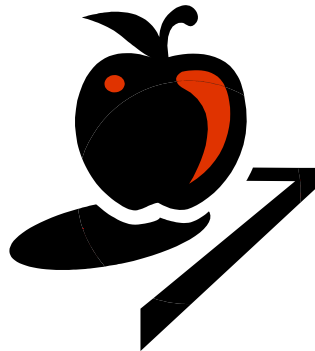


What's Being Served, Part VIII

A Nutritional Analysis of the CHEP supported Children's
Nutrition Program

March 2006

Report Prepared By: Brendine Partyka
Student Researcher



CHEP Good Food Inc.
230 Avenue R South, Saskatoon, Saskatchewan, S7M 0Z9
Ph: (306) 655-5311
www.chep.org



Table of Contents

Introduction	2
Methods	3
Results	3
Food Guide Comparisons	3
Nutrient Comparisons	4
Discussion of Results	7
A Closer Look at Meals and Menus	10
Sample Meals and Menus	12
Building a Healthy School Meal Program	16
Resource List	18
Appendix A: School Meal Evaluations	19

WHAT'S BEING SERVED VIII

Brendine Partyka Student Researcher

1. Introduction

CHEP: Children's Nutrition Programs

CHEP Good Food Inc. (formerly called the Child Hunger and Education Program) works in partnerships to provide many food programs in Saskatoon related to food security. CHEP exists to improve access to nutritious food for all members of the Saskatoon community. CHEP-supported programs foster knowledge of healthy food choices, access to safe and nutritious foods and strengthening of community partnerships. These characteristics support a healthier, happier community. The children's nutrition programs, providing breakfasts, lunches or snacks to school children, are one successful initiative of CHEP's partnerships. These programs are operated by the schools and parent groups and are fully or partially supported by CHEP. As well, CHEP provides training for coordinators and ongoing support by a nutritionist.

There are currently more than 35 schools and alternative classrooms which offer food programs in Saskatoon. CHEP is involved at 28 of the schools in some form. These schools are committed to providing healthy and safe breakfast, lunch or snack choices for students who for whatever reason may access this food. The school meal programs, run by food coordinators, play an important role in meeting a child's daily nutrition needs as well as influencing and building a child's lifelong eating habits. Good nutrition offered by these programs can directly influence a child's health by promoting healthy growth and development, improving self-esteem, decreasing anxiety and hyperactivity, stimulating cognitive development and decreasing risks of long term health problems such as obesity and heart disease. Building a foundation of nutritious eating during childhood helps children create a lifestyle of healthy food choices.

Good nutrition is closely linked to both physical and mental performance (6). Students who eat well are known to have greater academic achievement, fewer discipline problems and greater health outcomes (6). Regular meals enable these students meet energy and nutrient requirements to stay energized throughout the day. Nutritious food choices also enable students to obtain nutrients that are important for long term health, including essential fatty acids, protein, and micronutrients such as calcium, iron, vitamin C and folate.

To explore how closely meals provided are fulfilling these needs, an annual survey called What's Being Served is conducted. What's Being Served VIII is an evaluative report of the nutritional content of meals provided to children and youth at 22 school based CHEP-supported child nutrition programs across Saskatoon. The goal for the nutrition programs is to provide one third of a child's daily nutrition needs at each meal. The evaluation meal collection and analysis is conducted by senior nutrition

students in the College of Pharmacy and Nutrition at the University of Saskatchewan over a period of one month. Nutrition coordinators were aware that the collection was underway. The evaluation compares how closely meals collected come to reaching a child's nutritional requirements.

2. Methods

CHEP partnered with University students to collect actual breakfasts, lunches and snacks from 22 schools offering school meal programs to students. Collections took place between October 11, 2005 and November 10, 2005. The 22 schools in the 2005/2006 evaluation included 21 elementary schools and 1 high school. The food coordinators and principals at each participating school were sent a letter, in advance, outlining the What's Being Served meal evaluation. Each school and meal was coded for anonymity and six University students collected meals, identified meal contents and serving sizes, and entered this meal data into the nutritional analysis program Food Processor (2005 ESHA Research, Version 8.5.0). This data were then compiled and overall results were tabulated and analyzed. Nutrient and food guide comparisons that combined results from all meal programs were made.

