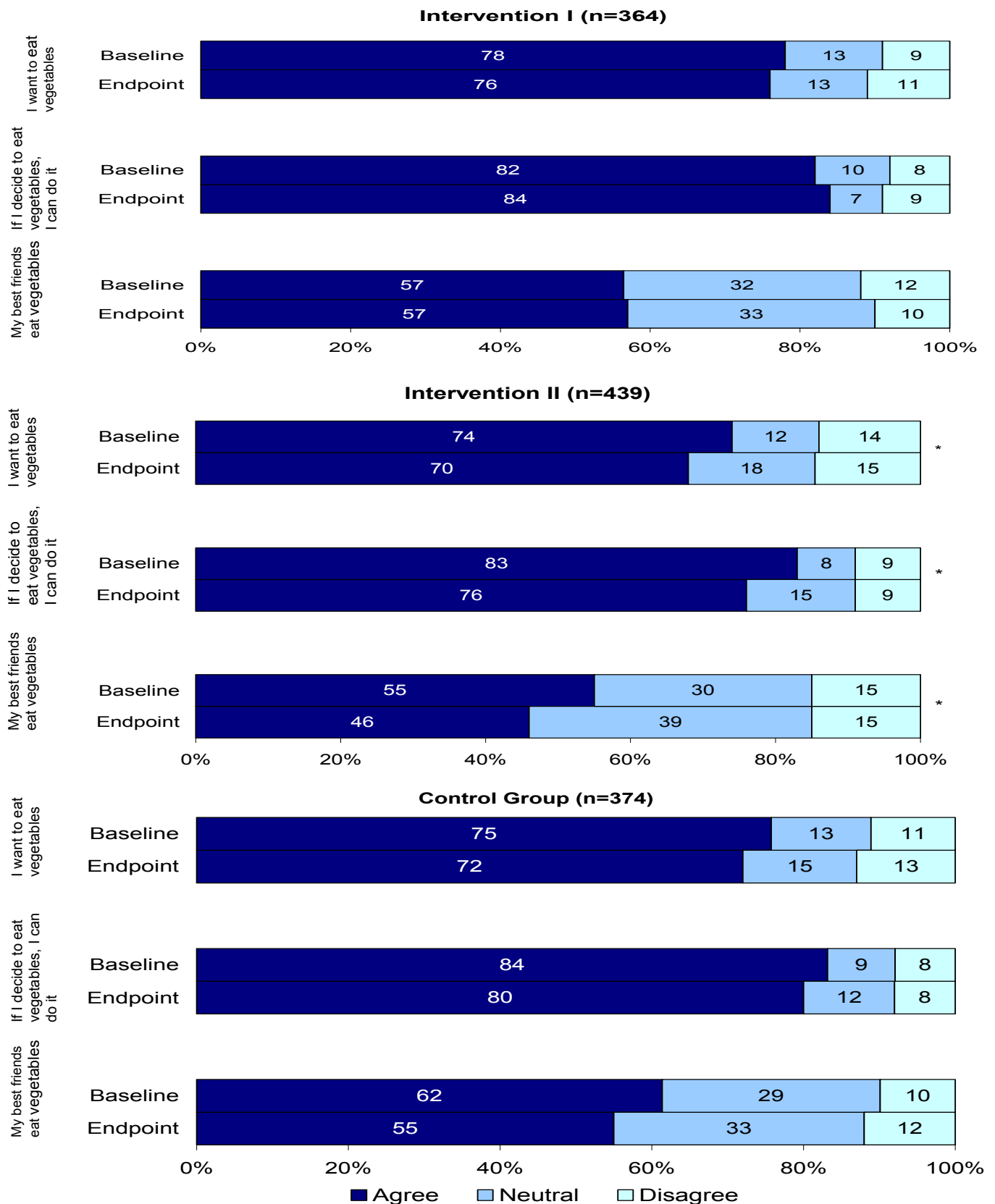
Means are adjusted for baseline measures, age and gender as covariates, and school clustering effect, school location (urban vs. rural), and presence of existing fruit and vegetables programs as random factors.

**Figure 6. Changes in fruit and vegetables preferences - baseline versus endpoint**



\*  $p < 0.05$ ; \*\*  $p < 0.01$  by Chi-Square test

Figure 7. Cognitive changes- baseline versus endpoint



\*  $p < 0.05$  by Chi-Square test

## **SECTION 5: DISCUSSION**

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The NFVPP was perceived by the northern school communities as a needed program with substantial benefits for students who had limited exposure to fruit and vegetables, especially those from economically disadvantaged families. This program provided students with the opportunity to eat fruit and vegetables and encouraged students to make healthier food choices. This is extremely important for these regions where 62% of children aged 12-19 do not eat five or more servings of fruit and vegetables daily.<sup>(1)</sup>

The current comprehensive evaluation was designed to provide scientific evidence to answer three key evaluation questions: **1)** How was the program implemented?; **2)** What were the key facilitators and barriers to the implementation of the program? and **3)** To what extent did the program impact children's fruit and vegetable consumption, cognition and behaviours? The following section discusses the program from each of these three perspectives. Evaluation methodological strengths, challenges, and limitations are discussed.

### ***5.1 How was the Northern Fruit and Vegetable Pilot Program Implemented?***

The NFVPP was developed and implemented through partnership and cooperation by multiple stakeholders including the Ministry of Health Promotion, the Ontario Ministry of Agriculture Food and Rural Affairs (OMAFRA), the Porcupine Health Unit, OFVGA, four school boards and local schools in remote and scattered regions of Northern Ontario. Piloting a program of this nature is extremely challenging. In an attempt to evaluate the program implementation process, two monitoring systems were put in place: tracking the amount of produce waste and the level of implementation of the Enhanced Nutrition Education Program entitled "Paint Your Plate."

- **Fruit and vegetable waste:**

Waste appeared to be a major issue throughout the NFVPP implementation process, as reflected by the waste tracking data and in-depth interviews. Based on waste tracking data estimated by school food preparers, approximately 25% of the time, "most" or "all" of the produce was wasted. Such a high proportion of waste may be due to a number of factors. Qualitative data from the in-depth interviews suggested that schools were given too much produce leading to increased waste. Poor fruit and vegetable quality was another contributing factor. Without prompt, 14 school food preparers spontaneously reported receiving rotten or frozen vegetables on 23 occasions (3.7%) in primary grades and 26 occasions (4.2%) in senior grades. These figures may actually underestimate the scope and extent of poor fruit and vegetable quality because there was no question on the tracking form assessing quality of the produce. Qualitative data from in-depth interviews also indicated that all but one school-level participant identified receiving poor quality vegetables during the program. In addition, the inconsistent delivery and lack of notification caused produce to be left unattended, which may have further compromised the quality of fresh fruit and vegetables.

It is important to understand why the degree of waste was greater for certain vegetables such as carrots, peppers, broccoli and cauliflower, than it was for fruits. Is it due to children's innate preference for certain vegetables or due to inappropriate handling of vegetables that resulted in poor quality during the implementation process? On one hand, children tend to be more accepting of fruit than vegetables.<sup>(4)</sup> On the other hand, all vegetables distributed in the current program were fresh and thus their quality could be affected by the handling and delivery from the "field to table" in

the school classroom. Meanwhile, all fruit, with the exception of apples, were canned and thus non-perishable. Therefore, the greater waste of vegetables compared to fruit may be attributed to both children's innate preference and the poor vegetable quality discussed above.

It is worth noting that poor vegetable quality might have compromised the intervention outcomes. Furthermore, poor quality produce has implications on program resources. The in-depth interview data show that even though the fruit and vegetables came pre-washed and pre-cut, food preparers had to rinse and re-cut a lot of the produce due to poor vegetable quality. This was very time consuming.

- **ENE implementation:**

It appears the Enhanced Nutrition Education (ENE) component ("Paint Your Plate" Guide) was not fully implemented. This was reflected by the very low response rate to our brief tracking survey (23.8% response rate). From the 10 surveys received, it is evident that there was a lack of implementation of the recommended curriculum and health promotion activities. Due to challenges in getting the resource translated and printed, the "Paint Your Plate" resource was not distributed until March 2007 when many schools had already completed their nutrition module (personal communication). Such delay in the delivery of the program materials and incomplete implementation of ENE compromise the intervention outcomes and the ability of the evaluation results to determine the effect of the ENE.

## ***5.2 What Were The Key Facilitators And Barriers to the Implementation of the NFVP Program?***

The in-depth interviews with program and school staff provided insights on facilitators and barriers to the implementation of the NFVPP.

### **Key implementation facilitators:**

Facilitators included sufficient funding, food preparer and volunteer involvement, as well as teacher role modeling. Program planners had implemented the necessary financial and human infrastructure to support the NFVPP. Given that the funded infrastructure was crucial to the implementation of the NFVPP, continued stable funding is paramount to the future success and sustainability of the program.

Teacher role modeling, encouragement and a positive attitude towards fruit and vegetables were significant factors in increasing students' willingness to try and eat fruit and vegetables. Future programs should continue to engage teachers and school staff in the implementation process to maximize the outcomes of the program. In addition, having the fruit and vegetables delivered, cut and prepared made the program easier to implement.

### **Key barriers and challenges:**

The number one challenge was delivery. The delivery was the root cause of many barriers related to scheduling and the quality of the vegetables. Poor vegetable quality was another key challenge schools faced. Ensuring the quality of the produce is the most important issue to be resolved. Regular monitoring of the quality of the produce should be established and steps need to be taken to improve the delivery of the produce to schools. This includes ensuring a consistent delivery schedule, proper delivery trucks, along with effective communication plan between the delivery staff and schools to ensure fruit and vegetables are not left unattended. In addition, the limited variety of fresh fruit is another limitation that needs to be addressed in subsequent programs. Increasing the variety of fresh fruit served to students will ensure a continued positive response to the program.

### **5.3 To What Extent Did the NFVPP Impact on Children's Fruit And Vegetable Consumption?**

The impact of the NFVPP was evaluated using a cluster-randomized controlled trial design with validated instruments that were considered sensitive and valid for assessing intervention effect.<sup>(2,3)</sup>

Although there were no differences in any cognitive or behavioural scores across the three intervention arms, there were favourable preference changes on certain fruit and vegetables with a shift from 'never tried it' towards 'like it' in both Intervention I and II. This finding agrees with a previous fruit and vegetable intervention program in Prince Edward Island that showed an increase in elementary school students' liking scores for certain fruit and vegetables after a six-week exposure period.<sup>(5)</sup> Another study also showed that when children were exposed to sweet peppers for two weeks, their 'liking' of sweet pepper significantly increased as compared to the Control Group.<sup>(8)</sup> The authors suggested that exposure is a promising technique for improving children's liking of vegetables.<sup>(8)</sup> In the current context, more children in both intervention I and II groups "liked" cauliflower, one of the vegetables offered in the program, after intervention. Surprisingly, children in Intervention II (i.e. the fruit and vegetable alone intervention) began "liking" vegetables (leeks and rutabaga) that were not offered in the program. It is speculated that by being exposed to free fruit and vegetables in school, children may be more likely to try new fruit and vegetables and "like" them after trying them. It is unclear why this phenomenon did not happen in the Intervention I group (the combined FFVS plus ENE intervention). Furthermore, in the Control Group, children's preference for cauliflower and peach cup also significantly changed, the shift was from "never tried" to both 'liked' and "disliked". This phenomenon may relate to the developmental process that children may try new foods as they age. Caution is needed to interpret these observed differences as a result of receiving the FFVS intervention or other events such as history, maturation, and testing. Unlike the previous analyses (**Tables 7 & 8**), this type of single group pre-post analysis does not control for these threats to validity. Further research should examine these trends in more detail to determine if they are artifacts or attributable to the intervention.

Results from the 24-hour recall method reveal that students in the combined strategy (Intervention I) consumed significantly more fruit and vegetables at school by 0.5 serving per day, as compared to the Control Group. Although not statistically significant in comparison to the Control Group, the combined strategy (Intervention I) and the FFVS alone strategy (Intervention II) resulted in an increase to the total daily fruit and vegetable consumption by 0.6 and 0.5 serving, respectively. The current results were consistent with the "5-a-Day Power Plus" Program in St. Paul, Minnesota, which increased fruit and vegetable consumption at lunch time by 0.4 servings per day.<sup>(4)</sup> This Minnesota program was a school-based intervention that employed multiple strategies including behavioural curricula in classrooms, parental involvement, school food service changes, and industry support and involvement. The authors concluded that parental involvement is needed to increase fruit and vegetable consumption at home.<sup>(4)</sup> In the NFVPP, the insignificant changes in fruit and vegetable consumption at home may be attributed to the minimal parental involvement coupled with the community's limited access to fresh fruit and vegetables.

An important question to be addressed was "Did the combination of distributing free fruit and vegetables with enhanced nutrition education (Intervention I) result in a greater impact on children's fruit and vegetable consumption than distributing free fruit and vegetables alone (Intervention II)?" A recent study by Reinaerts et al. examined the effect of a free fruit and vegetable distribution program compared to a multi-component program consisting of curriculum and parental involvement among 4 – 12 year-old children.<sup>(6)</sup> The study showed that both programs increased children's fruit and vegetable consumption by 0.2 servings per day, suggesting that simple distribution of free fruit and vegetables could be a practical population-based strategy to increase fruit and vegetable consumption among children.<sup>(6)</sup> Our current evaluation compared the net intervention effect size between the two interventions. Although no statistical differences were detected between these two intervention arms, the combined strategy (Intervention I), but not the free fruit and vegetable alone strategy (Intervention



II), did result in significant increases in children's fruit and vegetable consumption at school. This finding implies that the combined intervention strategy worked better than the single strategy, despite the fact that the ENE component was not fully implemented.

Another important question to address in the current context was 'How did the results of the NFVPP compare to other published research?' A recent systematic review of 11 fruit and vegetable interventions among elementary school children revealed that nine had a significant positive effect on fruit and vegetable consumption with a daily increment ranging from 0.3 to 0.99 serving.<sup>(7)</sup> Findings from this review highlighted key features leading to success including duration of at least 12 months, increased exposure to fruit and vegetables among the whole school community; inclusion of teacher training and integration with the curriculum; leadership and encouragement by peers and the school food service staff; and involvement of parents at school and at home.<sup>(7)</sup> The NFVPP possessed a number of such key features such as increasing children's exposure to fruit and vegetables at school, engagement of school staff, and provision of relevant curriculum. Due to the pilot nature of the program, the enhanced nutrition education component was not fully implemented. The restricted variety of fruit and limited capacity in delivering fresh vegetables to schools in Northern remote areas may have further compromised intervention effects. In addition, duration of the program was shorter than that of the original plan, due to lead time for collecting baseline data using a scientifically rigorous evaluation design, as well as food preparer training in French.

Avoiding unintended adverse outcomes is critical, especially for population-based interventions. There appears to be minor undesirable intervention outcomes related to students' cognitive and behavioural changes pertaining to vegetable consumption. These include the tendency towards unfavourable changes in self-efficacy, intention and peer influence pertaining to vegetable consumption in the Intervention II students but not Intervention I. Such adverse outcome may be attributed to exposure to poor quality vegetables. However, students in both Intervention I and II were exposed to the same vegetables including those of poor quality. It is speculated that the enhanced nutrition education component in Intervention I may have prevented these adverse cognitive outcomes. These results suggest that in order to minimize unintended adverse intervention outcomes on children's cognition and behaviours, it is important to ensure that children are exposed to good quality vegetable produce. Future study is needed to assess the unfavourable changes.

Nonetheless, the NFVPP used a combined strategy which demonstrated a favorable intervention effect on children's fruit and vegetable consumption at school, despite numerous challenges and limitations. Future fruit and vegetable programs ought to ensure full implementation of the enhanced nutrition education component, increase variety over a longer duration, i.e. more than 12 months provide quality fruit and vegetable produce, as well as involve parents and further engage teachers and staff in the implementation process.

#### ***5.4 Evaluation: Methodological Strengths, Challenges, and Limitations***

The current evaluation was the first of its kind in Canada to use a cluster-randomized controlled trial design with appropriate instruments suitable for assessing intervention effects on children's fruit and vegetable consumption. The evaluation also quantitatively assessed the program implementation process by tracking fruit and vegetable waste and adherence to the enhanced nutrition education guide. In addition, key facilitators and barriers to the implementation of the program were identified through in-depth interviews with program staff. Some methodological challenges and limitations should also be noted:

### **Distance evaluation:**

As the PHRED Evaluation Team was not on site, evaluation data collection largely relied on local school teachers and program staff, or telephone interviews. Recognizing the potential challenges, the Evaluation Team implemented a number of strategies to make data collection in the field as easy as possible. These steps included, but were not limited to:

- Personalized correspondence, in both English and French, sent to school boards and school principals explaining the importance and procedure of the evaluation, as well as soliciting their support for the project.
- All information letters and surveys were bundled by classroom and addressed by name of the classroom teachers with labels and courier slips for returning the materials.
- Detailed, yet succinct instructions, personalized and hand signed Thank You letters, along with a \$20 token of appreciation were sent to all teachers and principals who played a key role in obtaining consents and in administering surveys.
- A bilingual evaluation information line was established for teachers, programs staff and parents to respond to questions related to the evaluation.
- The evaluation project coordinator remained in close contact with school and program staff throughout the program.
- A small incentive (an insulated lunch-bag) was given to all students who participated in the Impact Evaluation.

Although every effort was made to streamline the process, numerous challenges emerged throughout the evaluation. For instance, delay in the return or misplacement of informed parental consents necessitated considerable follow-up by the evaluation project coordinator and decreased children's participation in the impact evaluation. Furthermore, surveys were not administered on the set dates, which was an important step to ensure consistent data collection. Some teachers might not have given clear and consistent instructions to students when the self-administered questionnaires were filled out in the classroom. This may have compromised survey accuracy and resulted in a substantial proportion of invalid or missing values, particularly those of the 24-hour recall data. Distance evaluation also resulted in relatively low return rates for fruit and vegetable waste tracking and the ENE adherence tracking sheets. Last, but not least, mass couriers of information letters and survey questionnaires which was indicated due to the tight timelines and numerous telephone calls increased the overall cost of the evaluation.

### **Evaluation conducted in two languages:**

All aspects of the current evaluation - including both the outcome and process evaluation components - were conducted in both English and French. All correspondence to school boards, schools, and parents, such as information letters, consent forms, and survey instruments were professionally translated into French. The task of translating materials is very resource intensive, from professional translation fees to time associated with reviewing translations to ensure consistency. In addition, one of the two French school boards delayed distribution of approximately 900 information letters and consent

forms because of concerns with a few terms used in the translated versions. As a result, the reprinting, repacking and couriering of material resulted in further delay to the implementation of the intervention in this particular school board and added to the cost of the evaluation.

### **Fruit and Vegetables Frequency (FFV) Questionnaire versus the pre-coded 24-hour recall methods:**

Both the Fruit and Vegetables Frequency (FVF) questionnaire and the pre-coded 24-hour fruit and vegetable recall questionnaire were completed by students in the impact evaluation.<sup>(2)</sup> The FVF Questionnaire was relatively simple to complete and data analysis was easy, compared to the pre-coded 24-hour fruit and vegetable recall questionnaire. However, the FVF Questionnaire tends to overestimate fruit and vegetable intake, and may not be sensitive enough to reflect fruit and vegetable intake changes in intervention research.<sup>(2)</sup> This was evident in the current evaluation. In contrast, the pre-coded 24-hour recall method is considered to have acceptable validity and reliability and is suitable for use in reflecting relatively small intervention effect size.<sup>(2)</sup> This method required for the detailed 24-hour recall intake data was relatively complicated to complete. The complex questionnaire, along with the potential lack of clear instructions from the teachers, resulted in a substantial proportion of missing and invalid values. For instance, 695 out of 1277 cases had reasonable baseline and endpoint data on fruit and vegetable intake. Although the overall sample size was close to the required sample size of 437 per intervention arms to detect an intervention effect of 0.4 serving per day with a power of 80% and type one error of 5%, the missing / invalid values of fruit and vegetable intake decreased the sample size for determining intervention effect size on fruit and vegetable consumption. This compromised the statistical power when determining intervention effects on fruit and vegetable consumption using the 24-hour recall method.

### **Limitations of the fruit and vegetable waste tracking form:**

Instead of using a weighing method, a 5-point scale was developed to subjectively estimate fruit and vegetable waste, in order to minimize extra workload for school food preparers in reporting waste tracking. The limitation with such a scale was that waste was estimated differently. For instance, some food preparers may have reported “no waste” when over supplied produce were donated to charity organizations, which resulted in underestimation of produce waste that were not consumed by intervention targets.

### **Limited capacity of statistical procedures for testing categorical data from cluster-randomized controlled trial:**

Methods for analyzing continuous outcomes are well established for cluster-randomized controlled trials. However, there is a limited capacity for analyzing categorical data with the commonly used statistical software, e.g. SPSS at the present time.<sup>(9)</sup> Therefore, findings should be reviewed with caution when interpreting results from the pre- and post- changes in categorical variables.

### **Contamination and compensatory rivalry:**

A cluster-randomized controlled trial attempts to control for a number of threats to validity so that the results of the evaluation are attributable to the intervention and not due to any confounding factors or intrinsic differences between the groups. However, in this study it was impossible to prevent contamination of the Control Group. There was a significant amount of media attention about the NFVPP in this area. This might have increased the awareness of fruit and vegetable consumption among parents, who then may have increased the amount of fruit and vegetables they put in their children’s lunches and/or snacks. While this evaluation asked about school-based nutrition programs at the start of the evaluation, this was not tracked throughout the evaluation period. Therefore, it is unknown if the control schools were offered a nutrition program during the study period. In addition,

during the course of the program, the local health unit sent out six newsletters promoting fruit and vegetable consumption to all elementary schools including control schools, which may have caused some contamination of the intervention effect. Given the heightened media attention of the NFVPP, schools and/or parents might have been compelled to provide some sort of nutritional program in the school setting or changed their practices at home.

**Lack of data on primary students, qualitative perspective from parents and children:**

Due to time constraint, the Evaluation Team was unable to identify an appropriate instrument to measure fruit and vegetable intake among students in grades JK to grade four. The impact of the NFVPP on primary students remains unknown. There is also a lack of data regarding the experiences of parents and their children who participated in the program.