Comparisons: Comparisons were made based on the recommended number of servings outlined by Canada's Food Guide to Healthy Eating. Comparisons were also made to 16 essential nutrients outlined by the 2001 Daily Recommended Intake (DRI) reports. School meal data was compared to values based on one third of a child's daily nutrient needs. In this study, the term 'child' has been applied to an average nine year-old male child weighing eighty-five pounds and standing 4'8" tall with a moderate activity level. The data is meant to offer comparison to the average child who accesses the children's nutrition programs. The high school meal data has been included amongst the elementary school data; therefore, the data represents an average of all meal programs evaluated.

3. Results

3. (a.) Food Guide Comparisons

The following tables show the recommended number of servings for children and youth from each of the four food groups, based on Canada's Food Guide to Healthy Eating. Table 1 represents the servings recommended per day, while Table 2 represents the servings recommended at breakfast and lunch meals.

Table 1: Food Group Recommendations - Daily

Food Group	Children 4-9 yrs	Youth 10-16 yrs
Grain Products	5-12	5-12
Vegetables and Fruit	5-10	5-10
Milk Products	2-3	3-4
Meat and Alternatives	2-3	2-3

Table 2: Food Group Recommendations – Breakfast and Lunch

Food Group	#Servings Breakfast	# Servings Lunch
Grain Products	2 – 3	2
Vegetables and Fruit	2	2 – 3
Milk Products	1	1
Meat and Alternatives	0 - 1	1

How to Use Food Group Comparisons:

The number of servings recommended by Canada's Food Guide to Healthy Eating can be the basis for meal planning. The guide applies to all Canadians aged four years and up. In general, grain products, vegetables and fruit and milk products are the most important sources of nutrients for growing children. Due to differences in rates of growth as well as body size, younger children have lower number of servings, while adolescents need a higher number of servings.

For the most part, of the meals collected for the study, the child nutrition programs have met the recommended number of servings for breakfast and lunch. This is important, as these servings help to meet requirements for specific nutrients. A general trend shows that meat and alternatives were not always served at breakfast, but were always served at lunch meals. Most programs included at least 1-2 servings of grain products, 1 serving of vegetables and fruits and 1 serving of milk products at each meal. Food coordinators should aim for the recommended number of servings for each meal as outlined in Table 2. Please see Appendix A for a detailed review of how breakfast and lunch meals have compared to the food guide.

3. (b.) Nutrient Comparisons

Tables 3 and 4 indicate the daily recommended intake values for key nutrients (expressed as one third of the daily recommended values), the actual intake of the children served at the children's nutrition programs (CNP) and the percent comparison between recommended and actual intakes. The table also shows the percent of the total daily recommended intake values achieved by the evaluated meals. A total of 11 breakfast programs and 22 lunch programs have been averaged in this evaluation.

In comparison to previous evaluations, the energy, carbohydrate, fibre, fat and calcium compositions of meals have remained below recommended values. However, this year's calcium values have increased slightly from previous years. This shows positive improvement and thoughtfulness by food coordinators, who recognize the value of calcium rich sources in the diet.

Some nutrient values were above recommended amounts. However, when shown as a percentage of the total daily recommended intake, these nutrient values can be interpreted as appropriate for meeting a child's daily nutrient needs. Vitamin C and

vitamin A are nutrients that are exceeding total daily recommendations. This can be attributed to the high number of vitamin C and vitamin A rich food sources being served by most nutrition programs. These sources include dark green and orange fruits and vegetables such as citrus fruits and carrots. These sources are nutrient dense foods and should be continued to be served at meal programs. A more detailed discussion on key nutrients of interest in this evaluation can be found in the following pages.

Table 3: Nutrient Comparison - Breakfast

Nutrient	1 /3 Daily Recommended Intake*	Actual CNP Meal	% Comparison of Actual to Recommended	% Total Daily Recommended Intake
Calories (kcal) ¹	666	441	66%	22%
Protein (g)	11	16	145%	48%
Carbohydrates (g) ²	75-108	76	70%	23%
Fat (g) ³	19-26	11	42%	14%
Fibre (g)	10	6	60%	20%
Vitamin C (mg)	15	54	360%	120%
Vitamin A (RAE)	200	227	114%	38%
Vitamin D (µg)	1.7	2.5	147%	50%
Folate (µg)	100	91	91%	30%
Thiamin, B1 (mg)	0.3	0.6	200%	67%
Riboflavin, B2 (mg)	0.3	0.7	233%	78%
Vitamin B6 (mg)	0.3	0.4	133%	44%
Vitamin B12 (µg)	0.6	0.9	150%	50%
Calcium (mg)	433	400	92%	33%
Iron (mg)	2.7	5	185%	63%
Sodium (mg)	500	523	105%	35%

¹Energy/kilocalorie recommendations are based on one-third of the estimated energy requirement (EER) listed in the DRI reports. A value of 2000kcal per day has been used as the basic energy requirement. This value represents the approximate energy intake that will maintain energy balance in a healthy, active child aged 9 to 13.

²Carbohydrate recommendations are based on the recommended range of 45-65% of total energy requirements. The value above represents one-third of the amount of carbohydrate recommended in a 2000 kcal/day diet.

³Fat recommendations for children and adolescence are 25-35% of total energy. The value above represents one-third of the amount of fat recommended in a 2000 kcal/day diet.

*The daily recommended intake values have been applied to an average nine year-old male child weighing eighty-five pounds and standing 4'8" tall with a moderate activity level.

Daily Recommended Intake levels include Adequate Intakes (AI) and Recommended Dietary Allowances (RDA); all terms are used to assist in determining and evaluating an individual's nutritional needs. DRI values have been adapted from the National Institute of Medicine, 2001.

Table 4: Nutrient Comparison - Lunch

Nutrient	1/3 Daily Recommended Intake*	Actual CNP Meal	% Comparison of Actual to Recommended	% Total Daily Recommended Intake
Calories (kcal) ¹	666	519	78%	26%
Protein (g)	11	25	227%	75%
Carbohydrates (g) ²	75-108	70	69%	23%
Fat (g) ³	19-26	18	69%	23%
Fibre (g)	10	7	70%	23%
Vitamin C (mg)	15	62	413%	137%
Vitamin A (RAE)	200	742	371%	123%
Vitamin D (µg)	1.7	1.8	106%	72%
Folate (µg)	100	80	80%	27%
Thiamin (mg)	0.3	0.5	167%	56%
Riboflavin (mg)	0.3	0.6	200%	66%
Vitamin B6 (mg)	0.3	0.5	167%	56%
Vitamin B12 (µg)	0.6	0.9	150%	50%
Calcium (mg)	433	413	95%	34%
Iron (mg)	2.7	3	111%	38%
Sodium (mg)	500	1014	202%	68%

¹Energy/kilocalorie recommendations are based on one-third of the estimated energy requirement (EER) listed in the DRI reports. A value of 2000kcal per day has been used as the basic energy requirement. This value represents the approximate energy intake that will maintain energy balance in a healthy, active child aged 9 to 13.

²Carbohydrate recommendations are based on the recommended range of 45-65% of total energy requirements. The value above represents one-third of the amount of carbohydrate recommended in a 2000 kcal/day diet.

³Fat recommendations for children and adolescence are 25-35% of total energy. The value above represents one-third of the amount of fat recommended in a 2000 kcal/day diet.

*The daily recommended intake values have been applied to an average nine year-old male child weighing eighty-five pounds and standing 4'8" tall with a moderate activity level.

Daily Recommended Intake levels include Adequate Intakes (AI) and Recommended Dietary Allowances (RDA); all terms are used to assist in determining and evaluating an individual's nutritional needs. DRI values have been adapted from the National Institute of Medicine, 2001.