**Needs for evaluating the lasting effect of the NFVPP:**

One of the working hypotheses for free fruit and vegetable intervention was that repeating exposure to unfamiliar fruit and vegetables in childhood will result in increased liking and consumption, which will become habits for life. Although the current evaluation demonstrated favourable changes in both preferences for certain types of fruit and vegetables, it remains unknown if such effects will last. Therefore, it is important to evaluate the lasting impact of the program on children's fruit and vegetable consumption.

## **SECTION 6. IMPLICATIONS AND RECOMMENDATIONS**

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The implementation process and impact of the NFVPP was evaluated using both qualitative and quantitative methodologies with a cluster- randomized controlled trial design. Results from this rigorous evaluation indicated that the NFVPP was positively viewed as a needed health promotion program for children in Northern Ontario with limited access to fresh fruit and vegetables. Although challenges and limitations emerged during the pilot implementation process, the program was in general well received, and resulted in increased fruit and vegetable consumption by 0.5 serving per day at school and favorable preference changes in certain fruit and vegetables. The evaluation also illuminated facilitators and barriers to successful implementation of a school-based program and identified suggestions for future program improvement. These findings are especially useful to other jurisdictions considering implementing a free school-based fruit and vegetable program as well as to the sustainability of existing programs.

### **6.1 Implications for Practice**

#### **Infrastructure:**

1. Sufficient funding, including paid food preparers, partnerships involving funders, health units, school boards and schools, and produce providers and good coordination and communication across partners are essential for an effective school-based fruit and vegetable program.
2. A quality control system must be in place to ensure that quality fruit and vegetables with sufficient variety and quantity, based on need are provided. Waste must be monitored and minimized.
3. A consistent and proper delivery system, which supports the transport of quality produce and an effective communication plan with school staff are needed to ensure quality produce “from field to table” This is especially critical in northern remote communities where schools are scattered across large geographic distances.

#### **Program Components:**

4. School-based fruit and vegetable intervention programs targeting elementary school children should use a strategy that combines offering free fruit and vegetables and enhanced nutrition education in the classroom.

#### **Participation/Engagement:**

5. Engaging school communities, especially classroom teachers in the implementation process is essential to the success of fruit and vegetable programs. Ensuring that necessary systems are in place to support teachers in delivering the program is a critical prerequisite.
6. To maximize the impact of fruit and vegetable programs on children, it is important to involve parents.

**Community Access to Fresh Produce:**

7. Community access to fresh fruit and vegetables at a reasonable cost is paramount if the full impact of a school-based fruit and vegetable program is to be realized. Access and cost are significant issues for northern communities.

**Future Evaluation Needs:**

8. Further evaluation and monitoring of subsequent programs are important for quality improvement and to demonstrate government accountability.
9. Subsequent evaluation is needed to :
  - assess the impact of the NFVPP on students in the primary grades;
  - assess and minimize potential undesirable intervention outcomes on children's cognition and behaviours pertaining to fruit and vegetables;
  - explore the experiences from both parents' and children's perspectives ; and
  - determine the long term impact of the program on children's fruit and vegetable consumption.

**6.2 Recommendations for the Ministry of Health Promotion**

Based on the findings of this mixed method evaluation, it is recommended that the Ministry of Health Promotion:

1. Continue the Northern Fruit and Vegetable Program having addressed issues related to produce delivery, quality, quantity and variety.
2. Provide the same level of funding to schools to deliver the program i.e. paid food preparer, refrigerator and associated supplies.
3. Articulate criteria for expanding the program.
4. Allocate funds to examine the lasting impact on a population level of the program "over time" on children's fruit and vegetable consumption.
5. Address evaluation gaps including the impact on the fruit and vegetable consumption of children in Junior Kindergarten to grade four, the perspectives of children and their parents and examine potential undesirable outcomes of a school-based program.
6. Explore the feasibility of conducting an economic analysis, once measures for program improvement have been fully implemented.
7. Liaise with other ministries and key stakeholders to enhance the accessibility of reasonably priced quality fruit and vegetables for communities/regions where significant barriers exist.

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## **APPENDIX I**

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### **PRODUCE WASTE TRACKING FORM**





**Fruit and Vegetable Waste Tracking Form**

**Instructions:** To be completed on a weekly basis by the person in your school, who is responsible for the implementation of the Fruit and Vegetables Program and returned to:

Mr. Bill Chircoski, Northern Ontario Fruit and Vegetables Pilot Program Coordinator,  
 Porcupine Health Unit, P.O. Bag 2012, 169 Pine Street South, Timmins, Ontario, P4N 8B7, Fax: 705-264-3980

School \_\_\_\_\_ Total number of students \_\_\_\_\_ Filled out by \_\_\_\_\_

Date	Name of the fruit / vegetable supplied	Amount supplied (servings)	Amount wasted (please estimate to the best of your ability and circle an appropriate number by grade grouping, i.e. JK-Grade 4 and Grades 5-8)									
			1 _____ 2 _____ 3 _____ 4 _____ 5					1 _____ 2 _____ 3 _____ 4 _____ 5				
			none little bit half most all					none little bit half most all				
			JK – Grade 4					Grades 5-8				
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5	

**Comments**

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Ministry of Health Promotion  
Ministère de la Promotion de la santé



### Formulaire de contrôle des fruits et des légumes non consommés

**Instruction:** Nous demandons à la personne chargée de la mise en œuvre du programme dans votre école de remplir le formulaire de contrôle une fois par semaine et de le retourner à :

M. Bill Chircoski, coordonnateur local du Programme de fruits et de légumes,  
Bureau de santé Porcupine, Sac postal 2012, 169, rue Pine Sud, Timmins, Ontario P4N 8B7, Télécopieur : 705- 264-3980

École \_\_\_\_\_ Nombre total d'élèves \_\_\_\_\_ Rempli par \_\_\_\_\_

48

Date	Nom du fruit ou du légume fourni	Quantité fournie (portions)	Quantité non consommée (veuillez estimer et encercler le nombre approprié en fonction des niveaux scolaires)	
			1 _____ 2 _____ 3 _____ 4 _____ 5 aucun un peu moitié presque tout tout de la pré-maternelle à la 4 <sup>e</sup> année	1 _____ 2 _____ 3 _____ 4 _____ 5 de la 5 <sup>e</sup> à la 8 <sup>e</sup> année
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5
			1 _____ 2 _____ 3 _____ 4 _____ 5	1 _____ 2 _____ 3 _____ 4 _____ 5

### Commentaires

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## **APPENDIX II**

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### **“PAINT YOUR PLATE” IMPLEMENTATION TRACKING FORM**





**Paint your plate.  
Create a masterpiece.**

**“Paint Your Plate! Create Your Own Masterpiece Vegetables and Fruit Action Guide for Schools” Implementation Tracking Sheet**

School \_\_\_\_\_ Grade \_\_\_\_\_ Name of classroom teacher \_\_\_\_\_

**Instructions:**

To be filled out by Grade 5-8 classroom teachers. Please return in the enclosed stamped envelope by **June 10 2007**. Your assistance is greatly appreciated! If you have any questions, please contact Ms. Linda Khoshaba, Research Associate, Middlesex-London Health Unit Tel: 519-667-5317 ext. 2368 Fax: 519-432-9430 Email: linda.khoshaba@mlhu.on.ca.

1. What lessons/activities did you use with your class? **(Check that all apply)**

- Grade 5: Looking Through the Label Lens
- Grade 6: Vegetables and Fruit! Read all About ‘Em
- Grade 7: You Are What You Eat
- Grade 8: Taking the VITALITY Approach!

2. What additional nutrition educational activities did you perform with your class?

- Vegetables and Fruit paper craft virtual salad Yes, in my class Yes, in this school No
- Classroom vegetables and fruit busy box Yes, in my class Yes, in this school No
- Paint your plate! Challenge Yes, in my class Yes, in this school No

3. List all **nutrition promotion activities** your school introduced since March 2007?

- |   |   |
|---|---|
| <input type="checkbox"/> Fundraising,           | <input type="checkbox"/> Nutrition program              |
| <input type="checkbox"/> Vending machine        | <input type="checkbox"/> School gardens                 |
| <input type="checkbox"/> Tuck shop              | <input type="checkbox"/> Tasty Tuesday & Fruity Friday  |
| <input type="checkbox"/> Classroom celebrations | <input type="checkbox"/> Others <b>(please specify)</b> |
| <input type="checkbox"/> School events          | _____   |
| <input type="checkbox"/> School cafeterias      |   |

4. Since March 2007, how many times has your school used information from the “Paint Your Plate” for a **morning announcement**?

- |                                |                               |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Never | <input type="checkbox"/> 7-10 |
| <input type="checkbox"/> 1-3   | <input type="checkbox"/> ≥11  |
| <input type="checkbox"/> 4-6   |                               |

5. Since March 2007, how many times has your school used information from the “Paint Your Plate” for **newsletter/report card inserts**?

- |                                |                               |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Never | <input type="checkbox"/> 7-10 |
| <input type="checkbox"/> 1-3   | <input type="checkbox"/> ≥11  |
| <input type="checkbox"/> 4-6   |                               |

6. Since March 2007, how many **recipes** from the “Paint Your Plate” were sent home to parents?

- |                                |                               |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Never | <input type="checkbox"/> 7-10 |
| <input type="checkbox"/> 1-3   | <input type="checkbox"/> ≥11  |
| <input type="checkbox"/> 4-6   |                               |

7. Other comments regarding the **Paint Your Plate! Create Your Own Masterpiece Vegetables and Fruit Action Guide for Schools.** \_\_\_\_\_



**« Choisissez vos couleurs! Créez un chef-d'oeuvre. Guide d'action sur les légumes et les fruits à l'intention des écoles » Feuille de contrôle de la mise en oeuvre**

École : \_\_\_\_\_ Année : \_\_\_\_\_ Titulaire de classe : \_\_\_\_\_

**Directives :**

Les titulaires de la 5<sup>e</sup> à la 8<sup>e</sup> année doivent remplir ce formulaire. Veuillez le retourner dans l'enveloppe affranchie ci-jointe avant **le 10 juin 2007**. Nous vous remercions sincèrement de votre participation à ce projet. Si vous avez des questions, communiquez avec Ms Linda Khoshaba, associée de recherche, Bureau de santé de Middlesex-London, tél. : 519-667-5317, poste 2368; téléc. : 519-432-9430; courriel : linda.khoshaba@mlhu.on.ca.

1. Quelles leçons/activités avez-vous utilisées dans votre classe? (**cocher tout ce qui s'applique**)

- 5<sup>e</sup> année : Examen d'une étiquette à la loupe!
- 6<sup>e</sup> année : Lisez plus sur les fruits et légumes
- 7<sup>e</sup> année : Une alimentation à votre image!
- 8<sup>e</sup> année : adoptez l'approche VITALITÉ!

2. Quelles activités additionnelles en nutrition avez-vous faites avec vos élèves?

- Salade virtuelle de fruits et légumes en papier  Oui, dans ma classe  Oui, dans l'école  Non  
Boîte d'outils pour les fruits et légumes  Oui, dans ma classe  Oui, dans l'école  Non  
Défi *Choisissez vos couleurs!*  Oui, dans ma classe  Oui, dans l'école  Non

3. Énumérez toutes les **activités de promotion de la nutrition** organisées par votre école depuis mars 2007.

- Activités de financement θ Jardins à l'école
- Machines distributrices θ Mardis délicieux et vendredis fruités
- Boutiques θ Autres : (**veuillez préciser**)
- Célébrations en salle de classe
- Activités scolaires
- Cafétérias d'écoles
- Programme de nutrition pour les élèves

4. Depuis mars 2007, combien de fois votre école a-t-elle utilisé, **dans ses annonces du matin**, de l'information contenue dans « Choisissez vos couleurs! »?

- Jamais θ 7-10
- 1-3 θ ≥11
- 4-6

5. Depuis mars 2007, combien de fois votre école a-t-elle utilisé, **dans son bulletin de nouvelles/encarts du bulletin des élèves**, de l'information contenue dans « Choisissez vos couleurs! »?

- Jamais θ 7-10
- 1-3 θ ≥11
- 4-6

6. Depuis mars 2007, combien de **recettes** extraites de « Choisissez vos couleurs! » ont été envoyées aux parents?

- Jamais θ 7-10
- 1-3 θ ≥11
- 4-6

7. Autres remarques concernant « **Choisissez vos couleurs! Créez un chef d'oeuvre. Guide d'action sur les légumes et les fruits à l'intention des écoles** » :

## **APPENDIX III**

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### **IN-DEPTH INTERVIEWS — LETTER OF INVITATIONS**





## Invitation to Participate in a Telephone Interview

April \_\_\_\_, 2007

Dear \_\_\_\_\_:

The exciting and novel *Northern Ontario Fruit and Vegetable Pilot Program* has been implemented in 24 elementary schools in the Porcupine area. The project supports *Ontario's Action Plan for Healthy Eating and Active Living* and aims to raise awareness and increase the consumption of fruit and vegetables among children. As we near the end of the school year, we are inviting principals, teachers, and in-school project leaders/ food preparers involved in this project to participate in a telephone interview. Your insights would help us to gain a broader understanding of this program and help improve and further expand this project to children across Ontario.

### ***What will the telephone interview be about?***

During the 20-30 minute telephone interview, you will be asked about your opinion and feedback on this pilot program. This feedback will help identify the barriers, facilitators, and challenges in the implementation process. The interview will be audio taped to help us more accurately document what was discussed. Please be assured that no information identifying you or your school will be reported. Following completion of the analysis and preparation of reports, all tape recordings will be destroyed. Interviews will be conducted in either French or English at your choice.

### ***When will the interviews take place?***

Interviews will take place during the month of May. If you would like to participate, our team will find a time that is convenient for you. Please complete the following information and mail or fax to:

Ms. Linda Khoshaba, Research Associate  
Middlesex-London Health Unit  
50 King St, London, ON N6A 5L7  
Tel: 519-667-5317 ext. 2368 Fax: 519-432-9430  
Email: linda.khoshaba@mlhu.on.ca.

A member of the research team will contact you to arrange an interview time. Thank you for considering participating in this interview. Your input will help us learn from this pilot project and will provide recommendations to guide future programming.



**Northern Ontario Fruit & Vegetable Pilot Project**



Ministry of Health Promotion  
Ministère de la Promotion  
de la santé



**Your Contact Details:**

Name: \_\_\_\_\_ School: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

Best method of contact:  Phone  Email (Please check)

Preferred Time and Day of week for interview: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sincerely,

Ms. Linda Khoshaba on behalf of the  
PHRED Evaluation Team



## Projet pilote de fruits et de légumes dans le nord de l'Ontario



Ministry of Health Promotion  
Ministère de la Promotion  
de la santé



## Invitation à participer à une entrevue téléphonique

Le \_\_\_\_ avril 2007

Madame, Monsieur,

Le *Projet pilote de fruits et de légumes dans le Nord de l'Ontario*, programme exceptionnel et novateur, a été mis en œuvre dans 24 écoles élémentaires de la région de Porcupine. Ce projet vient appuyer le *Plan d'action de l'Ontario pour la promotion de la saine alimentation et de la vie active* et vise à sensibiliser les enfants à consommer davantage de fruits et de légumes et accroître cette consommation. Alors que la fin de l'année scolaire approche, nous invitons les directeurs d'école, les enseignants et les chefs de projets/préparateurs de nourriture dans l'école ayant contribué à ce projet à participer à une entrevue téléphonique. Vos observations nous aideront à mieux comprendre ce programme et à l'améliorer afin de permettre à d'autres enfants en Ontario d'en profiter.

### ***En quoi consistera l'entrevue téléphonique?***

Au cours de l'entrevue téléphonique, qui devrait durer entre 20 et 30 minutes, l'intervieweur vous demandera votre opinion au sujet du programme. Celle-ci nous aidera à déceler les obstacles, les mécanismes facilitateurs et les défis liés au processus de mise en œuvre. L'entrevue sera enregistrée afin de nous permettre de documenter avec justesse la discussion. Soyez assuré qu'aucun renseignement permettant de vous identifier ou d'identifier votre école ne sera rendu public. Lorsque nous aurons terminé l'analyse des données et rédigé les rapports, les enregistrements seront détruits. L'entrevue se déroulera en français ou en anglais, selon votre préférence.

### ***Quand les entrevues téléphoniques auront-elles lieu?***

Les entrevues téléphoniques auront lieu au mois de mai. Si vous désirez participer à ce processus, notre équipe s'efforcera de trouver un moment qui vous convient. Veuillez remplir et nous faire parvenir le formulaire ci-dessous par courrier ou par télécopieur aux coordonnées suivantes :

Madame Linda Khoshaba, chercheure associée  
Bureau de santé Middlesex-London  
50, rue King, London (Ontario) N6A 5L7  
Tél. : 519-667-5317 poste 2368 Téléc. : 519-432-9430  
Courriel : linda.khoshaba@mlhu.on.ca.

Un membre de l'équipe de recherche communiquera avec vous afin de fixer la date et l'heure de l'entrevue. Nous vous remercions de votre participation à ce processus. Vos commentaires nous permettront d'en apprendre davantage sur ce projet pilote et nous guideront lors de programmations futures.

Appendix III-B



**Projet pilote de fruits et de légumes dans le nord de l'Ontario**

 Ontario  
Ministry of Health Promotion  
Ministère de la Promotion  
de la santé

 **PHRED**  
Public Health Research, Education  
& Development Program

 **REDSP**  
Programme de recherche,  
éducation et de développement  
en santé publique

 Porcupine  
Health Unit - Bureau de santé

**Vos coordonnées :**

Nom : \_\_\_\_\_ École : \_\_\_\_\_

Téléphone : \_\_\_\_\_ Courriel : \_\_\_\_\_

Meilleure façon de vous contacter : \_\_\_\_\_ Téléphone \_\_\_\_\_ Courriel (veuillez cocher)

Préférence quant à l'heure et la journée de la semaine : \_\_\_\_\_

Commentaires : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Merci,

Madame Linda Khoshaba au nom de  
L'équipe d'évaluation du Programme REDSP



## **APPENDIX IV**

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### **IN-DEPTH INTERVIEW: INFORMATION LETTER AND CONSENT**





**Letter of Information (Principals / Teachers / In-school Project Leaders /  
Food Preparers / Coordinators)**

**Evaluation of the Northern Ontario Fruit and Vegetable Pilot Project**

*Sponsor: Ministry of Health Promotion*

**Investigators:**

- **Dr. A.G. de la Rocha**, MD, FRCS(C), FACS, Medical Officer of Health, Porcupine Health Unit
- **Ms. Betty Ann Horbul**, RD, Manager, Porcupine Health Unit
- **Ms. Charlene Beynon**, MScN, Director, Public Health Research, Education & Development (PHRED) Program, Middlesex-London Health Unit (MLHU) and Associate Professor, The University of Western Ontario
- **Dr. Meizi He**, PhD. Nutrition Researcher / Educator, PHRED Program, MLHU & Assistant Professor, Brescia University College
- **Ms. Elaine Murkin**, RD, Dietitian, Ottawa Public Health
- **Ms. Michelle Sangster Bouck**, Research Associate, PHRED Program, MLHU
- **Ms. Susan Stewart**, MA, Research Associate, PHRED Program, Kingston, Frontenac and Lennox & Addington Public Health
- **Ms. Renée St. Onge**, MA, Policy and Planning Specialist, PHRED Program, Sudbury & District Health Unit

**Background:**

The exciting and novel *Northern Fruit and Vegetable Pilot Program* is coming to elementary schools in the Porcupine area. The project is funded by the Ministry of Health Promotion and supports *Ontario's Action Plan for Healthy Eating and Active Living*. The objectives of this initiative are to raise awareness and increase the consumption of fruit and vegetables among children.

The program will be implemented in up to 20 elementary schools in the Porcupine area starting in November 2006 until May 2007. Selected fruit and vegetable produce will be delivered on Mondays, with distribution Tuesdays, Wednesdays and Thursdays to all students in the participating schools. Nutrition education resources will also be provided for teachers, parents and students. Children in grades five to eight in a sub-sample of these schools will be asked to voluntarily complete a questionnaire at school, at the beginning and the end of the study about what they ate yesterday and their beliefs about fruit and vegetable consumption. Participation in the *Northern Fruit and Vegetable Pilot Program* will help promote healthy eating habits and awareness in children, such a special and important population. This is a pilot project to determine if the program can be continued and/or expanded in the future. Therefore, your opinion and feedback will be very important and invaluable.

**What will happen in the evaluation of this project:**

As part of the evaluation of this project, principals, teachers, and project co-ordinators in-school project leaders / food preparers in the intervention schools will be invited to participate in an interview with a member of the research team. This in-person interview will take approximately 20-30 minutes to complete. During the interview you will be asked about your opinion and feedback on the program. With your consent, the interview will be audio taped to help us more accurately document what was

## **Appendix IV-A**

discussed. No information identifying you or your school will be reported. Following completion of the analysis, all tape recordings will be destroyed. The data will be used to help health care professionals better serve their school communities and promote healthy eating among school-aged children.

### **Possible benefits and risks associated with participating in the evaluation process:**

Participation in this study may increase individual's awareness about the health benefits of eating fruit and vegetables. There is no known risk for participating in this study.

### **Alternatives and right to withdraw from the evaluation process:**

Your participation in the evaluation process is voluntary. You may refuse to participate, refuse to answer any questions, or withdraw from the study at any time.

### **Confidentiality:**

We will keep your identity, comments, as well as all audiotapes and written records confidential and secure. Interview notes will be kept confidential and the results reported anonymously as grouped data. Representatives of The University of Western Ontario Health Sciences Research Ethics Board may require access to your study-related records or may follow up with you to monitor the conduct of the research.

### **Costs and compensation:**

There is no cost for participating in the evaluation process. Participants will not receive any financial compensation.

### **Publication of the results:**

When the results of the evaluation are published, your name and your school's name will not be used. If you would like to receive a copy of the results of the evaluation, please check the box on the consent form and return it to either of the contact persons listed below.