4. Discussion of Results

Energy:

For the meals collected, results show that 66% of energy needs were being met at breakfast and 78% were being met at lunch. Meeting energy recommendations is important for healthy growth and development. Adequate calories also give children the energy needed for physical activity and other daily activities. The major sources of calories in the diet are carbohydrates and fat.

Comments: Because CHEP's goal to meet one third of a child's nutrient needs does not include snacks, the breakfast and lunch energy results seen in this study are considered to be within an acceptable range. Energy needs are most likely to be met through snacks eaten throughout the day, as many children snack on higher calorie foods. In contrast, other nutrient needs, such as calcium and folate, are less likely to be met through daily snacks. Thus, these other nutrients (e.g. calcium, folate) should be considered more closely.

Carbohydrates:

It is recommended that 45-65% of a child or adolescent's daily energy needs should come from carbohydrate sources. Carbohydrate is a child's main source of energy; it provides fuel for the brain and all body tissues. Based on the recommended percentage, only 70% and 69% of carbohydrate recommendations are being met at this study's breakfast and lunch meals, respectively.

Comments: Carbohydrate intake can be increased by including more complex carbohydrates in meals. Good sources of complex carbohydrates include grain products and vegetables and fruits. Some specific food examples include wholegrain breakfast cereals, bread, bagels, pasta, corn, carrots, apples and bananas. **Adding one-half or one serving of these foods to a meal will increase both carbohydrate and energy intake. Other sources of carbohydrates include simple carbohydrates. These choices, including sugar, honey and jam, are energy and carbohydrate dense.**

Fat:

Of the meals studied, the evaluation shows that children are receiving 42% of fat requirements at breakfast and 69% of fat requirements at lunch. Although fat is often attributed to health problems such as obesity and heart disease, it is an important nutrient in the diet. Essential fatty acids, such as those found in vegetable oils, are essential for growth and development, especially during childhood. Fat is also an important source of energy.

Comments: Some fats are better for us than others. Good choices include nuts, seeds and fish. Low-fat products are not emphasized for children. **Higher fat products,**

such as 2% milk, peanut butter, eggs and cheese are considered healthy choices for children and adolescents. They are good sources of nutrients, energy and fat and should be chosen more often. Margarine can also be a source of healthy fat, provided it is a non-hydrogenated type such as Becel. Hydrogenated margarines will have the words 'hydrogenated' or 'partially hydrogenated' on the label. These hydrogenated margarines have trans fat, which is considered an unhealthy fat and should not be served to children.

Calcium:

Calcium needs were lower than recommended, with 92% of calcium needs met at breakfast and 95% met at lunch. Although these values were not extremely low overall, some programs had calcium values lower than 50% of recommended values. This is of concern due to calcium's important role in the growth and maintenance of healthy bones and teeth. Calcium also plays important roles in muscle contraction and nerve transmission. Childhood and adolescence are the most critical times for the development of bone mass. After adolescence, our ability to strengthen bone declines. So, receiving adequate calcium during childhood and adolescence plays a key role in preventing osteoporosis later in life.

Comments: Meeting calcium needs is especially important for the children's nutrition programs. **Calcium sources, especially milk products, should be offered at each meal.** Whereas energy and fat needs are more likely to be met through daily snacking, calcium needs are less likely to be met. Thus, children will be more likely to meet calcium needs if calcium-rich foods are offered at each meal. One of the best ways to meet a child's calcium needs is to offer a full glass (1 cup or 250 ml) of milk with every meal. Chocolate milk is a good alternative because it has the same nutrients as regular milk. Other alternatives that are high in calcium include yogurt and hard cheeses.

Folate:

Close to 90% of folate recommendations were met at breakfast and 80% of recommendations were met at lunch. Folate is an especially important nutrient for the health of blood cells in the body. **Values can be increased by offering fortified breads and breakfast cereals, citrus fruits and juices or leafy green vegetables at every meal.**

Fibre:

Fibre intakes were also below recommended values, 60% and 70% of values were met at breakfast and lunch respectively. Fibre is important for keeping the digestive tract healthy. **Good sources of fibre include whole grains, vegetables and fruits and legumes such as lentils or beans.** Adding sliced fruit to breakfast cereals, adding beans to casseroles and soups and choosing 100% whole wheat bread are simple ways to increase fibre intake.

Other nutrients:

Overall, the nutrition programs are meeting children's needs for most nutrients. The averaged meal data indicate that the CHEP supported child nutrition programs are meeting children and adolescent needs with respect to protein, vitamin A, vitamin C, thiamin, riboflavin, niacin, vitamin B6, vitamin B12, folate, vitamin C, vitamin D, iron and potassium. **The nutrients needing attention include energy, carbohydrates, fat, fibre, folate and calcium.** Suggestions for increasing these values are shown above.

The child nutrition programs, on average, have come very close to achieving CHEP's goal of meeting one third of a child's daily nutrient requirements at each meal. This is a challenging goal to meet, as the quantity of food required, the time to prepare and serve meals and the time available to eat meals are often limited. Further, this goal does not include snacks that children may acquire during the day.

From this year's results of the What's Being Served evaluation, we can conclude that overall, food coordinators are offering nutrient-rich foods for participating children and adolescence. Congratulations to the food coordinators and everyone involved!

Limitations:

The recommended nutrient values and food servings are based on the average child's needs. However, energy and nutrient needs of children and adolescence vary with growth rate, body size and physical activity level. Because different children have different nutrient needs, a low value in the results does not necessarily mean that every child is deficient in a given nutrient. Likewise, an adequate or higher value in the results does not mean that every child is adequate in a given nutrient. Further, meal collections and data are based on the average amount of food that children and youth at each program received and/or consumed. It is important to recognize that individual children and youth may have eaten more or less than these average amounts.

The age differences between participating children and youth should also be noted. Some programs were intended for younger children (e.g. kindergarten children) and some were intended for teenaged youth (e.g. high school students). Younger children and teenagers have different nutrient and energy needs, particularly in overall energy, calcium and iron needs. The specific nutrient values chosen to represent the recommended nutrient values in our evaluation were selected based on the average child participating in the programs, not on any one individual child. Food coordinators and CHEP nutritionists should use the recommended nutrient values as a guide to plan meals based on the needs of the children that they serve. Using Canada's Food Guide to Healthy Eating is a good tool for planning meals that contain recommended nutrients.

Readers should also note that collections are based on a single meal collection for each program. Multiple meals for each breakfast or lunch program were not analyzed. Therefore, results do not entirely represent a program's variety or typical meals. As such, results should be used to increase awareness of how to improve nutrition programs.

How is What's Being Served used?

The What's Being Served evaluation is used in planning and improving nutrition programs. The evaluation is an important reminder of the role that nutrition programs serve in the community. Results of the evaluation are not meant to focus on any one nutrition program, but should be used to benefit the improvement of all programs collectively. CHEP will use the results for ongoing training and capacity building of the children's nutrition programs.

5. A Closer Look at Meals and Menus

The following section provides a general summary and a detailed review of meals served at various school locations across Saskatoon. All meals have been coded by the researchers, so that individual program sites are not singled out. This ensures that the evaluation can be used to make improvements to the entire Child Nutrition Program initiative and recognize the accomplishments of all programs.

This section can be used by food coordinators and the CHEP nutritionists to plan and make recommendations for changes to nutrition programs. Such changes can be used to improve the nutrition content of meals and increase access to healthy foods for the upcoming year.