### **Contact Person:**

If you have any questions about the content of this study, please contact either:

Mr. Bill Chircoski, Northern Fruit and Vegetable Pilot Program Site Coordinator, Porcupine Health Unit, P.O. Bag 2012, 169 Pine Street South, Timmins, Ontario P4N 8B7. Tel: 705-267-1181, ext 350

OR

Dr Meizi He, Nutrition Researcher/Educator, Public Health Research Education & Development Program, Middlesex-London Health Unit/ Assistant Professor, Brescia University College, London Ontario 519-663-5317 ext. 2476 OR [meizi.he@mlhu.on.ca](mailto:meizi.he@mlhu.on.ca).

If you have any questions about the conduct of this study or your rights as a research subject you may contact The Director, Office of Research Ethics, The University of Western Ontario Tel: 519-661-3036

*This letter is for you to keep.* You will receive a copy of the consent form after it has been signed

***Thank you for considering participation in this study.***



### CONSENT FORM

Evaluation of the Northern Ontario Fruit and Vegetable Pilot Project

I have read the letter of information and understand the nature of the evaluation process. I agree to participate in the evaluation process.

\_\_\_\_\_ Date                      \_\_\_\_\_ Printed name                      \_\_\_\_\_ Signature

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_ FAX: \_\_\_\_\_

Email: \_\_\_\_\_

[ ] **Yes**, I would like to receive a copy of the results of the evaluation.

Please send the results to:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

[ ] **No**, I would not like to receive a copy of the results of the evaluation.

*Please sign and return **one copy** in the enclosed envelope to either:*

Mr. Bill Chircoski, Northern Fruit and Vegetable Pilot Program Site Coordinator, Porcupine Health Unit, P.O. Bag 2012, 169 Pine Street South, Timmins, Ontario P4N 8B7. Tel: 705-267-1181, ext 350

OR

Dr. Meizi He, PHRED Nutrition Researcher / Educator, Assistant Professor, Brescia University College, 1285 Western Road, London, Ontario N6G 1H2. Tel. (519) 432-8353, ext. 28249.



## Lettre d'information (directeurs / enseignants / coordonateurs / Leaders du projet / préparateurs de nourriture dans l'école)

### Évaluation du *Projet pilote de fruits et de légumes dans le Nord de l'Ontario*

Commanditaire : ministère de la Promotion de la santé

#### Chercheurs :

- **D<sup>r</sup> A.G. de la Rocha**, MD, FRCS(C), FACS, médecin-hygiéniste, Bureau de santé de Porcupine
- **Ms. Betty Ann Horbul**, RD, gestionnaire, Bureau de santé de Porcupine
- **Ms. Charlene Beynon**, MScN, directrice, programme de Recherche, d'éducation et de développement en santé publique (REDSP) Middlesex-London Health Unit (MLHU) et professeure agrégée, The University of Western Ontario
- **D<sup>re</sup> Meizi He**, PhD. chercheure en nutrition / éducatrice, programme REDSP, MLHU & professeure adjointe, Brescia University College
- **Ms. Elaine Murkin**, RD, diététiste, Santé publique Ottawa
- **Ms. Michelle Sangster Bouck**, chercheure associée, programme REDSP, MLHU
- **Ms. Susan Stewart**, MA, chercheure associée, programme REDSP, Kingston, Frontenac and Lennox & Addington Public Health
- **Ms. Renée St Onge**, MA, spécialiste en politiques et en planification, programme REDSP, Service de santé publique de Sudbury et du district

#### Information préliminaire

Le nouveau *Programme pilote de fruits et de légumes dans le Nord de l'Ontario* sera bientôt présenté dans les écoles élémentaires de la région de Porcupine. Cet intéressant projet est subventionné par le ministère de la Promotion de la santé et il vient en appui au *Plan d'action de l'Ontario pour la promotion de la saine alimentation et de la vie active*. Les objectifs du projet sont de hausser le niveau de sensibilisation des enfants aux fruits et aux légumes et d'en augmenter leur consommation.

Le programme se déroulera dans un maximum de 20 écoles élémentaires de la région de Porcupine, de novembre 2006 à mai 2007. Un choix de fruits et de légumes sera livré aux écoles participantes les lundis pour distribution aux élèves les mardis, les mercredis et les jeudis. De l'information sur la nutrition sera également remise au personnel enseignant, aux parents et aux élèves. On demandera à un sous-groupe d'enfants de la 5<sup>e</sup> à la 8<sup>e</sup> année dans ces écoles de remplir un questionnaire à l'école, au début et à la fin de l'étude. Ce questionnaire leur demandera ce qu'ils ont mangé le jour précédent et ce qu'ils pensent de la consommation de fruits et de légumes.

## **Appendix IV-B**

La participation à ce projet pilote encouragera l'acquisition d'habitudes alimentaires saines chez les enfants et sensibilisera ces derniers aux bienfaits de la consommation de fruits et de légumes. Offert à un segment particulièrement important de la population, ce projet pilote servira à établir si le programme peut se poursuivre dans l'avenir et/ou être étendu. C'est pourquoi votre opinion et vos commentaires seront très importants et utiles.

### **Déroulement de l'évaluation du projet**

Nous inviterons les directeurs d'école, les enseignants, les coordonnateurs du projet et les Leaders du projet / préparateurs de nourriture dans l'école à participer à une entrevue avec un membre de l'équipe de recherche. Cette entrevue en personne prendra de 20 à 30 minutes. On vous demandera votre opinion et vos remarques au sujet du programme. Avec votre consentement, nous enregistrerons l'entrevue afin de nous aider à mieux documenter le contenu de la discussion. Aucun renseignement pouvant vous identifier ou identifier votre école ne sera transmis à des tiers. Après l'analyse des données, toutes les bandes enregistrées seront détruites. Les données aideront les professionnels de la santé à mieux servir leurs communautés scolaires et à promouvoir une alimentation saine parmi les enfants d'âge scolaire.

### **Avantages et risques possibles associés à la participation au processus d'évaluation**

La participation à cette évaluation peut hausser le niveau de sensibilisation aux avantages de la consommation des fruits et des légumes. Il n'existe aucun risque connu entourant la participation à cette étude.

### **Choix et droit de se retirer du processus d'évaluation**

Votre participation au processus d'évaluation est volontaire. Vous pouvez refuser de participer, refuser de répondre à l'une ou l'autre des questions, ou vous retirer de l'étude à n'importe quel moment.

### **Confidentialité**

Votre identité, vos remarques, les enregistrements et les dossiers écrits sont confidentiels et conservés en lieu sûr. Les notes prises durant les entrevues sont aussi confidentielles et les résultats de l'évaluation seront publiés en données regroupées, sans mention de noms. Les représentants de la Commission de déontologie de la recherche du Département des sciences de la santé de l'Université Western Ontario pourraient demander d'avoir accès à vos dossiers reliés à cette étude, ou pourraient communiquer avec vous afin de vérifier le bon déroulement du projet de recherche.

### **Dépenses et compensation**

La participation au processus d'évaluation n'engage aucune dépense de votre part et les participants ne reçoivent aucune compensation financière.

### **Publication des résultats**

Votre nom et le nom de votre école ne paraîtront pas dans les documents publiés en marge de cette évaluation. Si vous désirez recevoir un exemplaire des résultats de l'évaluation, veuillez cocher la case appropriée sur le formulaire de consentement et retourner ce dernier à l'une des personnes contact indiquées plus bas.

**Appendix IV-B**

**Personne contact**

Si vous avez des questions au sujet du contenu de cette étude, veuillez communiquer avec :  
M. Bill Chircoski, coordonnateur local du programme pilote de fruits et de légumes dans le Nord de l'Ontario, Bureau de santé de Porcupine, Sac postal 2012, 169, Sud rue Pine, Timmins, Ontario P4N 8B7. Tél. : 705-267-1181, poste 350

OU

D<sup>re</sup> Meizi He, chercheure / éducatrice en nutrition, programme REDSP, professeure adjointe, Brescia University College, 1285 Western Road, London, Ontario N6G 1H2. Tél. : (519) 432-8353, poste 28249.

Si vous avez des questions au sujet du déroulement de cette étude ou de vos droits à titre de participant à cette recherche, vous pouvez communiquer avec : The Director, Office of Research Ethics, The University of Western Ontario, Tél. : 519-661-3036

*Vous pouvez conserver cette lettre pour vos dossiers. Vous recevrez une copie du formulaire de consentement une fois qu'il a été signé.*

***Merci de considérer votre participation à cette étude.***







## **APPENDIX V**

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### **IN-DEPTH INTERVIEWS—INTERVIEW GUIDES**



**Process Evaluation Interview Guides**

**Interview Guide With School Staff And Food Preparers (English)**

**The focus of the evaluation is on the following 10 questions:**

- 1) How were you involved with the Northern Fruit & Vegetable Pilot Program?
  - a) What was your role?
  
- 2) What was your first reaction when you heard about the Northern Fruit & Vegetable Pilot Program?
  
- 3) How and when were the Fruit and Vegetables being served?
  - a) How did you get the volunteers?
  - b) How many did you need?
  - c) Was it difficult to coordinate?
  
- 4) What factors worked well in implementing the Northern Fruit & Vegetable Pilot Program in your school?
  
- 5) What were the major challenges in implementing the Northern Fruit & Vegetable Pilot Program in your school?
  
- 6) In your opinion, what could be improved with the Northern Fruit & Vegetable Pilot Program?
  
- 7) If you could change one thing with the Northern Fruit & Vegetable Pilot Program, what would it be?
  
- 8) How would you describe the response of your school community to the Northern Fruit & Vegetable Pilot Program?
  
- 9) What impact (+/-) has the program had in your school?
  
- 10) Would you participate in a program like this again?

**Interview Guide With School Staff And Food Preparers (French)**

- 1) À quel titre avez-vous été engagé dans le programme pilote sur les fruits et les légumes dans le Nord de l'Ontario?
- 2) Quelle a été votre première réaction lorsque vous avez appris l'existence du programme pilote sur les fruits et les légumes dans le Nord de l'Ontario?
- 3) Quand et comment est-ce que les fruits et légumes ont été servis?
  - a) Comment avez-vous recruté des bénévoles?
  - b) Combien en avait-il?
  - c) Est-ce que cela fut difficile à gérer et coordonner?
- 4) Quels facteurs ont favorisé la mise en œuvre dans votre école du programme pilote sur les fruits et les légumes dans le Nord de l'Ontario?
- 5) Quels ont été les principaux défis rencontrés durant la mise en œuvre dans votre école du programme pilote sur les fruits et les légumes dans le Nord de l'Ontario?
- 6) À votre avis, quels aspects du programme pilote sur les fruits et les légumes dans le Nord de l'Ontario pourraient être améliorés?
- 7) Si vous pourriez changer un aspect du programme pilote sur les fruits et les légumes dans le Nord de l'Ontario, quel serait cet aspect?
- 8) Comment décririez-vous la réaction de votre communauté scolaire au programme pilote sur les fruits et les légumes dans le Nord de l'Ontario?
- 9) Quels effets (+/-) a eu le programme dans votre école?
- 10) Participeriez-vous à un programme semblable à l'avenir?

**Interview Guide #2 Local Site Coordinator**

**Role:**

- 1) How did your role as a coordinator evolve as the Fruit and Vegetable program progressed?
- 2) A couple time during the interview you mentioned you had to be on produce patrol. Can you elaborate on this?
- 3) What do you think a coordinator's role should entail? Do you feel this was accomplished?

**Coordination:**

- 1) You mentioned that you felt there was a lack of communication between the administration and the schools regarding decision making, particularly regarding the Tupperware containers. What strategies would you implement in order to facilitate communication between these different parties?
- 2) Can you elaborate on how communicating with the school boards went?
- 3) How were the waste tracking sheets used?

**Quality of Fruit and Vegetables:**

- 1) You mentioned in our first interview that, at times, the quality of the fruit and vegetables was poor. Could you elaborate on the factors that contributed to this kind of quality?
- 2) In your opinion, how could this be resolved?

**Interview Guide OFVGA Representative**

- 1) How were you involved with the Northern Fruit & Vegetable Pilot Program?
- 2) From your perspective, what factors worked well in implementing the Northern Fruit & Vegetable Pilot Program?
- 3) From your perspective, what were the major challenges in implementing the Northern Fruit & Vegetable Pilot Program?
  - a) In your opinion, what could be done to address these challenges?

**Delivery challenges:**

- 4) Participants in the evaluation have mentioned challenges with delivery of the fruit and vegetables, including inconsistent scheduling and partially frozen produce. Can you tell us a little bit more about the delivery challenges experienced?
  - a) In your opinion, how could the delivery issues be resolved?

**Quality issues:**

- 5) Participants also mentioned concerns about the quality of the vegetables. From your perspective, what were the factors that had an impact on the quality of the vegetables?
  - a) In your opinion, how could the quality of the vegetables be improved?

**Variety concerns:**

- 6) Participants have mentioned concerns about the lack of variety of the produce served. Do you have any comments on the variety of the produce?
  - a) are any changes planned for next year?
- 7) In your opinion, what could be improved with the Northern Fruit & Vegetable Pilot Program in general?
- 8) If you could change one thing with the Northern Fruit & Vegetable Pilot Program, what would it be?
- 9) Would you like to address any other issue at this time?



## **APPENDIX VI**

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### **SAMPLE SIZE CALCULATION**



### Sample Size Calculation

Sample size was calculated using cluster-randomized trial design and based on the primary outcome measure, .i.e. fruit and vegetable intakes: <sup>(1)</sup>

#### Step 1: Base sample-size calculation

$$N = K (\text{alpha, power}) \times \frac{2 \times (\sigma)^2}{(\Delta)^2}$$

#### Where:

- for an alpha=0.05 and a power of 80%, K= 7.84
- $\sigma$  is the standard deviation of difference of the outcome measure
- $\Delta$  is the expected difference of the outcome measure, in the presence and absence of the intervention

As the **NFVP program** provided three servings of fruits and vegetables per week, which results in an expected change of 0.43 serving per day. Based on a fruit and vegetable intervention study of a similar nature, the standard deviation of the difference of fruit and vegetable intake was approximately 1.5 servings /day:<sup>(2)</sup>

$$N = 7.84 \times \frac{2 \times (1.5)^2}{(0.43)^2} = 254$$

#### Step 2: Design Effect

The current design is a cluster-randomized trial, where individual students were nested in schools (clusters). The sample size, therefore, should be multiplied by the design effect (**D**). <sup>(1)</sup>

$$D = 1 + (m-1) \times ICC$$

#### Where

- m is cluster size
- ICC is the intra-cluster correction coefficient of the outcome measure

Assuming that there would be 30 students from each school, i.e. m=30, and ICC of fruit and vegetable consumption among children in elementary schools is 0.03 based on a similar nature of study. <sup>(2)</sup>

$$D = 1 + (30-1) \times 0.03 = 1.72$$

Thus the sample size in each intervention arm was  $254 \times 1.72 = 437$

#### References

1. Hayes RJ, Bennett S. Simple sample size calculation for cluster-randomized trials. *Int J Epidemiol* 1999;28:319-26.
2. Perry CL, Bishop DB, Taylor G et al. Changing fruit and vegetable consumption among children: the 5-a-Day Power Plus program in St. Paul, Minnesota. *Am J Public Health* 1998;88:603-9.



## **APPENDIX VII**

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### **INFORMATION LETTERS**

**(ACTIVE AND PASSIVE CONSENT PROCESS)  
ENGLISH AND FRENCH VERSION)**





## Letter of Information (Active Consent)

### Evaluation of the Northern Ontario Fruit and Vegetable Pilot Project

*Sponsor: Ministry of Health Promotion*

#### Investigators:

- **Dr. Nancy Woods**, M.D.,C.C.F.P., F.C.F.P, Acting Medical Officer of Health, Porcupine Health Unit
- **Ms. Betty Ann Horbul**, RD, Manager, Porcupine Health Unit
- **Ms. Charlene Beynon**, MScN, Director, Public Health Research, Education & Development (PHRED) Program, Middlesex-London Health Unit (MLHU) and Associate Professor, The University of Western Ontario
- **Dr. Meizi He**, PhD. Nutrition Researcher / Educator, PHRED Program, MLHU & Assistant Professor, Brescia University College
- **Ms. Elaine Murkin**, RD, Dietitian, MSc, Supervisor, Public Health Nutritionist, Ottawa Public Health
- **Ms. Michelle Sangster Bouck**, Research Associate, PHRED Program, MLHU
- **Ms. Susan Stewart**, MA, Research Associate, PHRED Program, Kingston, Frontenac and Lennox & Addington Public Health
- **Ms. Renée St Onge**, MA, Policy and Planning Specialist, PHRED Program, Sudbury & District Health Unit
- **Ms. Linda Khoshaba**, MSc, Research Associate, PHRED Program, MLHU

#### Background:

The exciting and novel *Northern Fruit and Vegetable Pilot Program* has been implemented in 24 elementary schools in the Porcupine area. The project is funded by the Ministry of Health Promotion and supports *Ontario's Action Plan for Healthy Eating and Active Living*. The objectives of this initiative are to raise awareness and increase the consumption of fruit and vegetables among children.

The program started in the Porcupine area in November 2006 and will continue to May 2007. In order to assess the impact of this pilot program, it is important to include schools that do not receive the fruit and vegetables at school, i.e. a comparison group. Nine schools have been selected at random and have received enhanced nutrition education and free fruit and vegetable snacks; 9 schools have received free fruit and vegetable snacks with minimal nutrition education; and 8 schools are in the comparison group. Your child's school may have been randomly assigned to a comparison school.

This program has been offered to all children, except those in the comparison schools. Selected fruit and vegetable produce have been delivered on Mondays, with distribution and consumption at school on Tuesdays, Wednesdays and Thursdays. Nutrition education resources have also been provided for teachers, parents and students. There is a contact person who oversees the distribution of the produce to your child.

The *Northern Fruit and Vegetable Pilot Program* will help us to promote healthy eating habits and awareness in children, such a special and important population. This is a pilot project to determine if the program can be continued and/or expanded in the future. Therefore, your child's opinion and feedback will be very important and invaluable to the evaluation of this pilot program.

## **Appendix VII-A**

### **What is happening in the evaluation of this project:**

Children in grades five to eight in all of the above schools have been asked to complete a questionnaire at school, at the beginning and the end of the study about what they ate yesterday and their beliefs about fruit and vegetable consumption. The survey takes one class period, approximately 45 minutes, to complete. Participation in the survey is anonymous and strictly voluntary, and no student is required to fill out the questionnaire.

### **Possible benefits and risks associated with participating in the evaluation process:**

This program provides children in the participating schools with fruit and vegetables and the necessary knowledge to promote healthy eating behaviours.

There is no direct harm involved in filling out the survey. Students may find some questions uncomfortable to answer. They may leave blank any question they do not wish to answer. Classroom teachers will answer students' questions to the best of their knowledge.

### **Alternatives and right to withdraw from the evaluation process:**

Your child's participation in the evaluation process is voluntary. Your child may refuse to participate, refuse to answer any questions, or withdraw from the evaluation process at any time with no effect on their participation in the Northern Ontario Fruit and Vegetable Pilot Project, their status at school or the services they receive from the local Health Unit.

Alternative activities, e.g. reading a novel /newspaper/magazine or going on computer with headphones, will be arranged for children who choose not to participate in the evaluation process.

### **Confidentiality:**

The identity of all participants, as well as comments and written records will be kept confidential. When the results of the evaluation are published, your child's name will not be used.

If you would like to receive a copy of the results of the evaluation, please check the box on the consent form.

### **Costs and compensation:**

There is no cost for participating in the evaluation process. As a token of appreciation, a two-dollar value gift will be given to each child who completes both the baseline and post-intervention survey. Participants will not receive any other financial compensation.

### **Contact Person:**

If you have any questions about the content of this study, please contact either:

Mr. Bill Chircoski, Northern Fruit and Vegetable Pilot Program Site Coordinator, Porcupine Health Unit, P.O. Bag 2012, 169 Pine Street South, Timmins, Ontario P4N 8B7. Tel: 705-267-1181, ext 350

OR

Dr Meizi He, Nutrition Researcher/Educator, Public Health Research Education & Development Program, Middlesex-London Health Unit/ Assistant Professor, Brescia University College, London Ontario 519-663-5317 ext. 2476 OR [meizi.he@mlhu.on.ca](mailto:meizi.he@mlhu.on.ca).

If you have any questions about the conduct of this study or your rights as a research subject you may contact The Director, Office of Research Ethics, The University of Western Ontario Tel: 519-661-303

***Thank you for considering participation in the evaluation process.***

**If you would like your child to participate in the 'Evaluation of the Northern Ontario Fruit and Vegetable Pilot Project', please sign and return the Consent Form to:**

Ms. Linda Khoshaba, Research Associate  
Middlesex-London Health Unit  
50 King Street  
London, Ontario N6A 5L7  
Tel (519) 519-663-5317 ext.2368, fax 519-432-9430  
Email: [linda.khoshaba@mlhu.on.ca](mailto:linda.khoshaba@mlhu.on.ca)



**Appendix VII-B**

**CONSENT FORM**

Evaluation of the Northern Ontario Fruit and Vegetable Pilot Project

I have read the Letter of Information (or Information/Consent document), have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction." I agree to let my child participate in the evaluation process.

\_\_\_\_\_ Date      \_\_\_\_\_ Parent's / Guardian's printed name      \_\_\_\_\_ Parent's / Guardian's signature

\_\_\_\_\_ Date      \_\_\_\_\_ Child's printed name      \_\_\_\_\_ Child's signature (optional)

\_\_\_\_\_ Date      \_\_\_\_\_ Person Obtaining Informed Consent      \_\_\_\_\_ Signature

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**Yes**, I would like to receive a copy of the results of the evaluation.

Please send the results to:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**No**, I would not like to receive a copy of the results of the evaluation.

(Please sign and return **one copy** in the enclosed envelope to the classroom teacher of the child who brought this letter home.)