Overall Comments:

From the analysis of each program meal and menu, it is apparent that many programs are providing well-balance and healthful meals. Most meals included choices from every food group, and many meals included a wide variety of choices. Here are a few general comments and suggestions for planning meals for children's nutrition programs:

- Offer milk products with every meal to ensure children receive an adequate intake of calcium. To increase the calcium in meals try serving milk with each meal, adding skim milk powders to casseroles and offering yogurt parfaits or smoothies.
- If children do not enjoy regular milk, offer chocolate milk as an alternative. It contains the same nutrients as regular milk.
- Offer both vegetables and fruits at lunch meals to ensure adequate intake of the important vitamins and minerals found in these foods. Serving vegetable soups or adding tomatoes, cucumbers or peppers to sandwiches are easy and inexpensive ways to increase the vegetable intake in meals.

- Choose whole wheat items to increase fibre. Good choices include whole wheat breads and whole grain cereals, muffins, pancakes and pastas. 100% whole wheat bread is a great choice for increasing fibre.
- Use non-hydrogenated products to limit the amount of trans-fats that children consume. Limit the foods that have the words 'hydrogenated' or 'partially hydrogenated' on nutrition labels.
- Choose tuna, egg, turkey or beef sandwich fillings more often. Other choices, such as bologna, are high in preservatives and are lower in protein.
- If serving juice, look for labels that show '100% fruit juice' rather than labels that show 'beverage,' 'cocktail' or 'drink.' Beverages, cocktails and drinks are often higher in sugar and lower in nutrients than juices.
- Introduce a new food to the kids. Mixing tofu with yogurt, serving soy milk for a special treat and adding beans to soups are great ways to make trying new foods fun.

Sample Meals and Menus:

The following are examples of breakfast and lunch meals served by CHEP supported nutrition programs. These meals have been adapted to show how small meal changes can increase the nutritional value of the meal. Please see Appendix A for a complete review of all school meals.

Example 1 – Breakfast

Original meal:

2% chocolate milk	¾ cup
2% milk	½ cup
Oatmeal	¾ cup
Whole wheat toast	1 slice
Margarine	½ tsp

Food Groups		Nutrition Information	
Grain Products	2	Calories (kcal)	374
Vegetables and Fruits	0	Protein (g)	16
Milk Products	1 ¼	Fat (g)	11
Meat and Alternatives	0	Calcium (mg)	402
		Fibre (g)	7

Revised meal:

2% chocolate milk	¾ cup
2% milk	½ cup
Oatmeal	¾ cup
<i>Banana, sliced</i>	<i>1 medium</i>
Whole wheat toast	1 slice
Margarine	½ tsp
<i>Orange</i>	<i>1</i>

Food Groups		Nutrition Information	
Grain Products	2	Calories (kcal)	554
Vegetables and Fruits	2	Protein (g)	20
Milk Products	1 ¼	Fat (g)	11
Meat and Alternatives	½	Calcium (mg)	441
		Fibre (g)	12

Meal comments:

- Sliced fruit (e.g. bananas) can be added to oatmeal or toast to increase the vegetable and fruit servings, which are important sources of many nutrients. Make sure to include servings in both breakfast and lunch meals!
- Always choose non-hydrogenated margarines, as these can be a source of healthier fats. Peanut butter, ‘pea butter’ and hard cheeses are also good choices for toast toppings.
- Oatmeal is a great breakfast choice! It is a source of fibre, iron and B vitamins.

Example 2 – Breakfast**Original Breakfast:**

2% milk	1 cup
Orange juice	1 cup
Frosted Flakes	1 1/3 cups
Whole wheat toast	1 slice
Cheese spread	1 tsp
Jam	1 tsp

Food Groups		Nutrition Information	
Grain Products	2 ½	Calories (kcal)	536
Vegetables and Fruits	2	Protein (g)	17
Milk Products	1	Fat (g)	10
Meat and Alternatives	0	Calcium (mg)	424
		Fibre (g)	3

Revised Breakfast:

2% milk	1 cup
<i>Orange juice</i>	<i>½ cup</i>
<i>Raisin Bran cereal</i>	<i>1 cup</i>
Whole wheat toast	1 slice
<i>Peanut butter</i>	<i>1 tbsp</i>
Jam	1 tsp
<i>Fruit (e.g. banana, orange)</i>	<i>1</i>

Food Groups		Nutrition Information	
Grain Products	2	Calories (kcal)	660
Vegetables and Fruits	2	Protein (g)	22
Milk Products	1	Fat (g)	17
Meat and Alternatives	½	Calcium (mg)	347
		Fibre (g)	13

Meal comments:

- Serving breakfast cereals that are higher in fibre and lower in added sugars is a good choice for healthy eating, as fibre is important for our intestinal health. Look for cereals with ≥ 2 g fibre per serving and < 8 g sugar per serving.
- Processed cheese spreads are often higher in additives than regular hard cheese. Try serving hard cheese on toast instead of cheese spreads. Peanut butter is also a good choice for a toast spread, as it is a good source of protein and fat.
- Offer fresh fruits more often. When serving juices, be sure to select ones that are 100% fruit or vegetable juices. These choices offer the most nutrients per serving.

Example 3 – Lunch**Original Lunch:**

Rice and beef casserole	1 cup
▪ Ground beef, lean	¼ cup
▪ White rice	½ cup
▪ Carrots, cooked	1 tbsp
▪ Red and green peppers	1 tbsp
▪ Peas	2 tbsp
▪ Tomatoes, cooked	2 tbsp
Watermelon, sliced	½ cup

Food Groups		Nutrition Information	
Grain Products	1	Calories (kcal)	396
Vegetables and Fruits	2	Protein (g)	17
Milk Products	0	Fat (g)	7
Meat and Alternatives	1	Calcium (mg)	24
		Fibre (g)	3

Revised Lunch:

<i>2% milk</i>	<i>½ cup</i>
Rice and beef casserole	1 cup
▪ Ground beef, lean	¼ cup
▪ <i>Brown or converted rice</i>	<i>½ cup</i>
▪ Carrots, cooked	1 tbsp
▪ Red and green peppers	1 tbsp
▪ Peas	2 tbsp
▪ Tomatoes, cooked	2 tbsp
▪ <i>Shredded cheese</i>	<i>2 tbsp (30g)</i>
<i>100% whole wheat dinner roll</i>	<i>½ roll</i>
Watermelon, sliced	½ cup

Food Groups		Nutrition Information	
Grain Products	2	Calories (kcal)	567
Vegetables and Fruits	2	Protein (g)	25
Milk Products	1	Fat (g)	11
Meat and Alternatives	1	Calcium (mg)	279
		Fibre (g)	5

Meal comments:

- Always offer a milk product at meals. Shredded cheese makes a nice addition to casseroles and milk or chocolate milk is always a great choice.
- These lunch meals offer a great variety of vegetable choices. Casseroles are a great way to include many food groups in a meal!
- One serving of cooked rice is equal to about 1 cup. Offering whole wheat toast or dinner rolls with casseroles can increase the serving size of grain products.

Example 4 – Lunch**Original Lunch:**

Apple juice	¾ cup (200 ml)
Sandwich	1
▪ Whole wheat pita, 6 ½ “	1 pita
▪ Eggsalad	¾ cup (50 g)
Oranges, sliced	2 slices
Apples, sliced	2 slices
Honeydew melon, sliced	2 slices

Food Groups		Nutrition Information	
Grain Products	2	Calories (kcal)	766
Vegetables and Fruits	2 – 3	Protein (g)	13
Milk Products	0	Fat (g)	18
Meat and Alternatives	1 – 2	Calcium (mg)	116
		Fibre (g)	8

Revised Lunch:

<i>2% milk or chocolate milk</i>	<i>1 cup</i>
Sandwich	1
▪ Whole wheat pita, 6 ½ “	1 pita
▪ Eggsalad	¾ cup (50g)
▪ <i>Lettuce</i>	<i>1 leaf</i>
Oranges, sliced	2 slices
Apples, sliced	2 slices
Honeydew melon, sliced	2 slices

Food Groups		Nutrition Information	
Grain Products	2	Calories (kcal)	739
Vegetables and Fruits	2	Protein (g)	21
Milk Products	1	Fat (g)	22
Meat and Alternatives	1 – 2	Calcium (mg)	343
		Fibre (g)	9