## Lettre d'information (Consentement actif)

### Évaluation du Projet pilote de fruits et de légumes dans le Nord de l'Ontario

Commandité par : Ministère de la Promotion de la santé

#### Chercheurs :

- **D<sup>re</sup> Nancy Woods**, M.D., C.C.F.P., F.C.F.P., médecin-hygiéniste intérimaire, Bureau de santé de Porcupine
- **Mme Betty Ann Horbul**, RD, diététiste et gestionnaire, Bureau de santé de Porcupine
- **Mme Charlene Beynon**, M.ScN., directrice, Programme de recherche, d'éducation et de développement en santé publique (REDSP), Middlesex-London Health Unit (MLHU) et professeure adjointe à l'Université Western Ontario
- **D<sup>re</sup> Meizi He**, PhD. chercheuse en nutrition / éducatrice, Programme REDSP, MLHU & professeure adjointe, Brescia University College
- **Mme Elaine Murkin**, RD, M.Sc., superviseure et diététiste de la santé publique, Santé publique Ottawa
- **Mme. Michelle Sangster Bouck**, chercheuse associée, Programme REDSP, MLHU
- **Mme. Susan Stewart**, MA, chercheuse associée, Programme REDSP, Kingston, Frontenac and Lennox & Addington Public Health
- **Mme Renée St Onge**, MA, spécialiste en politiques et en planification, Programme REDSP, Service de santé publique de Sudbury et du district
- **Mme Linda Khoshaba**, M.Sc., chercheuse associée, Programme REDSP, MLHU

#### Information préliminaire

Le nouveau *Projet pilote de fruits et de légumes dans le Nord de l'Ontario* a été mis en œuvre dans 24 écoles élémentaires de la région de Porcupine. Ce projet important est subventionné par le ministère de la Promotion de la santé et il vient appuyer le *Plan d'action de l'Ontario pour la promotion de la saine alimentation et de la vie active*. Les objectifs de ce projet sont de sensibiliser davantage les enfants aux fruits et aux légumes et d'augmenter la consommation de ces produits.

Ce projet de santé publique a été mis en œuvre dans des écoles élémentaires de la région de Porcupine en novembre 2006 et se poursuivra jusqu'en mai 2007. Dans le but d'évaluer l'impact de ce projet pilote, il est aussi important d'inclure des écoles qui ne recevront pas de fruits et de légumes à l'école (un groupe témoin). Neuf écoles ont été choisies au hasard et reçoivent de l'information intensive en nutrition et des collations gratuites de fruits et de légumes; de plus, neuf écoles reçoivent des collations de fruits et de légumes et de l'information de base sur la nutrition. Huit écoles font partie du groupe témoin. L'école de votre enfant pourrait donc avoir été désignée, au hasard, école de contrôle.

Ce programme est offert à tous les élèves, sauf ceux des écoles témoins. Un choix de fruits et de légumes est livré les lundis pour distribution aux élèves les mardis, mercredis et jeudis. Les fruits et les légumes sont consommés à l'école. De l'information sur la nutrition a également été remise au personnel enseignant, aux parents et aux élèves. Une personne-ressource supervise la distribution des produits aux enfants.

Le *Projet pilote de fruits et de légumes dans le Nord de l'Ontario* nous aidera à promouvoir l'acquisition d'habitudes alimentaires saines chez les enfants, un segment de la population particulièrement important. Ce projet pilote servira à établir si le programme peut se poursuivre et/ou être étendu dans l'avenir. L'opinion et les remarques de votre enfant seront donc très importantes et utiles pour l'évaluation du projet pilote.

#### Déroulement de l'évaluation du projet

Les élèves de la cinquième à la huitième année de toutes les écoles mentionnées plus haut ont été invités à répondre à un questionnaire à l'école, au début et à la fin de l'étude. Le questionnaire leur demande ce qu'ils ont

mangé et bu le jour précédent, et leurs opinions sur la consommation de fruits et de légumes. Le sondage prend une période de classe, soit environ 45 minutes. La participation à ce sondage est anonyme et strictement volontaire, et aucun élève n'est obligé de répondre au questionnaire.

### **Avantages et risques possibles associés à la participation au processus d'évaluation**

Le programme fournit aux élèves des écoles participantes des fruits et des légumes et l'information nécessaire pour promouvoir des habitudes alimentaires saines.

Le fait de remplir le questionnaire ne cause aucun tort direct aux participants. Des élèves pourraient se sentir inconfortables face à certaines questions. Les élèves peuvent sauter les questions auxquelles ils ne désirent pas répondre. Le personnel enseignant répondra, dans la mesure du possible, aux questions des élèves.

### **Choix et droit de se retirer du processus d'évaluation**

La participation de votre enfant au processus d'évaluation est volontaire. Votre enfant peut refuser de participer, refuser de répondre à certaines questions, ou se retirer du processus d'évaluation à n'importe quel moment. Cela n'aura aucun effet sur sa participation au *Projet pilote de fruits et de légumes dans le Nord de l'Ontario*, sur son statut à l'école, ou sur les services que votre enfant reçoit du service de santé publique de la région.

Des activités de remplacement (par exemple, la lecture de livres, de journaux ou de revues, l'usage de l'ordinateur avec des écouteurs) seront prévues pour les enfants qui choisissent de ne pas participer au processus d'évaluation.

### **Confidentialité**

L'identité de tous les participants, les remarques et les dossiers seront confidentiels. Le nom de votre enfant ne sera pas mentionné dans les publications reliées à cette étude.

Si vous désirez recevoir un exemplaire des résultats de l'étude, veuillez cocher la case appropriée sur le formulaire de consentement.

### **Dépenses et compensation**

La participation au processus d'évaluation n'engage aucune dépense. En signe d'appréciation, nous remettrons un cadeau d'une valeur de deux dollars à chaque enfant qui participera au sondage initial et au sondage après l'intervention.

### **Personne-ressource**

Si vous avez des questions au sujet du contenu de cette étude, veuillez communiquer avec :

M. Bill Chircoski, coordonnateur local du *Projet pilote de fruits et de légumes dans le Nord de l'Ontario*, Bureau de santé Porcupine, Sac postal 2012, 169, Sud rue Pine, Timmins, Ontario P4N 8B7. Tél. : 705-267-1181, poste 350

OU

D<sup>re</sup> Meizi He, chercheure / éducatrice en nutrition, programme REDSP, professeure adjointe, Brescia University College, 1285 Western Road, London, Ontario N6G 1H2. Tél. : (519) 663-5317 poste 2476.

Si vous avez des questions au sujet du déroulement de cette étude ou de vos droits à titre de participant à cette recherche, vous pouvez communiquer avec: The Director, Office of Research Ethics, The University of Western Ontario, Tél. : 519-661-3036

### ***Merci de considérer votre participation à ce processus d'évaluation.***

**Si vous acceptez que votre enfant participe à l'Évaluation du Projet pilote de fruits et de légumes dans le Nord de l'Ontario, veuillez signer et nous faire parvenir le formulaire de consentement aux coordonnées suivantes :**

Madame Linda Khoshaba, chercheure associée  
Bureau de santé Middlesex-London  
50, rue King  
London (Ontario) N6A 5L7  
Tél. : 519-663-5317 poste 2368; Téléc. : 519-432-9430  
Courriel : [linda.khoshaba@mlhu.on.ca](mailto:linda.khoshaba@mlhu.on.ca)

## FORMULAIRE DE CONSENTEMENT

Appendix VII-D

### Évaluation du *Projet pilote de fruits et de légumes dans le Nord de l'Ontario*

J'ai lu la Lettre d'information (ou le document d'information / de consentement); la nature de l'étude m'a été expliquée; et j'accepte de participer à ce sondage. J'ai reçu une réponse satisfaisante à toutes mes questions. J'accepte que mon enfant participe au processus d'évaluation.

\_\_\_\_\_  
Date                      Nom du parent/du tuteur (lettres moulées)                      Signature

\_\_\_\_\_  
Date                      Nom de l'enfant (lettres moulées)                      Signature de l'enfant (optionnelle)

#### ***(à l'usage de l'équipe de recherche seulement)***

\_\_\_\_\_  
Date                      Nom du membre de l'équipe qui reçoit le  
formulaire de consentement (lettres moulées)                      Signature

-----

[ ] **Oui**, j'aimerais recevoir une copie des résultats de l'évaluation.

Veuillez envoyer cette copie à :

Nom : \_\_\_\_\_

Adresse : \_\_\_\_\_

\_\_\_\_\_

[ ] **Non**, je ne désire pas recevoir une copie des résultats de l'évaluation.

*(Veuillez signer **une copie** de ce formulaire et la retourner dans l'enveloppe ci-jointe à l'attention du titulaire de la classe de l'enfant qui a apporté cette lettre à la maison.)*



## Letter of Information (Passive Consent)

### Evaluation of the Northern Ontario Fruit and Vegetable Pilot Project

*Sponsor: Ministry of Health Promotion*

#### Investigators:

- **Dr. Nancy Woods**, M.D.,C.C.F.P., F.C.F.P, Acting Medical Officer of Health, Porcupine Health Unit
- **Ms. Betty Ann Horbul**, RD, Manager, Porcupine Health Unit
- **Ms. Charlene Beynon**, MScN, Director, Public Health Research, Education & Development (PHRED) Program, Middlesex-London Health Unit (MLHU) and Associate Professor, The University of Western Ontario
- **Dr. Meizi He**, PhD. Nutrition Researcher / Educator, PHRED Program, MLHU & Assistant Professor, Brescia University College
- **Ms. Elaine Murkin**, RD, Dietitian, MSc, Supervisor, Public Health Nutritionist, Ottawa Public Health
- **Ms. Michelle Sangster Bouck**, Research Associate, PHRED Program, MLHU
- **Ms. Susan Stewart**, MA, Research Associate, PHRED Program, Kingston, Frontenac and Lennox & Addington Public Health
- **Ms. Renée St Onge**, MA, Policy and Planning Specialist, PHRED Program, Sudbury & District Health Unit
- **Ms. Linda Khoshaba**, MSc, Research Associate, PHRED Program, MLHU

#### Background:

The exciting and novel *Northern Fruit and Vegetable Pilot Program* is coming to elementary schools in the Porcupine area. The project is funded by the Ministry of Health Promotion and supports *Ontario's Action Plan for Healthy Eating and Active Living*. The objectives of this initiative are to raise awareness and increase the consumption of fruit and vegetables among children.

The public health initiative will be implemented in elementary schools in the Porcupine area starting in November 2006 until May 2007. Up to 10 schools will be assigned at random to be in "Intervention Group 1", which will receive enhanced nutrition education and free fruit and vegetable snacks; up to 10 schools will be in "Intervention Group 2, which will receive free fruit and vegetable snacks with minimal nutrition education. This program is offered to all children in these twenty intervention schools. Selected fruit and vegetable produce will be delivered on Mondays, with distribution and consumption at school on Tuesdays, Wednesdays and Thursdays. Nutrition education resources will also be provided for teachers, parents and students. There will be a contact person who will oversee the distribution of the produce to your child.

The *Northern Fruit and Vegetable Pilot Program* will help us to promote healthy eating habits and awareness in children, such a special and important population. This is a pilot project to determine if the program can be continued and/or expanded in the future. In order to assess the impact of this pilot project, we are conducting a program evaluation with a sub-sample i.e. five schools from each intervention group. It is also important to include another five schools that do not receive the fruit and vegetables at school, i.e. a comparison group. Your child's school may be randomly assigned to a comparison school. Your child's participation in the evaluation process will be very important and invaluable to help us assess the impact of the program.

#### What will happen in the evaluation of this project:

Children in grades five to eight in all of the above schools will be asked to complete a questionnaire at

school, at the beginning and the end of the study about what they ate yesterday and their beliefs about fruit and vegetable consumption. The survey will take one class period, approximately 45 minutes, to complete. Participation in the survey is anonymous and strictly voluntary, and no student is required to fill out the questionnaire.

The questionnaire will be available to preview on the Internet ([www. Healthyweight101.com](http://www.Healthyweight101.com)) and at the school administration office between November 20 and 27. Feel free to review the questionnaire and decide whether or not your child will participate.

**Possible benefits and risks associated with participating in the evaluation process:**

This program will provide children in the participating schools with fruit and vegetables and the necessary knowledge to promote healthy eating behaviours.

There is no direct harm involved in filling out the survey. Students may find some questions uncomfortable to answer. They may leave blank any question they do not wish to answer. Classroom teachers will answer students' questions to the best of their knowledge.

**Alternatives and right to withdraw from the evaluation process:**

Your child's participation in the evaluation process is voluntary. Your child may refuse to participate, refuse to answer any questions, or withdraw from the evaluation process at any time with no effect on their participation in the Northern Ontario Fruit and Vegetable Pilot Project, their status at school, or the services they receive from the local Health Unit.

Alternative activities, e.g. reading a novel /newspaper/magazine or going on computer with headphones will be arranged for children who choose not to participate in the evaluation process.

**Confidentiality:**

The identity of all participants, as well as comments and written records will be kept confidential. When the results of the study are published, your child's name will not be used.

If you would like to receive a copy of the results of the study, please check the box on the consent form.

**Costs and compensation:**

There is no cost for participating in the evaluation process. As a token of appreciation, a two-dollar value gift will be given to each child who completes both the baseline and post-intervention survey. Participants will not receive any other financial compensation.

**Contact Person:**

If you have any questions about the content of this study, please contact either:

Mr. Bill Chircoski, Northern Fruit and Vegetable Pilot Program Site Coordinator, Porcupine Health Unit, P.O. Bag 2012, 169 Pine Street South, Timmins, Ontario P4N 8B7. Tel: 705-267-1181, ext 350

OR

Dr Meizi He, Nutrition Researcher/Educator, Public Health Research Education & Development Program, Middlesex-London Health Unit/ Assistant Professor, Brescia University College, London Ontario 519-663-5317 ext. 2476 OR [meizi.he @mlhu.on.ca](mailto:meizi.he@mlhu.on.ca).

If you have any questions about the conduct of this study or your rights as a research subject you may contact The Director, Office of Research Ethics, The University of Western Ontario Tel: 519-661-3036

*If you do not want your child to participate in the 'Evaluation of the Northern Ontario Fruit and Vegetable Pilot Project', please fill out and return one copy of the Refusal of Consent form and keep the other copy for your own records.*



*Thank you for considering participation in the evaluation process.*

**REFUSAL OF CONSENT**

Evaluation of the Northern Ontario Fruit and Vegetable Pilot Project

I have read the Letter of Information (or Information/Consent document) and have had the nature of the study explained to me. All questions have been answered to my satisfaction

I do not want my child/children listed below to participate in the 'Evaluation of Northern Ontario Fruit and Vegetable Pilot Project'. I understand that a neutral activity will be provided for them during the survey time and that there is no penalty for my family members not participating. I understand that this refusal of consent needs to be received by the Research Team no later than **November 27, 2006**.

Names of child/children who will not participate in the 'Evaluation of Northern Ontario Fruit and Vegetable Pilot Program':

\_\_\_\_\_

Child's Name

\_\_\_\_\_

Grade

\_\_\_\_\_

Child's Name

\_\_\_\_\_

Grade

(Please return **one** copy in the enclosed envelope to the classroom teacher of the child who brought this letter home.)

**Appendix VII-G**

**Receiving study results**

Evaluation of the Northern Ontario Fruit and Vegetable Pilot Project

[ ] **Yes**, I would like to receive a copy of the results of the evaluation.

Please send the results to:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

[ ] **No**, I would not like to receive a copy of the results of the evaluation.

*(Please return in the enclosed envelope to the classroom teacher of the child who brought this letter home.)*





## Lettre d'information (consentement passif)

### Évaluation du *Projet pilote de fruits et de légumes dans le Nord de l'Ontario* Commanditaire : ministère de la Promotion de la santé

#### Chercheurs :

- **D<sup>re</sup> Nancy Woods**, M.D., C.C.F.P., F.C.F.P, médecin-hygiéniste intérimaire, Bureau de santé de Porcupine
- **Mme Betty Ann Horbul**, RD, diététiste et gestionnaire, Bureau de santé de Porcupine
- **Mme Charlene Beynon**, M.ScN., directrice, Programme de recherche, d'éducation et de développement en santé publique (REDSP), Middlesex-London Health Unit (MLHU) et professeure adjointe à l'Université Western Ontario
- **D<sup>re</sup> Meizi He**, PhD. chercheure en nutrition / éducatrice, Programme REDSP, MLHU & professeure adjointe, Brescia University College
- **Mme Elaine Murkin**, RD, M.Sc., superviseure et diététiste de la santé publique, Santé publique Ottawa
- **Mme. Michelle Sangster Bouck**, chercheure associée, Programme REDSP, MLHU
- **Mme. Susan Stewart**, MA, chercheure associée, Programme REDSP, Kingston, Frontenac and Lennox & Addington Public Health
- **Mme Renée St Onge**, MA, spécialiste en politiques et en planification, Programme REDSP, Service de santé publique de Sudbury et du district
- **Mme Linda Khoshaba**, M.Sc., chercheure associée, Programme REDSP, MLHU

#### Information préliminaire

Le nouveau *Programme pilote de fruits et de légumes dans le Nord de l'Ontario* sera bientôt présenté dans les écoles élémentaires de la région de Porcupine. Cet important projet est subventionné par le ministère de la Promotion de la santé et il vient en appui au *Plan d'action de l'Ontario pour la promotion de la saine alimentation et de la vie active*. Les objectifs de ce projet sont de hausser le niveau de sensibilisation des enfants aux fruits et aux légumes et d'en augmenter leur consommation.

Ce projet de santé publique sera offert dans des écoles élémentaires de la région de Porcupine, de novembre 2006 à mai 2007. Jusqu'à 10 écoles seront choisies au hasard et désignées « Groupe d'intervention 1 ». Ces écoles recevront de l'information intensive en nutrition et des collations gratuites de fruits et de légumes; de plus, jusqu'à 10 écoles seront désignées « Groupe d'intervention 2 » et recevront des collations de fruits et de légumes et de l'information de base sur la nutrition. Ce programme sera offert à tous les enfants des 20 écoles d'intervention. Un choix de fruits et de légumes sera livré les lundis pour distribution aux élèves les mardis, mercredis et jeudis; les fruits et légumes seront consommés à l'école. De l'information sur la nutrition sera également remise aux enseignants, aux parents et aux élèves. Une personne contact supervisera la distribution des produits aux enfants.

Le *Programme pilote de fruits et de légumes dans le Nord de l'Ontario* nous aidera à promouvoir l'acquisition d'habitudes alimentaires saines chez les enfants, un segment de la population particulièrement important. Ce projet pilote servira à établir si le programme peut se poursuivre et/ou être étendu dans l'avenir. Il est aussi important d'inclure cinq autres écoles qui n'auront pas reçu de fruits et de légumes à l'école (un groupe de contrôle). L'école de votre enfant pourrait être choisie au hasard comme école contrôle. La participation de votre enfant au processus d'évaluation de l'impact du programme est très importante et utile.

### Déroulement de l'évaluation du projet

Les élèves de la cinquième à la huitième année de toutes les écoles mentionnées plus haut seront invités à répondre à un questionnaire à l'école, au début et à la fin de l'étude. Le questionnaire leur demande ce qu'ils ont mangé et bu le jour précédent, et leurs opinions sur la consommation de fruits et de légumes. Le sondage prendra une période de classe, soit environ 45 minutes. La participation à ce sondage est anonyme et strictement volontaire, et aucun élève n'est obligé de répondre au questionnaire.

Le questionnaire sera affiché dans notre site Internet ([www. Healthyweight101.com](http://www.Healthyweight101.com)) et au bureau de l'administration de l'école entre le 20 et le 27 novembre. Nous vous invitons à consulter ce questionnaire et à décider si votre enfant devrait participer ou non à l'étude.

### Avantages et risques possibles associés à la participation au processus d'évaluation

Le programme fournira aux élèves des écoles participantes des fruits et des légumes et l'information nécessaire pour promouvoir des habitudes alimentaires saines.

Le fait de remplir le questionnaire ne cause aucun tort direct aux participants. Des élèves pourraient se sentir inconfortables face à certaines questions. Les élèves peuvent sauter les questions auxquelles ils ne désirent pas répondre. L'enseignant ou l'enseignante répondra, dans la mesure du possible, aux questions des élèves.

### Choix et droit de se retirer du processus d'évaluation

La participation de votre enfant au processus d'évaluation est volontaire. Votre enfant peut refuser de participer, refuser de répondre à certaines questions, ou se retirer du processus d'évaluation à n'importe quel moment, sans que cela ait un effet sur sa participation au projet pilote de fruits et de légumes dans le Nord de l'Ontario, son statut à l'école, ou les services qu'il ou elle reçoit du service de santé publique de la région.

Des activités de remplacement (par exemple, la lecture de livres, de journaux ou de revues, l'usage de l'ordinateur avec des écouteurs) seront prévues pour les enfants qui choisissent de ne pas participer au processus d'évaluation.

### Confidentialité

L'identité de tous les participants, les remarques et les dossiers seront confidentiels. Le nom de votre enfant ne sera pas mentionné dans les publications reliées à cette étude.

Si vous désirez recevoir un exemplaire des résultats de l'étude, veuillez cocher la case appropriée sur le formulaire de consentement.

### Dépenses et compensation

La participation au processus d'évaluation n'engage aucune dépense. En signe d'appréciation, nous remettrons un cadeau d'une valeur de deux dollars à chaque enfant qui participera au sondage initial et au sondage après.

### Personne contact

Si vous avez des questions au sujet du contenu de cette étude, veuillez communiquer avec :

M. Bill Chircoski, coordonnateur local du programme pilote de fruits et de légumes dans le Nord de l'Ontario, Bureau de santé de Porcupine, Sac postal 2012, 169, Sud rue Pine, Timmins, Ontario P4N 8B7. Tél. : 705-267-1181, poste 350

OU

D<sup>re</sup> Meizi He, chercheure / éducatrice en nutrition, programme REDSP, professeure adjointe, Brescia University College, 1285 Western Road, London, Ontario N6G 1H2. Tél. : (519) 432-8353, poste 28249.