Meal comments:

- Always try to offer a milk product at every meal. Offering a full glass of milk (1 cup or 250ml) or adding hard cheese to sandwiches are good ways to increase calcium and other nutrients found in milk products.
- Try to offer vegetables at meals. Like fruits, vegetables are good sources of nutrients such as vitamins A and C. Lettuce, tomatoes or cucumbers make great additions to any sandwich.
- Eggsalad is a great sandwich filling. It offers high quality protein and does not contain as many preservatives as processed luncheon meats. Great choice!

6. Building a Healthy School Meal Program

The food coordinators working in the child nutrition programs have been important members in reaching CHEP's goal to provide good nutrition to all children and youth in Saskatoon. The children and youth who access the programs rely on these coordinators to build social relationships, increase self-confidence and feel positive about eating well. Food coordinators face a challenging, but rewarding task. The following offers insight into how food coordinators approach the food programs.

Healthy environments

Children and youth respond to people and images in their environment. Creating a positive and friendly environment is essential to influencing a child's response to food and nutrition. Many food coordinators have incorporated posters and positive messages about healthy eating, nutritious foods and active lifestyles into their nutrition rooms. These posters, along with nutritious foods, create consistent messages that help children see and understand good nutrition in action. Hopefully, this understanding can be carried with a child throughout his or her life. Further, most food coordinators have formed sociable relationships with children accessing the meal programs. Learning names of children and showing interest in their activities are simple and valuable ways to increase confidence in these young people. A safe, respectful atmosphere is important wherever children gather.

Menu planning

Children and youth are most likely to eat what is available, especially when it is attractively served in a social environment. Providing a variety of nutritious foods on a daily basis helps children and youth try new foods and enjoy many food choices. Many food coordinators follow basic meal rotations, offering a different type of sandwich each day, or alternating between hot and cold breakfasts.

Meal planning can help to ensure that all food groups will be accounted for in breakfast and lunch meals. Meal planning can also be a useful tool for grocery shopping and meal preparation, as leftovers from one day can be used to make casseroles and other balanced meals. In addition, menu planning can be used to introduce new foods to the children. Foods such as tofu, soy milk or beans might be added to regular meals to increase variety and choices. You never know what kids might like!

Donations

Many schools receive donations for their school meal programs. Some donations have included bagels (from local bagel retailers), frozen soups and casseroles (from school staff members and parents), vegetables (from local farmers and food brokers), stock produce (from local grocers) and condiments and other items (from food banks). If accepting donations, it is important to remember the mission and values of

the CHEP meal programs - that is, to provide good, nutritious meals. Please remember that some donations are not healthy choices and need not be used in the meal program. The focus should always be to provide the most nutritious foods possible. Strategies can be developed for using food donated to schools in ways other than meal programs.

Resource List

1. Dietitians of Canada (2004). School food and nutrition recommendations for Ontario ministry of education regarding snacks and beverages dispensed by vending machines.
2. Nova Scotia Education and Health Promotion (2005). Food and Nutrition Policy for Nova Scotia schools.
3. Saskatchewan School Board Association (2004). Nutrition Guidelines for Schools.
4. Hooper, M., Evers, S. (2003). What do Ontario children eat for breakfast? *Canadian Journal of Dietetic Practice and Research*: 2003: 64(1): 28-30.
5. American Dietetic Association (2004). Position of the American Dietetic Association: Dietary guidance for healthy children ages 2 to 11 years. *Journal of the American Dietetic Association*: 104: 660-677.
6. American Dietetic Association (2006). Position of the American Dietetic Association: Local support for nutrition integrity in schools. *Journal of the American Dietetic Association*: 106: 122-133.
7. American Dietetic Association (2003). Position of the American Dietetic Association, Society for Nutrition Education, and American School Food Service Association – Nutrition services: An essential component of comprehensive school health programs. *Journal of the American Dietetic Association*: 103: 505-514.