Si vous avez des questions au sujet du déroulement de cette étude ou de vos droits à titre de participant à cette recherche, vous pouvez communiquer avec : The Director, Office of Research Ethics, The University of Western Ontario, Tél. : 519-661-3036

*Si vous ne désirez pas que votre enfant participe à l'évaluation du Projet pilote de fruits et de légumes dans le Nord de l'Ontario, veuillez remplir le refus de consentement et en retourner une copie; vous pouvez conserver la deuxième copie **pour vos dossiers.***



## REFUS DU CONSENTEMENT

### Évaluation du *Projet pilote de fruits et de légumes dans le Nord de l'Ontario*

J'ai lu la Lettre d'information (ou le document d'information/de consentement) et la nature de l'étude m'a été expliquée. J'ai reçu une réponse satisfaisante à toutes mes questions.

**Je ne désire pas que mon enfant/mes enfants dont le nom paraît ci-dessous participe(nt) à l'évaluation du *Projet pilote de fruits et de légumes dans le Nord de l'Ontario*. Je comprends que les enfants qui ne participent pas au sondage feront une autre activité, et que les membres de ma famille ne subiront aucune conséquence pour n'avoir pas participé au projet. Je comprends que ce refus de consentement doit parvenir à l'équipe de recherche au plus tard le 27 novembre 2006.**

Nom de(des) enfant(s) qui ne participera(ront) pas à l'évaluation du *Projet pilote de fruits et de légumes dans le Nord de l'Ontario* :

\_\_\_\_\_

Nom de l'enfant

\_\_\_\_\_

Année d'étude

\_\_\_\_\_

Nom de l'enfant

\_\_\_\_\_

Année d'étude

(Veuillez remplir **une** copie de ce formulaire de refus de consentement et le retourner dans l'enveloppe ci-jointe à l'attention du titulaire de la classe de l'enfant qui a apporté cette lettre à la maison.)



## Résultats de l'évaluation

Évaluation du *Projet pilote de fruits et de légumes dans le Nord de l'Ontario*

**Oui**, j'aimerais recevoir une copie des résultats de l'évaluation.

Veillez envoyer cette copie à :

Nom : \_\_\_\_\_

Adresse : \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Non**, je ne désire pas recevoir une copie des résultats de l'évaluation

*(Veillez retourner ce formulaire dans l'enveloppe ci-jointe à l'attention du titulaire de la classe de l'enfant qui a apporté cette lettre à la maison.)*

## **APPENDIX VIII**

---

### **CONSENT PROCESS – INSTRUCTION FOR TEACHERS**

(ACTIVE AND PASSIVE CONSENT PROCESS)  
(ENGLISH AND FRENCH VERSION)





**November 17, 2006**

**Dear**

Thank you so much for your help with the Northern Ontario Fruit and Vegetable Evaluation. This evaluation is very important. It will help us determine if the Northern Ontario Fruit and Vegetable Pilot Project is having an impact on the fruit and vegetable consumption of your students, as well as any impact on their knowledge and attitudes towards fruit and vegetable consumption. The Ministry of Health Promotion will be looking at the results carefully to determine if this program should be continued or expanded.

Your role is vital to making this evaluation happen. Here is a quick check-list of what we are asking you to do in regards to distributing and receiving the **consent forms** from your students. If you have any questions, please do not hesitate to contact our hotline at: 1-519-663-5317 ext. 2476.

***Thanks again for your help! We couldn't do it without you!***

**○ Monday Nov. 20:** Distribute the envelopes to each student. Check off class list.

The envelopes have been addressed to the Parent / Guardian of each student in your class. Please send these envelopes home with the students on Monday November 20. If the current class list we were given is not up-to-date, please put the envelopes of students not in your class in a separate envelope to return to us. For new students in your class we have included some unaddressed envelopes.

**○ Wednesday Nov. 22:** Distribute reminder card to each student. Check off class list.

**As "Consent Forms" start to come in:**

**○** Mark a check mark (✓) on the class list beside the name of the child bringing in a "Consent Form."

**○ Monday Nov. 27:** Put the "Consent Forms" in the envelope provided and return to us.

***Thank you!***

***If you have any questions, call or email***

1-519-663-5317 ext. 2476

meizi.he@mlhu.on.ca



## Le 17 Novembre 2006

Chère

Merci beaucoup de votre aide dans l'évaluation du Projet pilote de fruits et de légumes dans le Nord de l'Ontario. Cette évaluation est très importante. Elle nous permettra d'établir si le Projet pilote de fruits et de légumes dans le Nord de l'Ontario a une influence sur la consommation de fruits et de légumes chez les élèves, ainsi que sur leurs connaissances et leurs attitudes face à la consommation de fruits et de légumes. Le ministère de la Promotion de la santé analysera les résultats de l'évaluation et décidera si le programme devrait être continué ou développé davantage.

Vous avez un rôle essentiel à jouer dans la réalisation de cette évaluation. Voici une liste de contrôle que vous devriez utiliser en rapport avec la distribution et la réception des **formulaires de consentement** des élèves. Si vous avez des questions, n'hésitez pas à communiquer avec notre ligne directe, 1-519-663-5317, poste 2476.

***Encore une fois, merci de votre aide!  
Nous ne pourrions pas réussir ce projet sans vous!***

- Le lundi 20 novembre** : Distribuez les enveloppes à chaque élève. Cochez les noms sur la liste de classe.

Les enveloppes ont été adressées au parent / tuteur de chaque élève de votre classe. Demandez aux élèves d'apporter l'enveloppe à leur parent / à leur tuteur le lundi 20 novembre. Si la liste de classe qu'on nous a remise n'est pas à jour, placez dans une enveloppe distincte les enveloppes des élèves qui ne font pas partie de votre classe et retournez-nous cette enveloppe. Nous avons inclus des enveloppes sans adresse pour les nouveaux élèves de votre classe.

- Le mercredi 22 novembre** : Distribuez la carte de rappel à chaque élève. Cochez les noms sur la liste de classe.

**Lorsque vous recevrez les formulaires de consentement :**

- Cochez (✓) sur la liste de classe le nom de l'élève qui rapporte un formulaire de consentement.
- Le lundi 27 novembre** : Placez les formulaires de consentement dans l'enveloppe prévue à cet effet, et retournez-nous cette enveloppe.

***Merci!***

Si vous avez des questions :

composez le 1-519-663-5317, poste 2476  
ou envoyez un courriel à: [meizi.he@mlhu.on.ca](mailto:meizi.he@mlhu.on.ca)





November 17, 2006

Dear

Thank you so much for your help with the Northern Ontario Fruit and Vegetable Evaluation. This evaluation is very important. It will help us determine if the Northern Ontario Fruit and Vegetable Pilot Project is having an impact on the fruit and vegetable consumption of your students, as well as any impact on their knowledge and attitudes towards fruit and vegetable consumption. The Ministry of Health Promotion will be looking at the results carefully to determine if this program should be continued or expanded.

Your role is vital to making this evaluation happen. Here is a quick check-list of what we are asking you to do in regards to distributing and receiving the **consent forms** from your students. If you have any questions, please do not hesitate to contact our hotline at: 1-519-663-5317 ext. 2476.

***Thanks again for your help! We couldn't do it without you!***

**Monday Nov. 20:** Distribute the envelopes to each student. Check off class list. The envelopes have been addressed to the Parent / Guardian of each student in your class. Please send these envelopes home with the students on Monday November 20. If the current class list we were given is not up-to-date, please put the envelopes of students not in your class in a separate envelope to return to us. For new students in your class we have included some unaddressed envelopes.

**Wednesday Nov. 22:** Distribute reminder card to each student. Check off class list.

**As "Refusal of Consent" forms start to come in:**

Mark a check mark (✓) on the class list beside the name of the child bringing in a "Refusal of Consent" form.

Keep the "Refusal of Consent" forms in the envelope provided and return to us **by December 1<sup>st</sup>** when you return the questionnaires.

***Thank you!***

If you have any questions, call or email:  
1-519-663-5317 ext. 2476  
meizi.he@mlhu.on.ca



Le \_\_\_\_ novembre 2006

Chère

Merci de votre aide dans l'évaluation du Projet pilote de fruits et de légumes dans le Nord de l'Ontario. Cette évaluation est très importante. Elle nous permettra d'établir si le Projet pilote de fruits et de légumes dans le Nord de l'Ontario a une influence sur la consommation de fruits et de légumes chez les élèves, ainsi que sur leurs connaissances et leurs attitudes face à la consommation de fruits et de légumes. Le ministère de la Promotion de la santé analysera les résultats de l'évaluation et décidera si le programme devrait être continué ou développé davantage.

Vous avez un rôle essentiel à jouer dans la réalisation de cette évaluation. Voici une liste de contrôle que vous devriez utiliser en rapport avec la distribution et la réception des **formulaires de consentement** des élèves. Si vous avez des questions, n'hésitez pas à communiquer avec notre ligne directe, 1-519-663-5317, poste 2476.

***Encore une fois, merci de votre aide!  
Nous ne pourrions pas réussir ce projet sans vous!***

- Le lundi 20 novembre** : Distribuez les enveloppes à chaque élève. Cochez les noms sur la liste de classe.

Les enveloppes ont été adressées au parent / tuteur de chaque élève de votre classe. Demandez aux élèves d'apporter l'enveloppe à leur parent / à leur tuteur. Si la liste de classe qu'on nous a remise n'est pas à jour, placez dans une enveloppe distincte les enveloppes des élèves qui ne font pas partie de votre classe et retournez-nous cette enveloppe. Nous avons inclus des enveloppes sans adresse pour les nouveaux élèves de votre classe.

- Le mercredi 22 novembre** : Distribuez la carte de rappel à chaque élève. Cochez les noms sur la liste de classe.

**Lorsque vous recevrez des formulaires de refus de consentement :**

- Cochez (✓) sur la liste de classe le nom de l'élève qui rapporte un formulaire de refus de consentement.
- Gardez les formulaires de refus de consentement dans l'enveloppe prévue à cet effet, et retournez-nous pour le **1<sup>er</sup> décembre** quand vous retournez les questionnaires.

*Merci!*

Si vous avez des questions :  
composez le 1-519-663-5317, poste 2476

ou envoyez un courriel à: [meizi.he@mlhu.on.ca](mailto:meizi.he@mlhu.on.ca)

---

Permission granted to reprint provided Public Health Research, Education and Development (PHRED) Program is acknowledged.2007

## **APPENDIX IX**

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### **QUESTIONNAIRES (ENGLISH AND FRENCH)**



# Having Fun with Fruit and Vegetables

Dear Student

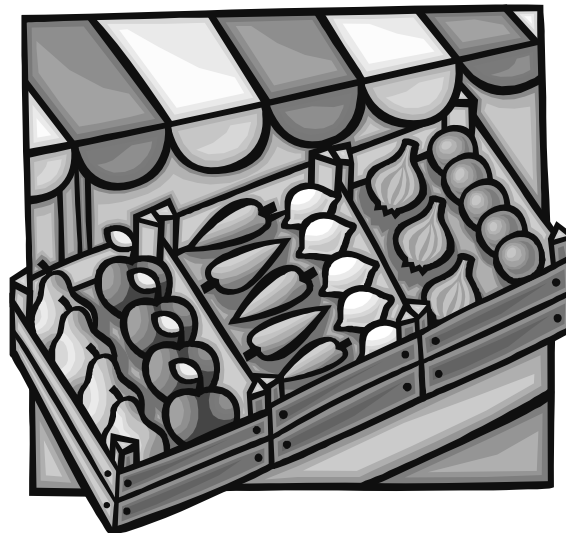
We are asking you to complete this questionnaire about your eating habits. No one at your school or at home will read your answers.

If you have any questions, please ask your teacher.

Please do not write your name on this questionnaire. If you do not want to answer a question, please go to the next question. When you have finished answering the questions, please put the questionnaire in the envelope provided, seal it and return the envelope to your teacher.

Your participation is voluntary. If you do not want to answer the questions, please place the questionnaire unanswered in the envelope and give it to your teacher.

Thank you.



## How to complete the questionnaire

Most of the questions can be answered by making an "X" in just one box beside your answer. In a few questions you may make an "X" in more than one box. For some questions we ask you to write your own answer.

**An example:** What kind of fruit did you eat yesterday? How much? (write 1 if you ate one apple,  $\frac{1}{2}$  if you ate a half)

1	Apple(s)
	Applesauce (cup)
	Apricot(s)
1/2	Banana(s)
15	Grapes (pieces)
	Melon (slices)
	Orange(s)
1	Peach Cup (cup)
	Peach(es)
	Pear(s)
	Plum(s)
	Fruit Salad/Fruit Cup (cup)
	Raisins (pack)
	Dried Fruit ( <i>e.g. Dried cranberries/cherries</i> )
	Other Fruits ( <i>list the fruits and how much</i> )

## A: Some questions about you...

A1. How old are you? \_\_\_\_\_ years

A2. Are you a girl or a boy?

Girl

Boy

A3. What language do you most often speak at home?

English

French

Both English and French

Other ( please write in) \_\_\_\_\_

## B: Questions about what you ate yesterday...

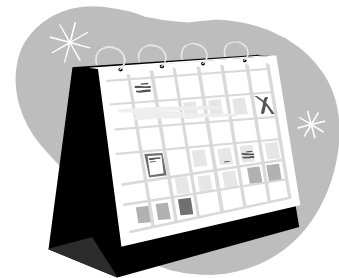
Questions about what you ate and drank yesterday morning at breakfast time

B1. What day of the week was yesterday?

Tuesday

Wednesday

Thursday



B2. What time did you get up? \_\_\_\_\_

B3. Did you eat or drink something yesterday morning at breakfast time?

yes

no

What did you eat or drink? (only list a few words like bread, milk, cereal, etc.)

---

---



**The next questions ask about fruit, vegetables and juice that you ate and drank yesterday morning at breakfast time**

**B4.** Did you drink 100% fruit or vegetable juice (do not count fruit drinks e.g. Kool-Aid, Sunny D or Fruitopia) **yesterday morning at breakfast time?**

yes       no

If yes, what kind of juice? How much? (write 1 if you had 1 glass or  $\frac{1}{2}$  if you had a half glass)

100% Fruit Juice \_\_\_\_\_ glass  
 100% Vegetable Juice \_\_\_\_\_ glass

**B5.** Did you have fruit **yesterday morning at breakfast time?**

yes       no

If yes, what kind of fruit? How much? (do not count fruits contained in juices). Write 1 if you ate one apple,  $\frac{1}{2}$  if you ate a half

- \_\_\_\_\_ Apple(s)
- \_\_\_\_\_ Applesauce (cup)
- \_\_\_\_\_ Apricot(s)
- \_\_\_\_\_ Banana(s)
- \_\_\_\_\_ Grapes (pieces)
- \_\_\_\_\_ Melon (slices)
- \_\_\_\_\_ Orange(s)
- \_\_\_\_\_ Peach Cup (cup)
- \_\_\_\_\_ Peach(es)
- \_\_\_\_\_ Pear(s)
- \_\_\_\_\_ Plum(s)
- \_\_\_\_\_ Fruit Salad/Fruit Cup (cup)
- \_\_\_\_\_ Raisins (pack)
- \_\_\_\_\_ Dried Fruit (*eg. Dried cranberries/cherries*)
- \_\_\_\_\_ Other Fruits (*list the fruits and how much*)

**B6. Did you eat raw vegetables yesterday morning at breakfast time?**

yes

no

If yes, what kind of raw vegetables? How much? (write 10 if you ate 10 baby carrots)

- \_\_\_\_\_ Baby Cucumbers (pieces)
- \_\_\_\_\_ Cucumber (slices)
- \_\_\_\_\_ Carrots (Sticks/Baby Carrots) (pieces)
- \_\_\_\_\_ Cherry Tomatoes (pieces)
- \_\_\_\_\_ Tomato (slices or wedges)
- \_\_\_\_\_ Pepper (slices)
- \_\_\_\_\_ Other Raw Vegetables  
(list the vegetables and how much)

---

---

**Questions about what you ate and drank yesterday at school/during school hours**

**B7. Did you eat or drink something yesterday at school/during school hours? (include snacks and/or lunch)**

yes

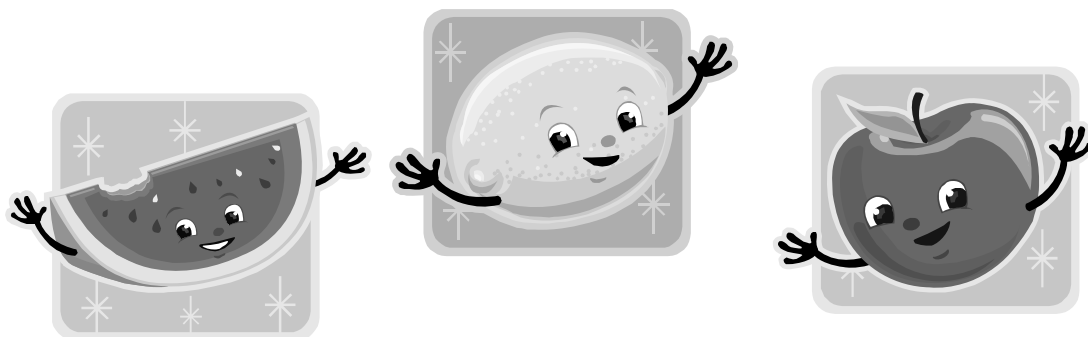
no

If yes, what was it? (only list a few words like sandwich, yogurt)

---

---

---



**The next questions ask about fruit, vegetables and juice that you ate and drank yesterday at school/during school hours**

**B8.** Did you drink 100% fruit or vegetable juice (do not count fruit drinks e.g. Kool-Aid, Sunny D or Fruitopia) **yesterday at school/during school hours?** (include snacks and/or lunch)

yes                       no

If yes, what kind of juice? How much? (write 1 if you had 1 glass or ½ if you had a half glass)

100% Fruit Juice                      \_\_\_\_\_ glass  
 100% Vegetable Juice                \_\_\_\_\_ glass

**B9.** Did you eat fruit **yesterday at school/during school hours?** (include snacks and/or lunch)

yes                       no

If yes, what kind of fruit? How much? (do not count fruits contained in juices). Write 1 if you ate one apple, ½ if you ate a half

- \_\_\_\_\_ Apple(s)
- \_\_\_\_\_ Applesauce (cup)
- \_\_\_\_\_ Apricot(s)
- \_\_\_\_\_ Banana(s)
- \_\_\_\_\_ Grapes (pieces)
- \_\_\_\_\_ Melon (slices)
- \_\_\_\_\_ Orange(s)
- \_\_\_\_\_ Peach Cup (cup)
- \_\_\_\_\_ Peach(es)
- \_\_\_\_\_ Pear(s)
- \_\_\_\_\_ Plum(s)
- \_\_\_\_\_ Fruit Salad/Fruit Cup (cup)
- \_\_\_\_\_ Raisins (pack)
- \_\_\_\_\_ Dried Fruit (eg. Dried cranberries/cherries)
- \_\_\_\_\_ Other Fruits (list the fruits and how much)

**B10.** Did you have a salad **yesterday at school/during school hours?** (include snacks and/or lunch)

yes

no

If yes, what kind of salad? How much? (write 1 if you ate 1 plate or  $\frac{1}{2}$  if you ate half a plate)

Mixed Salad (*lettuce, tomatoes, etc*) \_\_\_\_\_ plate

Only Lettuce \_\_\_\_\_ plate

Tomato Salad \_\_\_\_\_ plate

Cucumber Salad \_\_\_\_\_ plate

Vegetable Salad \_\_\_\_\_ plate

Other Salad (*list ingredients*) \_\_\_\_\_ plate

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**B11.** Did you eat **other raw vegetables** (not including a salad) **yesterday at school/during school hours?** (include snacks and/or lunch)

yes

no

If yes, what kind of raw vegetables? How much? (write 10 if you ate 10 baby carrots)

- \_\_\_\_\_ Broccoli (pieces)
- \_\_\_\_\_ Baby Cucumbers (pieces)
- \_\_\_\_\_ Cucumber(slices)
- \_\_\_\_\_ Carrots (Sticks/baby carrots) (pieces)
- \_\_\_\_\_ Cauliflower (pieces)
- \_\_\_\_\_ Celery Sticks (pieces)
- \_\_\_\_\_ Cherry Tomatoes (pieces)
- \_\_\_\_\_ Peppers (slices)
- \_\_\_\_\_ Tomato (slices or wedges)
- \_\_\_\_\_ Rutabaga/Turnip (pieces)
- \_\_\_\_\_ Peas (cup)
- \_\_\_\_\_ Zucchini (pieces)
- \_\_\_\_\_ Other (*list the raw vegetables and how much*)

**B12.** Did you have vegetable soup **at school/during school hours?** (include snacks and/or lunch)

yes

no

If yes, how much? (write 1 if you had 1 bowl or  $\frac{1}{2}$  if you had half a bowl)

Vegetable Soup \_\_\_\_\_ bowl

**Questions about what you ate and drank yesterday afternoon after school, at dinner and after dinner**

**B13.** Did you eat or drink something **before dinner yesterday afternoon?**

yes

no

What was it? (only list a few words like: milk, apple, water).

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**B14.** Did you eat or drink something **yesterday for dinner?**

yes

no

What was it? (only list a few words like: chicken, peas, potato)

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**B15.** Did you eat or drink something **yesterday after dinner?**

yes

no

What was it? (only list a few words like: apple, yogourt)

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**The next questions ask about fruit, vegetables and juice yesterday afternoon after school, at dinner and after dinner**

**B16.** Did you drink 100% fruit or vegetable juice (do not count fruit drinks, e.g. Kool-Aid, Sunny D, or Fruitopia) **yesterday afternoon after school, at dinner or after dinner?**

yes

no

If yes, what kind of juice? How much? (write 1 if you had 1 glass or  $\frac{1}{2}$  if you had a half a glass)

100% Fruit Juice \_\_\_\_\_ glass

100% Vegetable Juice \_\_\_\_\_ glass

**B17.** Did you have fruit **yesterday afternoon after school, at dinner or after dinner?**

yes

no

If yes, what kind of fruit? How much? (do not count fruits contained in juices). Write 1 if you ate one apple,  $\frac{1}{2}$  if you ate a half

- \_\_\_\_\_ Apple(s)
- \_\_\_\_\_ Applesauce (cup)
- \_\_\_\_\_ Apricot(s)
- \_\_\_\_\_ Banana(s)
- \_\_\_\_\_ Grapes (pieces)
- \_\_\_\_\_ Melon (slices)
- \_\_\_\_\_ Orange(s)
- \_\_\_\_\_ Peach Cup (cup)
- \_\_\_\_\_ Peach(es)
- \_\_\_\_\_ Pear(s)
- \_\_\_\_\_ Plum(s)
- \_\_\_\_\_ Fruit Salad/Fruit Cup (cup)
- \_\_\_\_\_ Raisins (pack)
- \_\_\_\_\_ Dried Fruit (*eg. Dried cranberries/cherries*)
- \_\_\_\_\_ Other Fruits (*list the fruits and how much*)

Appendix IX-A

**B18.** Did you have a salad **yesterday afternoon after school, at dinner or after dinner?**

yes

no

If yes, what kind of salad? How much? (write 1 if you ate 1 plate or  $\frac{1}{2}$  if you ate half a plate)

Mixed Salad ( <i>lettuce, tomatoes, etc</i> )	_____	plate
Only Lettuce	_____	plate
Tomato Salad	_____	plate
Cucumber Salad	_____	plate
Vegetable Salad	_____	plate
Other Salad ( <i>list ingredients</i> )	_____	plate

\_\_\_\_\_  
\_\_\_\_\_

**B19.** Did you have cooked vegetables **yesterday afternoon after school, at dinner or after dinner?**

yes

no

If yes, what kind of cooked vegetables? How much? (write 1 if you ate 1 plate or  $\frac{1}{2}$  if you ate half a plate)

Mixed Cooked Vegetables ( <i>list the cooked vegetables</i> )	_____	plate
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Mashed Potato	_____	plate
Carrots	_____	plate
Sweet Corn	_____	plate
Green Beans	_____	plate
Cauliflower	_____	plate
Broccoli	_____	plate
Other Vegetables: ( <i>list the vegetables and how much</i> )	_____	plate

\_\_\_\_\_  
\_\_\_\_\_

Appendix IX-A

**B20.** Did you eat **other raw vegetables** (not including a salad) **yesterday afternoon after school, at dinner or after dinner?**

yes

no

If yes, what kind of raw vegetable? How much? (write 10 if you ate 10 baby carrots)

- \_\_\_\_\_ Broccoli (pieces)
- \_\_\_\_\_ Baby Cucumbers (pieces)
- \_\_\_\_\_ Cucumber(slices)
- \_\_\_\_\_ Carrots (Sticks/baby carrots) (pieces)
- \_\_\_\_\_ Cauliflower (pieces)
- \_\_\_\_\_ Celery Sticks (pieces)
- \_\_\_\_\_ Cherry Tomatoes (pieces)
- \_\_\_\_\_ Peppers (slices)
- \_\_\_\_\_ Tomato (slices or wedges)
- \_\_\_\_\_ Rutabaga/Turnip (pieces)
- \_\_\_\_\_ Peas (cup)
- \_\_\_\_\_ Zucchini (pieces /slices)
- \_\_\_\_\_ Other (*list the raw vegetables and how much*)

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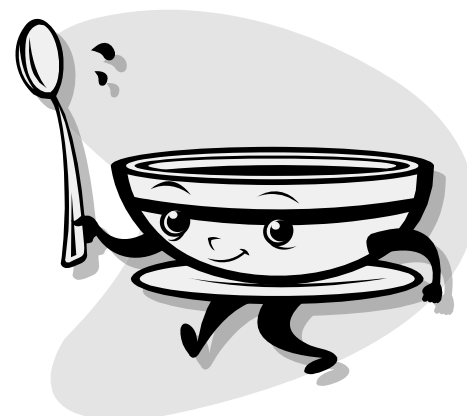
**B21.** Did you have vegetable soup **yesterday afternoon after school, at dinner or after dinner?**

yes

no

If yes, how much? (write 1 if you had 1 bowl or  $\frac{1}{2}$  if you had half a bowl)

Vegetable soup \_\_\_\_\_ bowl





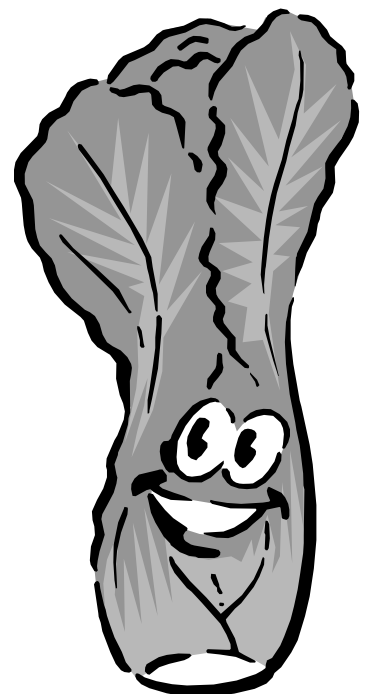
## C: Some questions about what you usually eat (Only "X" one box for each question)

C1. How often do you usually eat fresh fruit?

- Never
- Less than one day per week
- One day per week
- 2-4 days a week
- 5-6 days a week
- Every day, once a day
- Every day, twice a day
- Every day, more than twice a day

C2. How often do you usually eat salad or grated vegetables?

- Never
- Less than one day per week
- One day per week
- 2-4 days a week
- 5-6 days a week
- Every day, once a day
- Every day, twice a day
- Every day, more than twice a day

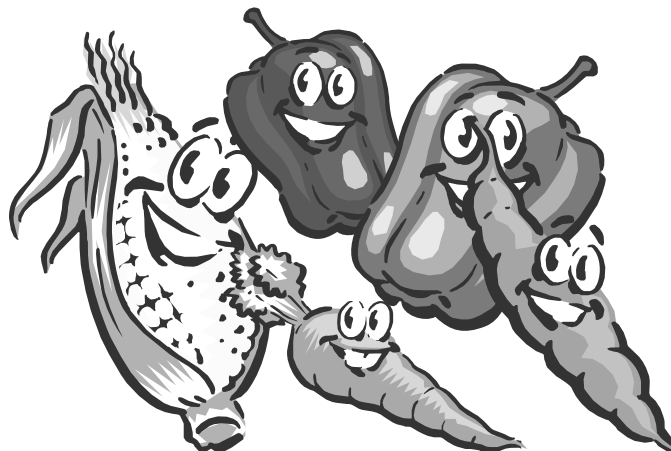


**C3. How often do you usually eat raw vegetables?**

- Never
- Less than one day per week
- One day per week
- 2-4 days a week
- 5-6 days a week
- Every day, once a day
- Every day, twice a day
- Every day, more than twice a day

**C4. How often do you usually eat potatoes? (do not include french fries or potato chips)**

- Never
- Less than one day per week
- One day per week
- 2-4 days a week
- 5-6 days a week
- Every day, once a day
- Every day, twice a day
- Every day, more than twice a day



**C5. How often do you usually eat cooked vegetables?**

- Never
- Less than one day per week
- One day per week
- 2-4 days a week
- 5-6 days a week
- Every day, once a day
- Every day, twice a day
- Every day, more than twice a day

**C6. How often do you usually drink 100% fruit or vegetable juice? (do not count fruit drinks, e.g. Kool-Aid, Sunny D or Fruitopia)**

- Never
- Less than one day per week
- One day per week
- 2-4 days a week
- 5-6 days a week
- Every day, once a day
- Every day, twice a day
- Every day, more than twice a day



## D: Some questions about fruit and vegetables

D1. How many servings of fruit and vegetables do you think you should eat everyday to stay healthy? \_\_\_\_\_

Please let us know how much you agree or disagree with the below statements:

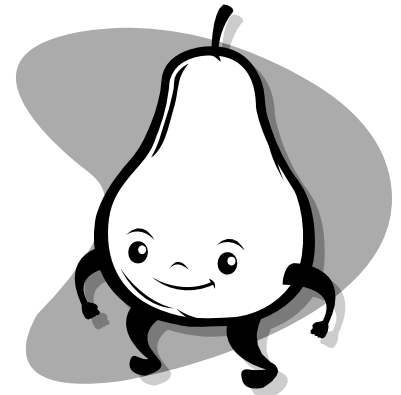
*(Only "X" one box for each statement)*

D2. Eating fruit every day makes me feel good.

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

D3. Eating fruit every day gives me more energy.

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree



D4. Eating fruit and vegetables could help prevent cancer.

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**D5. Eating fruit and vegetables could help prevent heart disease.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree
- I do not know

**D6. I like to eat fruit every day.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree



**D7. Fruit tastes good.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**D8. My best friend(s) eat fruit every day.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**D9. It is difficult for me to eat fruit every day.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**D10. If I decide to eat fruit every day, I can do it.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**D11. I want to eat fruit every day.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

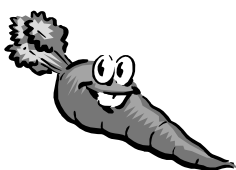


**D12. Eating fruit every day is a habit for me.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**D13. Which of the following fruits do you like or dislike: (Please, "X" one box in every line)**

	Like very much	Like a bit	Dislike a bit	Dislike very much	Have not tried
Apples	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Applesauce	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Apricots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bananas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blueberries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cherries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dried Fruits e.g. Cranberries/ Cherries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grapes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kiwis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Melon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oranges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peaches (Cup)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pears	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plums	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Raisins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Raspberries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rhubarb	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strawberries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tangerines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**D14. Do you usually ask your parents/guardians to buy the kind of fruit that you like to eat?**

- Yes, always
- Yes, most days
- Yes, sometimes
- Hardly ever
- Never

**D15. Do you usually bring fruit with you to school?**

- Yes, always
- Yes, most days
- Yes, sometimes
- Hardly ever
- Never

**D16. How willing are you to try a fruit that you've never tried before?**

- Very willing
- Somewhat willing
- Not willing
- Not sure

**D17. What do you think about school giving you one to two pieces of fruit each week for free?**

- I like it
- I do not have an opinion
- I do not like it



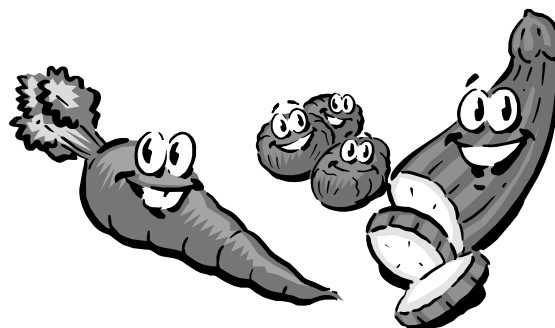
**E: Please let us know to what extent you agree with these opinions:**  
*(Only "X" one box for each statement)*

**E1. Eating vegetables every day makes me feel good.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**E2. Eating vegetables every day gives me more energy.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree



**E3. I like to eat vegetables every day.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**E4. Vegetables taste good.**

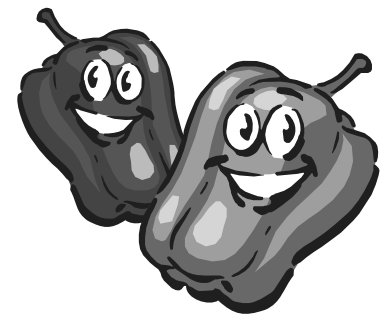
- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**E5. My best friend(s) eat vegetables every day.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**E6. It is difficult for me to eat vegetables every day.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree



**E7. If I decide to eat vegetables every day, I can do it.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**E8. I want to eat vegetables every day.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree

**E9. Eating vegetables every day is a habit for me.**

- I fully agree
- I agree somewhat
- Neither agree nor disagree
- I disagree somewhat
- I fully disagree



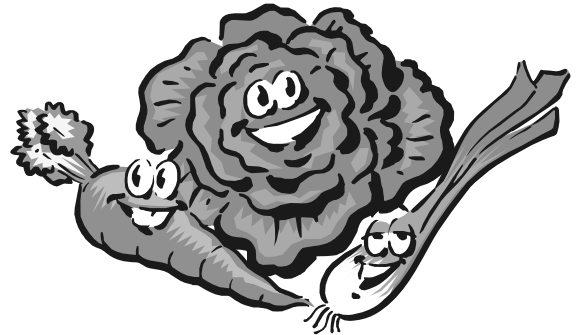
**E10. Which of the following vegetables do you like or dislike: (Please, "X" one box in every line)**

	Like very much	Like a bit	Dislike a bit	Dislike very much	Have not tried
Asparagus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Broccoli	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cabbage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carrots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cauliflower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Celery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cherry tomatoes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cucumber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Green beans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leeks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lettuce	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mushrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Onions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peppers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rutabaga	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spinach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Squash	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tomatoes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turnip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zucchini	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix IX-A

E11. Do you usually ask your parents/guardians to buy the kind of vegetables that you like to eat?

- Yes, always
- Yes, most days
- Yes, sometimes
- Hardly ever
- Never



E12. Do you usually bring vegetables with you to school?

- Yes, always
- Yes, most days
- Yes, sometimes
- Hardly ever
- Never

E13. How willing are you to try a vegetable that you've never tried before?

- Very willing
- Somewhat willing
- Not willing
- Not sure

E14. What do you think about the school giving you one to two servings of vegetables each week for free?

- I like it
- I do not have an opinion
- I do not like it

Thank you for your help!

Please put the questionnaire in the envelope and give it to your teacher

# Amuse-toi avec les fruits et les légumes!

Bonjour, les amies et les amis,

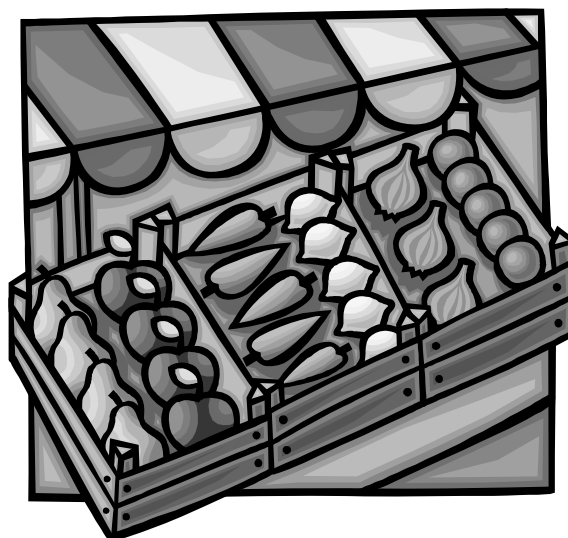
Nous te demandons de répondre à ce questionnaire sur tes habitudes alimentaires. Aucune autre personne à l'école ou à la maison ne lira tes réponses.

Si tu as des questions, demande à ton titulaire de classe.

N'écris pas ton nom sur le questionnaire. Si tu ne veux pas répondre à une question, passe à la prochaine question. Lorsque tu auras terminé, place le questionnaire dans l'enveloppe, scelle-la et remets-la à ton titulaire de classe.

Ta participation à ce sondage est volontaire. Si tu ne veux pas participer à ce sondage, place le questionnaire dans l'enveloppe et remets-le à ton titulaire de classe.

Merci!



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© Ce sondage est une adaptation de Eating Habits of Schoolchildren réalisé par le consortium Pro Children et subventionné par la Commission européenne.

This questionnaire may be used by others provided Pro Children consortium and the Public Health Research, Education and Development (PHRED) Program are acknowledged.

## Comment remplir le questionnaire

Tu réponds à la plupart des questions en plaçant un «X» dans la case de ta réponse. Certaines questions te permettent de donner plusieurs réponses en mettant un «X» dans plusieurs cases. D'autres questions te demandent d'écrire ta réponse.

### Exemple:

Quel(s) fruit(s) as-tu mangé hier? Quelle quantité? (écris 1 si tu as mangé un fruit entier,  $\frac{1}{2}$  si tu as mangé la moitié d'un fruit)

1	Pomme(s)
1	Compote de pommes (tasse)
1/2	Abricot(s)
14	Banane(s)
1	Raisin (morceaux)
1	Melon (tranches)
	Orange(s)
	Pêches en contenant (contenant)
	Pêche(s)
	Poire(s)
	Prune(s)
	Salade de fruits/tasse de fruits (tasse)
	Raisins séchés (paquet)
	Fruit séché (ex.: canneberges/cerises séchées)
	Autres fruits (écris le nom des fruits et la quantité)

## A : Quelques questions à ton sujet...

A1. Quel âge as-tu? \_\_\_\_\_ ans

A2. Es-tu une fille ou un garçon?

Fille

Garçon

A3. Quelle langue parles-tu le plus souvent à la maison?

Anglais

Français

Anglais et Français

Autre (écris le nom de la langue)

## B: Questions sur ce que tu as mangé hier...

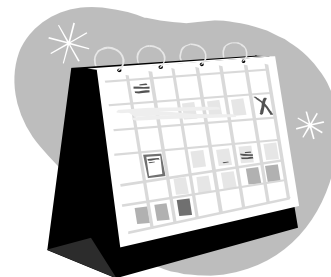
Questions sur ce que tu as mangé et bu hier matin, au déjeuner.

B1. Quel jour de la semaine était-on hier?

Mardi

Mercredi

Jeudi



B2. À quelle heure t'es-tu levé? \_\_\_\_\_

B3. As-tu mangé quelque chose hier matin, au déjeuner?

oui

non

Qu'est-ce que tu as mangé ou bu? (écris des mots comme pain, lait, céréales, etc.)

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**Les questions suivantes te demandent quels fruits, quels légumes et quels jus tu as mangés et bus hier matin, au déjeuner.**

**B4.** As-tu bu du jus de fruits ou de légumes à 100 % hier matin, au déjeuner? (n'inclus pas les breuvages à saveur de fruits comme Kool-Aid, Sunny D ou Fruitopia)

oui                       non

Si oui, quel genre de jus? Quelle quantité? (écris 1 si tu as bu un verre, ou  $\frac{1}{2}$  si tu as bu la moitié d'un verre)

Jus de fruits à 100 % \_\_\_\_\_ verre

Jus de légumes à 100% \_\_\_\_\_ verre

**B5.** As-tu mangé des fruits hier matin, au déjeuner?

oui                       non

Si oui, quel genre de fruit? Quelle quantité? (ne compte pas les fruits qui sont contenus dans les jus). Écris 1 si tu as mangé un fruit entier, ou  $\frac{1}{2}$  si tu as mangé la moitié d'un fruit.

- \_\_\_\_\_ Pomme(s)
  - \_\_\_\_\_ Compote de pommes (tasse)
  - \_\_\_\_\_ Abricot(s)
  - \_\_\_\_\_ Banane(s)
  - \_\_\_\_\_ Raisin(s) (morceaux)
  - \_\_\_\_\_ Melon(s) (tranches)
  - \_\_\_\_\_ Orange(s)
  - \_\_\_\_\_ Pêches en contenant (contenant)
  - \_\_\_\_\_ Pêche(s)
  - \_\_\_\_\_ Poire(s)
  - \_\_\_\_\_ Prune(s)
  - \_\_\_\_\_ Salade de fruits/fruits en contenant (contenant)
  - \_\_\_\_\_ Raisins séchés (boîte)
  - \_\_\_\_\_ Fruit séché (ex. : canneberges/cerises séchés)
  - \_\_\_\_\_ Autres fruits (écris le nom des fruits et la quantité)
- \_\_\_\_\_
- \_\_\_\_\_

**B6. As-tu mangé des légumes crus hier matin, au déjeuner?**

oui

non

Si oui, quel genre de légume? Quelle quantité? (écris 10 si tu as mangé dix petites carottes)

- \_\_\_\_\_ Petit concombre (morceaux)
- \_\_\_\_\_ Concombre tranché (tranches)
- \_\_\_\_\_ Carotte (bâtonnets/petites carottes) (morceaux)
- \_\_\_\_\_ Tomate cerise (morceaux)
- \_\_\_\_\_ Tomate(s) (tranches ou morceaux)
- \_\_\_\_\_ Poivron tranché (morceaux)
- \_\_\_\_\_ Autres légumes crus (écris le nom des légumes)

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**Questions sur ce que tu as mangé et bu hier, à l'école/durant les heures de classe**

**B7. As-tu mangé ou bu quelque chose hier, à l'école/durant les heures de classe?**  
(inclus les collations et/ou le goûter)

oui

non

Si oui, qu'est-ce que tu as mangé ou bu? (écris le nom de ce que tu as mangé ou bu: sandwich, yogourt, jus, etc.)

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**Les questions suivantes te demandent quels fruits, quels légumes et quels jus tu as mangés ou bus hier à l'école/durant les heures de classe.**

**B8.** As-tu bu du jus de fruits ou de légumes à 100 % hier à l'école/durant les heures de classe? (n'inclus pas les breuvages à saveur de fruits comme Kool-Aid, Sunny D ou Fruitopia)

oui                       non

Si oui, quel genre de jus? Quelle quantité? (écris 1 si tu as bu un verre, ou  $\frac{1}{2}$  si tu as bu la moitié d'un verre)

Jus de fruits à 100 %                      \_\_\_\_\_ verre

Jus de légumes à 100%                      \_\_\_\_\_ verre

**B9.** As-tu mangé des fruits hier à l'école/durant les heures de classe? (inclus les collations et/ou le goûter)

oui                       non

Si oui, quel genre de fruit? Quelle quantité? (ne compte pas les fruits qui sont contenus dans les jus). Écris 1 si tu as mangé un fruit entier, ou  $\frac{1}{2}$  si tu as mangé la moitié d'un fruit.

- \_\_\_\_\_ Pomme(s)
- \_\_\_\_\_ Compote de pommes (tasse)
- \_\_\_\_\_ Abricot(s)
- \_\_\_\_\_ Banane(s)
- \_\_\_\_\_ Raisin(s) (morceaux)
- \_\_\_\_\_ Melon(s) (tranches)
- \_\_\_\_\_ Orange(s)
- \_\_\_\_\_ Pêches en contenant (contenant)
- \_\_\_\_\_ Pêche(s)
- \_\_\_\_\_ Poire(s)
- \_\_\_\_\_ Prune(s)
- \_\_\_\_\_ Salade de fruits/fruits en contenant (contenant)
- \_\_\_\_\_ Raisins séchés (boîte)
- \_\_\_\_\_ Fruit séché (ex. : canneberges/cerises séchées)
- \_\_\_\_\_ Autres fruits (écris le nom des fruits et la quantité)

Appendix IX-B

**B10.** As-tu mangé une salade hier à l'école/durant les heures de classe? (inclus les collations et/ou le goûter)

oui       non

Si oui, quel genre de salade? Quelle quantité? (écris 1 si tu as mangé une assiette de salade, ou  $\frac{1}{2}$  si tu as mangé la moitié d'une assiette)

Salade mélangée (laitue, tomate, etc.)	_____	assiette
Laitue seulement	_____	assiette
Salade de tomates	_____	assiette
Salade de concombre	_____	assiette
Salade de légumes	_____	assiette
Autre genre de salade (écris les ingrédients)	_____	assiette

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**B11.** As-tu mangé des légumes crus hier à l'école/durant les heures de classe (sans compter les légumes qui se trouvent dans la salade)? (inclus les collations et/ou le goûter)

oui       non

Si oui, quel genre de légume? Quelle quantité? (écris 10 si tu as mangé dix petites carottes)

_____	Brocoli (morceaux)
_____	Petit concombre (morceaux)
_____	Concombre (tranches)
_____	Carottes (bâtonnets/petites carottes) (morceaux)
_____	Chou-fleur (morceaux)
_____	Céleri (bâtonnets)
_____	Tomate cerise (morceaux)
_____	Poivron (tranches)
_____	Tomate(s) (tranches ou morceaux)
_____	Rutabaga/navet (morceaux)
_____	Pois (tasse)
_____	Zucchini (morceaux)
_____	Autres légumes crus (écris le nom des légumes)

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**B12.** As-tu mangé une soupe aux légumes hier à l'école/durant les heures de classe?  
(inclus les collations et/ou le goûter)

oui

non

Si oui, quelle quantité? (écris 1 si tu as mangé un bol de soupe, ou  $\frac{1}{2}$  si tu as mangé la moitié d'un bol)

Soupe aux légumes \_\_\_\_\_ Bol

**Questions sur ce que tu as mangé et bu hier après-midi, après l'école, au souper et après le souper.**

**B13.** As-tu mangé ou bu quelque chose avant le souper, hier après-midi?

oui

non

Qu'as-tu bu ou mangé? (écris le nom des aliments : lait, pomme, eau)

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**B14.** As-tu mangé ou bu quelque chose hier, au souper?

oui

non

Qu'as-tu bu ou mangé? (écris le nom des aliments : poulet, pois, pomme de terre)

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**B15.** As-tu mangé ou bu quelque chose hier, après le souper?

oui

non

Qu'as-tu mangé ou bu? (écris le nom des aliments: pomme, yogourt)

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**Les questions suivantes te demandent quels fruits, quels légumes et quels jus tu as pris hier après-midi après l'école, au souper et après le souper.**

**B16.** As-tu bu du jus de fruits ou de légumes à 100 % hier après-midi après l'école, au souper ou après le souper? (n'inclus pas les breuvages à saveur de fruits comme Kool-Aid, Sunny D ou Fruitopia)

oui                       non

Si oui, quel genre de jus? Quelle quantité? (écris 1 si tu as bu un verre, ou  $\frac{1}{2}$  si tu as bu la moitié d'un verre)

Jus de fruits à 100 %                      \_\_\_\_\_ verre

Jus de légumes à 100%                      \_\_\_\_\_ verre

**B17.** As-tu mangé des fruits hier après-midi après l'école, au souper ou après le souper?

oui                       non

Si oui, quel genre de fruit? Quelle quantité? (ne compte pas les fruits qui sont contenus dans les jus). Écris 1 si tu as mangé un fruit entier, ou  $\frac{1}{2}$  si tu as mangé la moitié d'un fruit.

- \_\_\_\_\_ Pomme(s)
- \_\_\_\_\_ Compote de pommes (tasse)
- \_\_\_\_\_ Abricot(s)
- \_\_\_\_\_ Banane(s)
- \_\_\_\_\_ Raisin(s) (morceaux)
- \_\_\_\_\_ Melon(s) (tranches)
- \_\_\_\_\_ Orange(s)
- \_\_\_\_\_ Pêches en contenant (contenant)
- \_\_\_\_\_ Pêche(s)
- \_\_\_\_\_ Poire(s)
- \_\_\_\_\_ Prune(s)
- \_\_\_\_\_ Salade de fruits/fruits en contenant (contenant)
- \_\_\_\_\_ Raisins séchés (boîte)
- \_\_\_\_\_ Fruit séché (ex.: canneberges/ cerises séchées)
- \_\_\_\_\_ Autres fruits (écris le nom des fruits et la quantité)

Appendix IX-B

**B18.** As-tu mangé une salade hier après-midi, au souper ou après le souper?

oui

non

Si oui, quel genre de salade? Quelle quantité? (écris 1 si tu as mangé une assiette de salade, ou  $\frac{1}{2}$  si tu as mangé la moitié d'une assiette)

Salade mélangée (laitue, tomate, etc.) \_\_\_\_\_ assiette

Laitue seulement \_\_\_\_\_ assiette

Salade de tomates \_\_\_\_\_ assiette

Salade de concombre \_\_\_\_\_ assiette

Salade de légumes \_\_\_\_\_ assiette

Autre genre de salade (écris les ingrédients) \_\_\_\_\_ assiette

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**B19.** As-tu mangé des légumes cuits hier après-midi après l'école, au souper ou après le souper?

oui

non

Si oui, quel genre de légume cuit? Quelle quantité? (écris 1 si tu as mangé 1 assiette de légumes, ou  $\frac{1}{2}$  si tu as mangé la moitié d'une assiette)

Légumes mélangés cuits (écris le nom des légumes) \_\_\_\_\_ assiette

\_\_\_\_\_ assiette

Pomme de terre en purée \_\_\_\_\_ assiette

Carottes \_\_\_\_\_ assiette

Blé d'inde sucré \_\_\_\_\_ assiette

Haricots verts \_\_\_\_\_ assiette

Chou-fleur \_\_\_\_\_ assiette

Brocoli \_\_\_\_\_ assiette

Autres légumes : (écris le nom des légumes) \_\_\_\_\_ assiette

\_\_\_\_\_ assiette

\_\_\_\_\_

\_\_\_\_\_

Appendix IX-B

**B20.** As-tu mangé des légumes crus hier après-midi après l'école, au souper ou après le souper (sans compter les légumes qui se trouvent dans la salade)?

oui

non

Si oui, quel genre de légume? Quelle quantité? (écris 10 si tu as mangé dix petites carottes)

- \_\_\_\_\_ Brocoli (morceaux)
- \_\_\_\_\_ Petit concombre (morceaux)
- \_\_\_\_\_ Concombre (tranches)
- \_\_\_\_\_ Carottes (bâtonnets/petites carottes) (morceaux)
- \_\_\_\_\_ Chou-fleur (morceaux)
- \_\_\_\_\_ Céleri (bâtonnets)
- \_\_\_\_\_ Tomate cerise (morceaux)
- \_\_\_\_\_ Poivron (tranches)
- \_\_\_\_\_ Tomate(s) (tranches ou morceaux)
- \_\_\_\_\_ Rutabaga/navet (morceaux)
- \_\_\_\_\_ Pois (tasse)
- \_\_\_\_\_ Zucchini (morceaux)
- \_\_\_\_\_ Autres légumes crus (écris le nom des légumes)

**B21.** As-tu mangé une soupe aux légumes hier après-midi après l'école, au souper ou après le souper?

oui

non

Si oui, quelle quantité? (écris 1 si tu as mangé un bol de soupe, ou  $\frac{1}{2}$  si tu as mangé la moitié d'un bol)

Soupe aux légumes \_\_\_\_\_ bol





## C: Quelques questions sur ce que tu manges habituellement (mets un seul «X» par question)

### C1. Combien souvent manges-tu des fruits?

- Jamais
- Moins d'un jour par semaine
- Un jour par semaine
- 2-4 jours par semaine
- 5-6 jours par semaine
- Chaque jour, une fois par jour
- Chaque jour, deux fois par jour
- Chaque jour, plus de deux fois par jour

### C2. Combien souvent manges-tu une salade ou des légumes râpés?

- Jamais
- Moins d'un jour par semaine
- Un jour par semaine
- 2-4 jours par semaine
- 5-6 jours par semaine
- Chaque jour, une fois par jour
- Chaque jour, deux fois par jour
- Chaque jour, plus de deux fois par jour

**C3. Combien souvent manges-tu des légumes crus?**

- Jamais
- Moins d'un jour par semaine
- Un jour par semaine
- 2-4 jours par semaine
- 5-6 jours par semaine
- Chaque jour, une fois par jour
- Chaque jour, deux fois par jour
- Chaque jour, plus de deux fois par jour

**C4. Combien souvent manges-tu des pommes de terre? (n'inclus pas les frites ou les croustilles)**

- Jamais
- Moins d'un jour par semaine
- Un jour par semaine
- 2-4 jours par semaine
- 5-6 jours par semaine
- Chaque jour, une fois par jour
- Chaque jour, deux fois par jour
- Chaque jour, plus de deux fois par jour

**C5. Combien souvent manges-tu des légumes cuits?**

- Jamais
- Moins d'un jour par semaine
- Un jour par semaine
- 2-4 jours par semaine
- 5-6 jours par semaine
- Chaque jour, une fois par jour
- Chaque jour, deux fois par jour
- Chaque jour, plus de deux fois par jour

**C6. Combien souvent bois-tu du jus de fruits ou de légumes à 100 %**  
(n'inclus pas les breuvages à saveur de fruits comme Kool-Aid, Sunny D ou Fruitopia)

- Jamais
- Moins d'un jour par semaine
- Un jour par semaine
- 2-4 jours par semaine
- 5-6 jours par semaine
- Chaque jour, une fois par jour
- Chaque jour, deux fois par jour
- Chaque jour, plus de deux fois par jour



## D: Quelques questions sur les fruits et les légumes.

D1. D'après toi, combien de portions de fruits et de légumes devrais-tu manger chaque jour pour demeurer en santé? \_\_\_\_\_

Dis-nous combien tu es d'accord ou en désaccord avec les affirmations suivantes:  
(mets un seul «X» par affirmation)

D2. Manger des fruits chaque jour me fait sentir bien.

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

D3. Manger des fruits chaque jour me donne plus d'énergie.

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

D4. Manger des fruits et des légumes peut aider à prévenir le cancer.

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

**D5. Manger des fruits et des légumes peut aider à prévenir des maladies du cœur.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

**D6. J'aime manger des fruits chaque jour.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

**D7. Les fruits ont bon goût.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

**D8. Mon(mes) meilleur(s) ami(s) mange(nt) des fruits chaque jour.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

**D9. Il est difficile pour moi de manger des fruits chaque jour.**

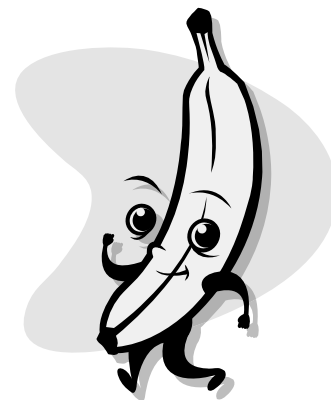
- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

**D10. Si je décide de manger des fruits chaque jour, je peux le faire.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

**D11. Je veux manger des fruits chaque jour.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord



**D12. Manger des fruits chaque jour est une habitude chez moi.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

**D13. Quels fruits aimes-tu ou n'aimes-tu pas? (mets un «X» à chaque ligne)**

	J'aime beaucoup	J'aime un peu	Je n'aime pas vraiment	Je n'aime pas du tout	Je n'ai pas essayé d'en manger
Pomme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compote de pommes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Abricots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Banane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bleuet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cerise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fruit sec (ex.: canneberges, cerises)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Raisin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kiwis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Melon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orange	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pêche (en contenant)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pêche	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prune	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Raisins secs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Framboises	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prune	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Raisins secs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rhubarbe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fraises	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tangerine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**D14. Demandes-tu habituellement à tes parents ou tuteurs d'acheter le genre de fruits que tu aimes manger?**

- Oui, toujours
- Oui, la plupart du temps
- Oui, parfois
- Presque jamais
- Jamais

**D15. Apportes-tu habituellement des fruits à l'école?**

- Oui, toujours
- Oui, la plupart du temps
- Oui, parfois
- Presque jamais
- Jamais



**D16. Comment prêt es-tu d'essayer un fruit que tu n'as jamais mangé avant?**

- Très prêt
- Un peu prêt
- Pas prêt
- Pas certain

**D17. Que penses-tu de l'idée que l'école te donnerait gratuitement deux fruits (ou morceaux de fruits) par jour?**

- J'aime l'idée
- Je n'ai pas une opinion à ce sujet
- Je n'aime pas l'idée



**E: Dis-nous comment tu es d'accord avec les opinions suivantes:  
(mets un seul <<X>> par opinion)**

**E1. Manger des légumes chaque jour me fait sentir bien.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

**E2. Manger des légumes chaque jour me donne plus d'énergie.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

**E3. J'aime manger des légumes chaque jour.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

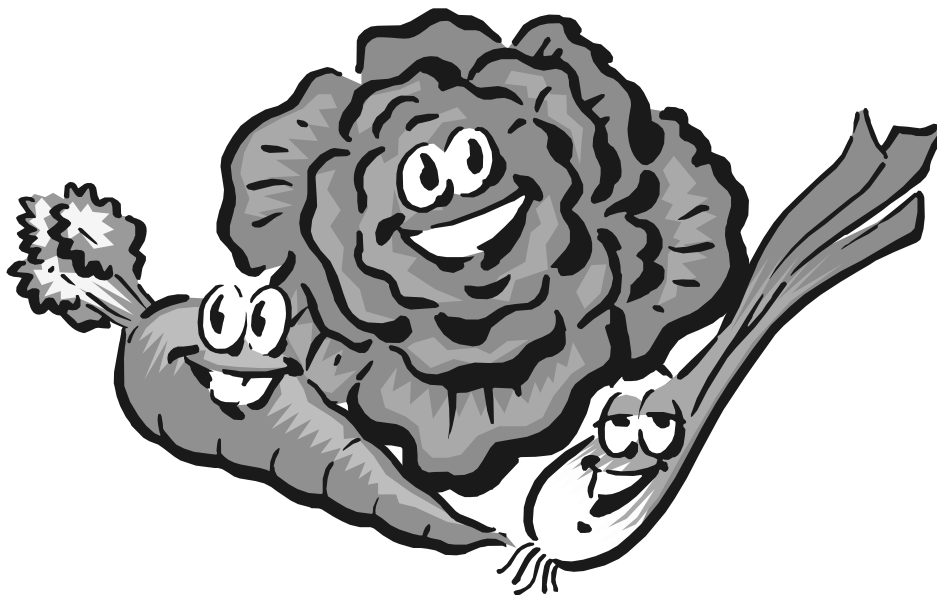
- E4. Les légumes ont bon goût.**
- Je suis complètement d'accord
  - Je suis un peu d'accord
  - Pas d'accord et pas en désaccord
  - Je suis un peu en désaccord
  - Je suis complètement en désaccord
- E5. Mon(mes) meilleur(s) ami(s) mange(nt) des légumes chaque jour.**
- Je suis complètement d'accord
  - Je suis un peu d'accord
  - Pas d'accord et pas en désaccord
  - Je suis un peu en désaccord
  - Je suis complètement en désaccord
- E6. Il est difficile pour moi de manger des légumes chaque jour.**
- Je suis complètement d'accord
  - Je suis un peu d'accord
  - Pas d'accord et pas en désaccord
  - Je suis un peu en désaccord
  - Je suis complètement en désaccord
- E7. Si je décide de manger des légumes chaque jour, je peux le faire.**
- Je suis complètement d'accord
  - Je suis un peu d'accord
  - Pas d'accord et pas en désaccord
  - Je suis un peu en désaccord
  - Je suis complètement en désaccord

**E8. Je veux manger des légumes chaque jour.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord

**E9. Manger des légumes chaque jour est une habitude chez moi.**

- Je suis complètement d'accord
- Je suis un peu d'accord
- Pas d'accord et pas en désaccord
- Je suis un peu en désaccord
- Je suis complètement en désaccord



Appendix IX-B

E10. Quels légumes aimes-tu ou n'aimes-tu pas? (mets un «X» à chaque ligne)

	J'aime beaucoup	J'aime un peu	Je n'aime pas vraiment	Je n'aime pas du tout	Je n'ai pas essayé d'en manger
Asperge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Betterave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brocoli	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chou	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carotte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chou-fleur	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Céleri	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tomate cerise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blé d'inde	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concombre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Haricot vert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poireau	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laitue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Champignon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oignon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pois	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poivron	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rutabaga	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Épinard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Courge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tomate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Navet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zucchini	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**E11. Demandes-tu habituellement à tes parents ou tuteurs d'acheter le genre de légumes que tu aimes manger?**

- Oui, toujours
- Oui, la plupart du temps
- Oui, parfois
- Presque jamais
- Jamais

**E12. Apportes-tu habituellement des légumes à l'école?**

- Oui, toujours
- Oui, la plupart du temps
- Oui, parfois
- Presque jamais
- Jamais

**E13. Comment prêt es-tu d'essayer un légume que tu n'as jamais mangé avant?**

- Très prêt
- Un peu prêt
- Pas prêt
- Pas certain

**E14. Que penses-tu de l'idée que l'école te donnerait gratuitement une ou deux portions de légumes par jour?**

- J'aime l'idée
- Je n'ai pas une opinion à ce sujet
- Je n'aime pas l'idée

**Merci de ton aide!**

Place le questionnaire dans l'enveloppe et remets l'enveloppe à ton titulaire de classe.

## **APPENDIX X**

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# **QUESTIONNAIRE ADMINISTRATION – INSTRUCTION FOR TEACHERS**

**(ENGLISH AND FRENCH)**





December 1, 2006

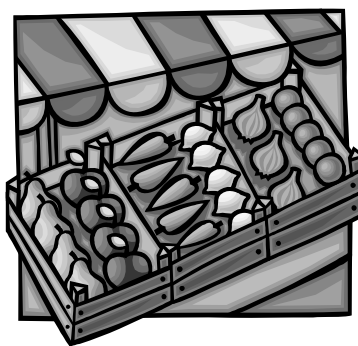
Dear xxx:

Thank you so much for your help with the Northern Ontario Fruit and Vegetable Evaluation. This evaluation is very important. It will help us determine if the Northern Ontario Fruit and Vegetable Pilot Project is having an impact on the fruit and vegetable consumption of your students, as well as any impact on their knowledge and attitudes towards fruit and vegetable consumption. The Ministry of Health Promotion will be looking at the results carefully to determine if this program should be continued or expanded.

You are being asked to administer the "Having Fun with Fruit and Vegetables" survey in your classroom to all the students whose parents/guardians signed a **Consent Form**. The survey should be completed in your classroom on one of the following days: Wednesday **December 6**, Thursday **December 7**, or Friday **December 8**. Preferably the survey should be administered first thing in the **morning**, in order to maximize students' recall of what they ate the day before. It is anticipated that it will take **approximately 45 minutes** for both parts of the questionnaire to be completed.

Your role is vital to making this evaluation happen. Here is a quick checklist of what we are asking you to do in regards to administering the survey to your students. If you have any questions, please do not hesitate to contact our hotline at: 1-519-663-5317 ext. 2476.

***Thank you! We couldn't do it without you!***



**If you have any questions, call or email**  
1-519-663-5317 ext. 2476  
meizi.he@mlhu.on.ca



## Survey Checklist

Appendix X-A

- **Only those children whose parents signed a consent form will complete the survey.**

Students not participating in the evaluation can engage in independent class work or quiet reading at their desk. We have also enclosed some alternate activities (word search) for you to distribute if you choose.

- **Distribute the envelopes to each student on the Participant List (pink paper).**

Envelopes have been labeled with the child's name for each student whose parent signed a consent form. Each student has been assigned a unique ID code; it is therefore important that each student receives the envelope labeled with his/her name.

- **Identify students on the Remaining Names list (pink paper) for whom you have recently received a signed consent form. Assign a unique ID (see below) and distribute the surveys to these students.**

We have included extra pre-coded blank envelopes and surveys for children whose consents came in after the consents had been sent to the evaluation team. Before giving the student this survey, please write the unique ID code on the Remaining Names list, beside the student's name. The unique ID has been highlighted in yellow on the envelope.

If you have a student in your class with a signed consent and their name is not on the "Remaining Names" list, add their name to the list and assign a survey ID as above.

If you need more surveys, please talk to your Principal/Designate. Additional surveys have been sent to your school.

- **Using the Teacher Script (blue paper), read the questions one by one for sections A and B on the survey.**

The Teacher Script (blue paper) provides step by step instructions to the students. We have also sent you a list of Frequently Asked Questions (yellow paper).

- **Have students complete sections C, D and E of the survey independently.**
- **Upon completing the survey, have students put their survey in the blank envelope provided and seal.**
- **Collect all surveys and put a check mark (✓) on the Participant List (pink paper) beside the name of each student as they return the survey.**
- **If a student did not return a survey, please indicate on the Participant List (pink paper) the reason why (e.g. child absent, child refused to participate)**
- **Please complete the "Report on Survey Process" (green paper) and return with the surveys.**

Your feedback will assist us in addressing any issues for the follow-up survey completed later in the school year.

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## **Return Checklist**

**Appendix X-A**

### **Items to return to Principal/Designate:**

- Additional signed Consent Forms
- Completed Surveys
- Unanswered Surveys
- Participant List (pink paper)
- Report on Survey Process (green paper)

**The Principal/Designate will be forwarding your school's submission to the Evaluation Team.**

**Thank you!**



## Report on Survey Process

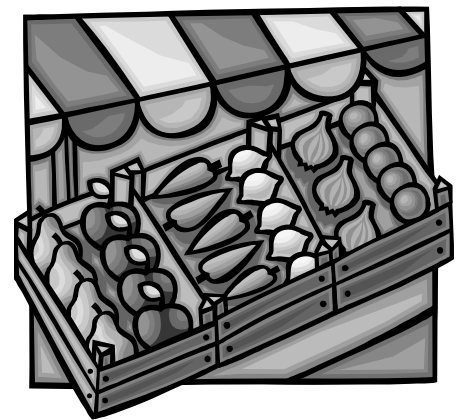
1. Total number of surveys completed: \_\_\_\_\_

2. Identify which day you administered the survey in your class:

- Wednesday December 6
- Thursday December 7
- Friday December 8

3. What time of day did you administer the survey:

- Early Morning
- Late Morning
- Early Afternoon
- Late Afternoon



4. How long did it take to complete the survey in your classroom? \_\_\_\_\_

5. Please list any significant questions asked by students during the administration of the survey.

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6. Please list any other significant issues that arose during the administration of the survey.

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**Additional comments?** **Appendix X-A**

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Additional comments? The PHRED Public Health Research, Education and Development (PHRED) Program is acknowledged.2007

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**Thank you!**

**Please return with Student Surveys to the Principal/Designate**



**Le 11 décembre 2006**

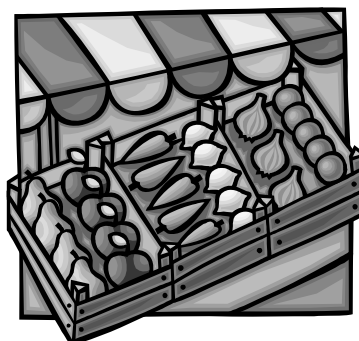
**Chère r,**

Votre aide concernant l'évaluation sur les fruits et légumes dans le Nord de l'Ontario est grandement appréciée. Cette évaluation est très importante. Elle nous aidera à déterminer si le Programme pilote de consommation de fruits et de légumes dans le Nord de l'Ontario exerce une influence sur la consommation de fruits et légumes chez vos élèves, et s'il a un impact sur leurs connaissances et leurs attitudes à cet égard. Le ministère de la Promotion de la santé examinera les résultats avec soin pour établir si ce programme devrait être poursuivi ou étendu.

Nous vous demandons d'administrer le sondage Amuse-toi avec les fruits et les légumes dans votre classe auprès de tous les élèves dont les parents ont accordé leur consentement. Le sondage devrait avoir lieu en classe l'un des jours suivants : le mercredi **13 décembre**, le jeudi **14 décembre** ou le vendredi **15 décembre**. De préférence, il devrait être fait **à la première heure**, afin que les élèves puissent se rappeler le plus possible de ce qu'ils ont mangé la veille. Il faudra **environ 45 minutes** pour remplir les deux parties du questionnaire.

Votre rôle est essentiel. Voici une brève liste de contrôle de ce que vous devez faire pour réaliser le sondage auprès de vos élèves. Si vous avez des questions, n'hésitez pas à communiquer avec nous par notre ligne directe, au 1-519-663-5317, poste 2476.

***Merci encore de votre aide! Nous ne pourrions y arriver sans vous!***



Si vous avez des questions, appelez-nous ou envoyez-nous un courriel :  
1-519-663-5317, poste 2476

meizi.he@mlhu.on.ca

## Liste de contrôle pour le sondage

- Dans la colonne appropriée de la liste des participants (papier rose), cochez le nom des élèves dont les parents/les tuteurs ont signé et retourné le formulaire de consentement.

- Veuillez retirer les questionnaires des élèves dont les parents n'ont PAS signé le formulaire de consentement. Retournez ces questionnaires à l'équipe d'évaluation. (référez-vous à la liste de contrôle des formulaires retournés).

Les élèves qui ne participent pas à l'évaluation peuvent faire des travaux scolaires ou lire tranquillement à leur pupitre. Vous trouverez également ci-jointes quelques activités de rechange (du genre recherche de mots) à distribuer si vous voulez.

- Identifiez sur le tableau « Noms restants » (papier rose) les élèves qui ont rapporté un formulaire de consentement, mais dont le nom n'apparaît pas sur la liste des participants (papier rose). Assignez à chacun de ces élèves le code unique qui apparaît sur le questionnaire supplémentaire que vous allez lui remettre (voir plus bas).

Nous avons ajouté une enveloppe vierge précodée pour un enfant qui a rapporté un formulaire de consentement, mais dont le nom n'apparaît pas sur la liste des participants. Avant de remettre un questionnaire à chaque élève, veuillez inscrire l'ID unique sur la liste des participants, vis-à-vis de son nom. L'ID unique est surligné en jaune sur l'enveloppe.

Si vous avez besoin de plus d'un questionnaire additionnel, veuillez communiquer avec la direction de votre école ou la personne désignée à cette fin. Des questionnaires additionnels ont été envoyés à votre école.

- Distribuez les enveloppes qui restent aux élèves.

Les enveloppes sont étiquetées au nom de chaque enfant. Chaque élève s'est vu assigner un ID unique; il est donc important qu'il reçoive l'enveloppe qui lui est destinée.

À l'aide du texte de l'enseignant (papier bleu), lisez une à une les questions des parties A et B du sondage.

Le texte de l'enseignant (papier bleu) donne aux élèves des instructions étape par étape. Nous vous avons aussi envoyé une foire aux questions (papier jaune).

- Demandez aux élèves de remplir seuls les parties C, D et E du questionnaire, chacun de leur côté.
- Ensuite, demandez-leur de placer leur questionnaire dans l'enveloppe vierge et de sceller celle-ci.
- Ramassez toutes les enveloppes et cochez (✓) la liste des participants (papier rose) vis-à-vis du nom des élèves à mesure qu'ils remettent leurs questionnaires.
- Si un élève n'a pas remis son questionnaire, veuillez en indiquer la raison (p. ex., absence de l'enfant, refus de participer) dans la liste des participants (papier rose).
- Veuillez remplir le « Compte rendu du processus de sondage » (papier vert) et le

**renvoyer avec les enveloppes.**

Votre feed-back nous aidera à régler les problèmes, le cas échéant, en vue du sondage de suivi qui aura lieu plus tard pendant l'année scolaire.

**Liste de contrôle pour le renvoi**

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**Éléments à remettre au directeur :**

- Formulaires de consentement signés
- Questionnaires remplis
- Formulaires de consentement tardifs
- Questionnaires non remplis
- Liste des participants (papier rose)
- Compte rendu du processus de sondage (papier vert)

**Le directeur enverra la réponse de votre école à l'équipe d'évaluation.**

**Merci**

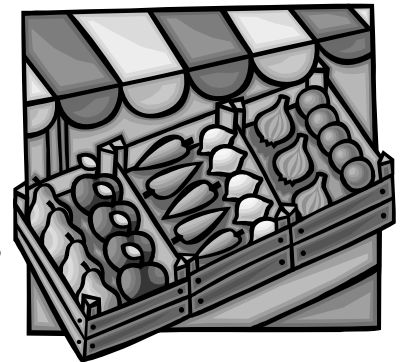




## Compte rendu du processus de sondage

1. Indiquez le jour où vous avez réalisé le sondage dans votre classe :

- le mercredi 13 décembre
- le jeudi 14 décembre
- le vendredi 15 décembre



2. À quel moment de la journée avez-vous réalisé le sondage?

- Tôt en matinée
- En fin de matinée
- En début d'après-midi
- En fin d'après-midi

3. Combien de temps a-t-il fallu pour tenir le sondage dans votre classe? \_\_\_\_\_

4. Nombre total de questionnaires remplis : \_\_\_\_\_

5. Veuillez énumérer les questions importantes que les élèves ont posées pendant le sondage.

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6. Veuillez énumérer les grands problèmes qui ont été soulevés pendant le sondage.

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**7. Autres commentaires :**

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**Merci**

**À renvoyer au directeur avec les questionnaires**

## **APPENDIX XI**


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### **DOLE 5 A DAY FRUIT AND VEGETABLE NUTRITION FACTS CHART**




## Fruit & Vegetable Nutrition Facts Chart

Search the chart below for 5 A Day serving size information as well as calories, dietary fiber, vitamin A, vitamin C, potassium, and folate content for more than 100 fruits, vegetables, and 100% juices commonly found in U.S. supermarkets. Nutrient data were obtained from the USDA Nutrient Database for Standard Reference (SR17).

 5 A Day THE COLOR WAY	5 A Day Serving Size	Weight grams	Calories	Fiber grams	Vitamin A International Units	Vitamin C milligrams	Potassium milligrams	Folate micrograms
Acorn squash, baked	½ cup, cubed	102	107	4.5	439	11	448	20
Apples	1 medium	138	72	3.3	75	6	148	4
Apple juice	¾ cup juice	186	87	0.2	2	2	221	0
Apple juice, with added vitamin C	¾ cup juice	186	87	0.2	2	77	221	0
Apricots, fresh	2 medium	70	34	1.4	1348	7	181	6
Apricots, canned, in juice	½ cup	122	59	2.0	2063	6	201	2
Apricots, dried	¼ cup	33	78	2.4	1171	0	378	3
Artichokes, cooked	1 medium	120	60	6.5	212	12	425	61
Artichoke hearts, canned	½ cup	84	42	4.5	149	8	297	43
Arugula	1 cup	20	5	0.3	475	3	74	19
Asian Pears	1 medium	122	51	4.4	0	5	148	10
Asparagus, raw	5 medium spears	80	16	1.7	605	5	162	42
Asparagus, cooked	5 medium spears	75	16	1.5	754	6	168	112
Avocado, California	1/5 medium	35	58	2.4	51	3	175	31
Bananas	1 medium	118	105	3.1	76	10	422	24
Beets, cooked	½ cup, sliced	85	37	1.7	30	3	259	68
Beet greens, cooked	½ cup	72	19	2.1	5511	18	654	10
Bell peppers, sweet, green	½ cup, chopped	75	15	1.3	276	60	130	8
Bell peppers, sweet, red	½ cup, chopped	75	19	1.5	2333	142	157	13
Bell peppers, sweet, yellow	½ cup, chopped	75	20	0.7	150	138	159	20
Blackberries, fresh	½ cup	72	31	3.8	154	15	117	18

## Fruit & Vegetable Nutrition Facts Chart

Search the chart below for 5 A Day serving size information as well as calories, dietary fiber, vitamin A, vitamin C, potassium, and folate content for more than 100 fruits, vegetables, and 100% juices commonly found in U.S. supermarkets. Nutrient data were obtained from the USDA Nutrient Database for Standard Reference (SR17).


 5 A Day THE COLOR WAY	5 A Day Serving Size	Weight grams	Calories	Fiber grams	Vitamin A International Units	Vitamin C milligrams	Potassium milligrams	Folate micrograms
<b>Blackberries,</b> frozen	½ cup	76	48	3.8	86	2	106	26
<b>Blueberries,</b> fresh	½ cup	73	41	1.7	39	7	56	4
<b>Blueberries,</b> frozen	½ cup	78	40	2.1	36	2	42	5
<b>Bok choy,</b> raw	1 cup, chopped	70	9	0.7	3128	32	176	46
<b>Bok choy,</b> cooked	½ cup, chopped	85	10	0.8	3612	22	315	35
<b>Boysenberries</b>	½ cup	66	33	3.5	44	2	92	42
<b>Broccoli,</b> raw	½ cup chopped	44	15	1.1	290	40	139	28
<b>Broccoli,</b> cooked	½ cup chopped	78	27	2.6	1534	51	229	84
<b>Brussels sprouts,</b> cooked	½ cup, about 4 sprouts	78	28	2.0	604	48	247	47
<b>Butternut squash,</b> baked	½ cup	103	41	3.2	11434	16	291	19
<b>Cabbage, green,</b> raw	1 cup, chopped	89	21	2.0	152	29	219	38
<b>Cabbage, green,</b> cooked	½ cup	75	16	1.4	105	15	73	15
<b>Cabbage,</b> red, raw	1 cup, chopped	89	28	1.9	993	51	216	16
<b>Cabbage,</b> red, cooked	½ cup	75	22	1.9	25	8	196	18
<b>Cantaloupe</b>	½ cup, cubed	80	27	0.7	2706	30	214	17
<b>Carambola</b> (a.k.a. star fruit)	1 medium	91	28	2.5	56	31	121	11
<b>Carrots,</b> raw	1 medium	61	25	1.7	7342	4	195	12
<b>Carrots,</b> cooked	½ cup, sliced	78	27	2.3	13418	3	183	11
<b>Carrots,</b> baby, raw	8 medium	80	28	1.4	11032	7	190	26
<b>Cauliflower,</b> green, raw	½ cup, chopped	32	10	1.0	50	28	96	18
<b>Cauliflower,</b> green, cooked	½ cup, chopped	62	20	2.0	87	45	172	25
<b>Cauliflower,</b> white, raw	½ cup, chopped	50	12	1.2	6	23	152	28

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Find more information on fruits, vegetables, and nutrition at [www.dole5aday.com](http://www.dole5aday.com).

## Fruit & Vegetable Nutrition Facts Chart

Appendix XI

Search the chart below for 5 A Day serving size information as well as calories, dietary fiber, vitamin A, vitamin C, potassium, and folate content for more than 100 fruits, vegetables, and 100% juices commonly found in U.S. supermarkets. Nutrient data were obtained from the USDA Nutrient Database for Standard Reference (SR17).


 5 A Day THE COLOR WAY	5 A Day Serving Size	Weight grams	Calories	Fiber grams	Vitamin A International Units	Vitamin C milligrams	Potassium milligrams	Folate micrograms
Cauliflower, white, cooked	½ cup, chopped	62	14	1.7	7	28	88	27
Celery, raw	2 medium stalks	80	11	1.3	359	3	208	29
Chayote, cooked	½ cup, chopped	80	19	2.2	38	6	138	14
Cherimoya	½ cup, chopped	78	58	1.8	0	9	210	14
Cherries	½ cup (about 10 cherries)	73	46	1.5	46	5	161	3
Cherry tomatoes	½ cup (about 5 tomatoes)	75	13	0.9	621	10	177	11
Chile peppers, green, raw	½ cup, chopped	75	30	1.1	884	182	255	17
Chile peppers, red, raw	½ cup, chopped	75	30	1.1	714	108	242	17
Collard greens, cooked	½ cup, chopped	95	25	2.7	7708	17	110	88
Corn, yellow, cooked	½ cup	82	89	2.3	216	5	204	38
Corn, white, cooked	½ cup	82	89	2.2	2	5	204	38
Corn-on-the- cob, yellow, cooked	Kernels from 1 medium cob	63	59	1.8	146	3	158	20
Corn-on-the- cob, white, cooked	Kernels from 1 medium cob	63	59	1.3	3	3	158	20
Cranberries, raw	½ cup whole berries	48	22	2.2	28	6	40	0
Cranberries, dried, sweetened	¼ cup	30	92	1.7	0	0	12	0
Cucumbers	½ cup, sliced	52	8	0.3	55	2	76	4
Currants, dried	¼ cup	36	102	2.4	26	2	321	4
Dates	5 dates	42	117	3.3	4	0	272	8
Eggplant, cooked	½ cup, cubed	50	17	1.2	18	1	61	7
Endive, raw	1 cup, chopped	50	8	1.6	1084	3	157	71
Figs, raw	2 medium	100	74	2.9	142	2	232	6

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 5 A Day THE COLOR WAY	5 A Day Serving Size	Weight grams	Calories	Fiber grams	Vitamin A International Units	Vitamin C milligrams	Potassium milligrams	Folate micrograms
<b>Figs, dried</b>	¼ cup (about 4 figs)	38	93	3.7	4	1	253	3
<b>Grape juice, purple, unsweetened</b>	¾ cup juice	190	116	0.2	15	0	250	6
<b>Grapefruit, pink or red</b>	½ medium	128	41	1.4	1187	44	178	13
<b>Grapefruit, white</b>	½ medium	118	39	1.3	39	40	175	12
<b>Grapefruit juice, pink or red, unsweetened</b>	¾ cup	185	72	0.3	815	70	300	19
<b>Grapefruit juice, white, unsweetened</b>	¾ cup	185	72	0.2	61	71	300	19
<b>Grapes, green</b>	½ cup (~15 grapes)	77	53	0.7	51	8	147	2
<b>Green beans, raw</b>	½ cup	55	17	1.9	380	9	115	20
<b>Green beans, cooked</b>	½ cup	63	22	2.0	438	6	91	21
<b>Guava</b>	1 fruit	55	37	3.0	343	126	229	27
<b>Honeydew melon</b>	½ cup, cubed	89	32	0.7	44	16	202	17
<b>Jalepeño peppers, raw</b>	½ cup, sliced	45	14	1.3	360	20	97	21
<b>Jicama</b>	½ cup, sliced	60	23	2.9	13	12	90	7
<b>Kale, cooked</b>	½ cup, chopped	65	18	1.3	8854	27	148	8
<b>Kiwifruit</b>	1 large	91	56	3.1	159	68	302	35
<b>Lemons</b>	1 medium	58	17	1.6	13	31	80	6
<b>Lettuce, Bibb (a.k.a. Boston)</b>	1 cup, shredded	55	7	0.6	1822	2	131	40
<b>Lettuce, iceberg</b>	1 cup, shredded	72	10	0.9	361	2	102	21
<b>Lettuce, green leaf</b>	1 cup, shredded	36	5	0.5	2666	7	70	14
<b>Lettuce, red leaf</b>	1 cup, shredded	28	4	0.3	2098	1	52	10
<b>Lettuce, Romaine</b>	1 cup, shredded	47	8	1.0	2729	11	116	64

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## Fruit & Vegetable Nutrition Facts Chart

Search the chart below for 5 A Day serving size information as well as calories, dietary fiber, vitamin A, vitamin C, potassium, and folate content for more than 100 fruits, vegetables, and 100% juices commonly found in U.S. supermarkets. Nutrient data were obtained from the USDA Nutrient Database for Standard Reference (SR17).

 5 A Day THE COLOR WAY	5 A Day Serving Size	Weight grams	Calories	Fiber grams	Vitamin A International Units	Vitamin C milligrams	Potassium milligrams	Folate micrograms
Limes	1 medium	67	20	1.9	34	20	68	5
Mandarin orange segments, in light syrup	½ cup	126	77	0.9	1058	25	98	6
Mangos	½ cup (about 1/3 of a medium fruit)	83	54	1.5	631	23	129	12
Mushrooms, raw	½ cup, chopped	35	8	0.4	0	1	110	6
Mustard greens, raw	1 cup	56	15	1.8	5880	39	198	105
Mustard greens, cooked	½ cup	70	10	1.4	4426	18	141	51
Napa cabbage, cooked	½ cup, chopped	55	7	0.8	143	2	47	23
Nectarines	1 medium fruit	136	60	2.3	452	7	273	7
Okra, cooked	½ cup (~ 4 pods)	50	16	1.6	188	11	152	44
Olives, black	¼ cup, whole	34	39	1.1	135	0	3	0
Onions, white	½ cup, chopped	80	34	1.1	2	5	115	15
Onions, green/ scallions	½ cup, chopped	50	16	1.3	498	9	138	32
Oranges	1 medium	131	62	3.1	295	70	237	39
Orange juice, fresh	¾ cup	187	84	0.4	372	93	372	56
Orange juice, from concentrate	¾ cup	187	82	0.4	146	61	355	34
Papayas	½ cup, cubed	70	27	1.3	766	43	180	27
Parsnips, cooked	½ cup, sliced	78	55	2.8	0	10	286	45
Peaches	1 medium	98	38	1.5	319	7	186	4
Pears	1 medium	166	96	5.1	38	7	198	12

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Find more information on fruits, vegetables, and nutrition at [www.dole5aday.com](http://www.dole5aday.com).



## **APPENDIX XII**

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### **COVER LETTER TO TEACHER FOR FOLLOW-UP TO MISSING CONSENT FORM**





Ministry of Health Promotion  
Ministère de la Promotion de la santé



Date: April 16, 2007

Dear Teacher:

We are following up with those teachers who can assist us in tracking missing consent forms for the *Evaluation of the Northern Ontario Fruit and Vegetable Pilot Project (NOFVP)*.

According to our records, we have a survey on file for some of the children in your class, however, no consent form was returned to us. Attached is a list of names from your class for whom we did not receive the consent form. We are asking for your assistance in helping us locate these missing consent forms.

If you should have them, could you please forward via mail or fax to:

Ms. Linda Khoshaba, Research Associate  
Middlesex-London Health Unit  
50 King Street  
London, Ontario N6A 5L7  
Tel (519) 519-663-5317 ext.2368, fax 519-432-9430  
Email [linda.khoshaba@mlhu.on.ca](mailto:linda.khoshaba@mlhu.on.ca)

If you do not have the missing consents, we would very much appreciate if you could send the enclosed envelopes home with the children in your class. The package contains a letter of information and consent form, along with a stamped envelope. The parent can return the consent form to the address above. Otherwise, we will not be able to use these surveys in the analysis.

Please do not hesitate to contact me should you have any questions or concerns. Your time is greatly appreciated and we want to thank you for your cooperation.

A handwritten signature in black ink, appearing to read "Linda Khoshaba".

Ms. Linda Khoshaba, on behalf of the PHRED Evaluation Team



## **APPENDIX XIII**

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### **COVER LETTER TO PARENTS FOR FOLLOW-UP TO MISSING CONSENTS**







Ministry of Health Promotion  
Ministère de la Promotion de la santé



Date: April 16, 2007

Dear parent / guardian:

We are writing to verify your consent with your child's participation in the *Evaluation of the Northern Ontario Fruit and Vegetable Pilot Project (NOFVP)*.

You should have received the enclosed Letter of Information and Consent Form in late 2006 asking your permission for your child to participate in the *NOFVP Pilot Project*. For some reason, we did not receive your signed consent. We would very much appreciate if you could take a few minutes to review the Letter of Information and pending your decision, return the consent form in the enclosed stamped envelope.

Please do not hesitate to contact me should you have any questions or concerns. Your time is greatly appreciated and we would like to thank you for considering this request.

Ms. Linda Khoshaba, Research Associate  
Middlesex-London Health Unit  
50 King Street  
London, Ontario N6A 5L7  
Toll Free Information Line: 1-877-663-5320  
Tel (519) 519-663-5317 ext.2368, fax 519-432-9430  
Email [linda.khoshaba@mlhu.on.ca](mailto:linda.khoshaba@mlhu.on.ca)

Ms. Linda Khoshaba, on behalf of the PHRED Evaluation Team